Book of abstracts

Nordic Environmental Social Science Conference

9-11 June 2026

Bridging the gaps

Uppsala University

Uppsala, Sweden

List of workshops and abstracts

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context 18

A framework for understanding land use justice in the green transition 19

Changing wind and solar licensing processes: implications for local influence and democratic fairness 20

Differences in power and experienced energy justice among landowners leasing land to wind power infrastructure – A case study in Western Finland 21

Evaluating perceptions of justice in critical raw materials provision in Finland: Perspective on dimensions and governance 22

Exploring the uncharted waters of legal drivers and barriers for pumped hydro storage in Sweden 23

Fragmented governance and cumulative impacts: Challenges in governing Finland's renewable energy planning 24

Land-sea interactions in an expanding blue economy: exploring the match of value chains, stakeholder needs and governance frameworks 25

Localities under pressure in the green transition – issues of acceptability and governing capacity in Nordic municipalities 26

Mobilisers of Co-Creation: Understanding the Reflexive Institutional Work and Democratic Legitimacy of Municipal Officials in Local Energy Transitions 27

Policy Coherence for Energy Landscape Governance: A Case Study of Spatial Planning in Sweden 28

Resisting the Acceptance Model: 'What More Do We Need to Do to Be Worth Saving?' A Just Approach to Public Participation in Wind Power Development 29

Ruling for Sustainability: Exploring new ideas of collaboration for an improved knowledge basis in the environmental courts 30

The tortuous trajectory of stakes in rooftop solar in Norway, 2015-2025 31

Urgency vs Inclusion: Gender and Governance Challenges in Nordic and Baltic Energy Transitions 32

2. Bridging the green gap: Helping, manipulation or something else? 33

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes 34

The Effect of Engagement with Global Environmental Justice on Public Preferences for Climate Policy Implementations 35

Adapt now or mitigate later? Flood risk and oil revenue allocation in Namibia 36

Could rationing for climate mitigation be perceived as fair? A survey experiment 37

Everyday Adaptation and Policy Legitimacy under Arctic change: Insights from a Place-Based Survey Experiment with the Iñupiat Community of Wainwright 38

Fee & redistribution - a silver bullet for effective and accepted climate policy for food and air travel? 39

From Affordability to Climate Action: How Social Safety Nets Enable Public Support for Higher Energy Prices 40

How wealth legitimacy shapes public preference for climate policies targeting the rich 41

Making or Breaking Climate Policy Support: How Welfare State Generosity Shapes Carbon Tax Acceptance in Sweden 42

Measuring Eco-Social Risk and Its Implications for Support for Climate Action 43

Ocean for Climate: Exploring Public Support for Carbon Dioxide Removal Policies 44

Presentism and policy-tradeoffs among the public and politicians 45

Self-interest and biased beliefs in policy perceptions: experimental evidence 46

The macro-public's reaction to a climate assembly: Effects of media framings that emphasis process or results. 47

The moral hazard of non-CO_2 mitigation in aviation 48

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them 49

Bridging silos and governance levels to better mitigate climate change and air pollution: Challenges and opportunities in the EU's multilevel system 50

Can critical raw materials regulation be leveraged for better operationalization of climate and biodiversity policies? 51

Exceptions and exception options of EU's Nature Restoration Regulations in relation to its Habitats, Birds and Environmental Liability Directives 52

Permitting Fisheries in Baltic Sea Natura 2000 Sites: Legal-Systemic Obstacles to Effective Environmental Control 53

Politics over environmental protection? The mechanisms behind the ability of the Swedish government to circumvent environmental laws 54

Sovereignty Against the Climate: How U.S. Conceptions of Sovereignty Prevent Climate Action 55

Sovereignty, Legitimacy, and the Limits of Cross-Border Due Diligence 56

Spatial planning, wind power and municipal veto rights 57

5. Whose knowledge counts? Co-creation in industrial and energy mega-projects in Arctic Fennoscandia 58

6. Governing global trade: Facilitating effective policy mixes from the local to the global 59

Do Regulations Shape Outcomes? An Analysis of the Global Lithium Value Chain 60

Effects of Global Supply Chain Due Diligence Regulations: A Meta-Analysis of Governance and Implementation Dynamics 61

From Fragmentation to Coherence: Rebalancing Access and Risk in ASM Mineral Supply Chains 62

Global South Stakeholders in Public-Private Supply Chain Governance 63

Green shipping corridors on the horizon? Multi-scalar and cross-national policy mixes for green ship fuel value chain development 64

Hardening Seafood Sustainability Governance? Mapping Emerging EU Policy Mix and Its Implications for Global Value Chains 65

Legitimised by whom? New EU trade rules regulating forest and agricultural commodity supply chains 66

Scrutinizing Institutional Dependencies in the Sustainability Governance of Global Supply Chains 67

Seeing Like a Regulation: Sustainable Fisheries Standards Beyond the EU Territory 68

Structural Preconditions for Effective mHREDD: Unpacking Buyer-Supplier Dynamics in the Apparel Industry 69

Voluntary sustainability standards can mitigate deforestation-export trade-offs 70

7. New directions in climate and environmental expertise 71

Being an expert in energy efficient renovation: forms of expertise beyond institutions and the epistemic 72

Contesting Climate Expertise: How the NGFS Reconfigures Authority at the Science–Finance Interface 73

Counting Nature: The Rise of Statistical Expertise in Environmental Governance 74

Documenting carnivore presence in Sápmi: reindeer herding communities' knowledge claims from consultation to court 75

Economic forms of transition: power-to-x expertise between assetizing and commodifying green hydrogen 76

Expertise in transition: Does incorporating social science to global environmental assessments make a difference? 77

From epistemic severing to epistemic pluralism? Investigating discursive practices of legitimation within the International Seabed Authority 78

Global expertise in transition: comparing expert platforms at the global climate-health nexus. 79

Scenario spaghetti: Unpacking the Science-Based Targets net-zero standard for the financial sector 80

The Causes and Consequences of Outsourcing Nationally Determined Contributions 81

The function and authority of practice-based experts in an era of biodiversity crisis 82

The 'Glacier Knowledge Industry': A critical political ecology of mega-expertise and the global cryosphere-climate change governance 83

Think Tanks, Reflexive Political Technologies and New Anti-Climate Common Sense 84

Trade, Climate, and Power: National Legal Experts and WTO law in times of crisis 85
Transition expertise in global wind energy 86
8. What happens to crisis preparedness when the focus shifts to war? 87
Changing futurescapes of Swedish food systems 88
Environmental policy in an age of creeping social-ecological crises 89
From buzzword to practise in the era of polycrises: Ambitions, dimensions, definitions and ways forward with local energy resilience in the Nordics 90
Geopolitical Risks and Social Vulnerabilities 91
Performative comprehensiveness in the context of climate, security and war 92
War framings and the interpretation of the significance of animal protein production in Finnish crisis preparedness 93
What happens to food supply in a crisis? The securitization of food in Swedish total defence preparedness 94
What is crisis preparedness in Swedish transport infrastructure planning? Changing meanings of transport-related resilience in times of polycrises 95
9. On shaky ground? EU climate neutrality and democracy in turbulent times 96
A reluctant frontrunner? The evolution of an EU carbon removal policy and certification framework in a world of turbulence 97
Climate Advisory Bodies and Democratic Governance: Evidence from the UK's Climate Change Committee 98
Complexity, Confusion, and Misunderstandings: Understanding EU Environmental Policy Implementation Through Three Commissions 99
Contextual conditions shaping meaningful public participation. A case study of EU climate policy. 100
From Sustainability to Competitiveness: How Discursive Shifts Are Reshaping the European Green Deal in EU Agricultural Policy 101
Implementing the European Green Deal: climate and biological diversity governance in Sweden 102
Institutionalizing Public Participation in EU Climate Governance Through NECPs 103
Navigating Decarbonization Dilemmas: Competing Narratives in EU Raw Materials Policy 104
Policy advice in European Union climate governance: Institutions & knowledge utilization related to emissions trading & the 2040 greenhouse gas target 105
Proceduralisation of EU Climate Law: Blurring the Boundaries of Legitimate Authority? 106
Strengthening climate governance through democratic innovations: lessons learnt from European climate assemblies 107

The European Union's Struggle for Climate Leadership at COP30 in Belém: EU Climate Diplomacy under Pressure Ten Years after Paris 108

10. Nordic industrial policy for a just and effective green transition 109

An emerging circular industrial policy: evaluation of the EU industry policies for circular transition. 110

Analyzing emerging socio-technical trajectories through job postings 111

Banking on derisking: Asessing the investability of carbon management in the Nordic 112

Bridging the Climate-Air Quality Nexus: A Comparative Policy Analysis of China and the EU's Green Industrial Agendas 113

Building capacity for industrial policy: the important role of transition planning 114

European multi-level governance for transforming energy-intensive industries towards zero-emissions 115

Green macrofinancial regimes and transformative industrial policy in Nordic countries 116

In the crosshairs: how regulations, tariffs and industrial policy drive the sustainability transition of the vehicle industry in Europe and China 117

Industrial Policy and the Decarbonisation of Chemical Parks: A Comparative Governance Analysis of China and the EU 118

Industrial Sustainability by Design: Social tipping dynamics for just industrial renewal in European heartlands 119

Learning from the pre-neoliberal Swedish climate transformation 121

Mission-Based Industrial Policies, Green Reindustrialization and Its Discontents: the Uneven Distribution of Risks and Rewards in Regional Development 122

Picking Sectors for Industrial Policy: IPCEIs and Europe’s Emerging State Capacity for Strategic Identification 123

The role of policy in market formation for small modular nuclear reactors: A comparative case study of Sweden, Canada, and the United States 124

The Role of the Government in Green Technology Experimentation and Up-scaling: Lessons from Previous Research Evaluations 125

The role(s) of the state in post-carbon capitalism: the case of the Finnish battery and extractive industries 126

11. Co-creating nature-based solutions: Bridging policy, practice, and participation 127

Assessing the Multilevel Governance of Transboundary Nature-Based Solutions across the Amazon Basin 128

Co-creating Nature Based Governance 129

Co-creation Framings and Biodiversity Evidence in Nature-based Solutions: Re-examining the Implementation Gap 130

Community forests as important commons in urban climate policy in Poland – conditions and perspectives 131

Design of an innovation-driven toolkit for scaling Nature-based Solutions. A Comparative Study between the Global North and South 132

Engaging Stakeholders for Co-creating Wetland Restoration Projects: Comparative Insights from Sweden 133

From consultation to transformation: An analysis of stakeholder engagement in peatland governance 134

Making room for water: boundary objects and institutional bricolage in nature-based flood risk management 135

Multi-species justice and nature-based solutions: Advancing justice for humans and beyond through land use planning 136

Participatory mechanisms in wetland restoration governance in Denmark and how they affect environmental outcomes 137

Understanding translocal dynamics through translocal tree growers in Tanzania's Southern Highlands 138

Whose Knowledge for Co-Creation and How? Lessons from Community-Created Wetlands in the Great Indian Desert 139

12. Societal discord and harmony caused by environmental policies 140

Indigenous Rights or Renewable Energy? Examining Attitudes Toward the Trade-off in Norw 141

A mixed method study of affective polarization in climate policy support 142

Painting a greener Swedish forestry: Discord and convergence in Sweden's green transition discourse 143

The performativity of 'Favourable Conservation Status' in Saimaa ringed seal conservation ... 144

The potential of intergenerational learning to prevent generational discord and to bridge generations for strengthened sense of belongingness 145

Who talks about climate when policy divides? Everyday conversations, dissatisfaction and engagement in Norway 146

13. On time and justice: Recognising diverse temporal competences for timely action 147

Learning from past apocalypses to live in the Anthropocene? Decolonizing time and place in Anthropocene Therapy 148

Syncopating rhythms : Seasons as temporal frameworks to co-ordinated action 149

Temporal Dissonances in Microbial Innovations: a case study of 'felt time' in Sweden 150

Title: A doomed failure?: On the relation between time scale of climate change and responsibility for adaptation in central Stockholm 151

Understanding Environmental Governance Through Rhythm: Temporal Competences at the Science–Policy Interface 152

Unstable timings: deep-time governance and the temporal politics of construction grounds . 153

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research 154

A Genealogy of Environmental Realism: Business Community, Environmentalism and Obstructionism in Finland, 1970–2000 155

Automated Identifying Climate Obstructionism in Finnish Parliamentary Discussions 156

Corralling Environmental Anxiety into Enthusiasm for Corporate Projects: Climate obstruction through branding the Circular Economy 157

Distrusting Publics or distrusting publics? 158

Environmental Malthusian legacies in Swedish secondary education: A discourse analysis of school textbooks and their climate change content 159

From global cooling to sanctions as climate injustice: Obstructing adaptation to climate change in Russian media, 2019–2025 160

How does climate obstruction become mainstream? The response of the mainstream parties to the far-right climate backlash in Finland 161

Mapping obstruction through coalitions: Discursive alignments and evidence practices in Australian energy debates 162

Opinions of delay: Comparing political elites with the wider public 163

Security as an ideological fix – against obstructive logics of resourcification 164

Speaking for the Smoke: Political Elites and the Amplification of Climate Misinformation 165

The long history of deceived publics: From false class consciousness to climate denialism 166

15. From anti-environmental conservatism to eco-nationalism 167

Between technocracy and scepticism: Boris Johnson's environmentalism 168

Conservatism and Climate Change 169

Conservatism in psychology: A narrative review of the current approaches and applications in environmental psychology 170

Explaining Right-Wing Support for Climate Policy 171

On Kebabs and McDonalds: diagnostic places of far-right environmentalism and the double replacement 172

The Conservative Environment Network: Pushing the Tories Towards a Greener Agenda? 173

Why Vary on the Environment? Explaining Nationalist Parties' Engagement Patterns 174

16. Tech for nature: Bridging climate and biodiversity governance 175

Conceptualizing digital waste as a social scientific waste research topic 176

Credible Credits: The Making of a Carbon Market 177

The logics of climate budgets: What counts in urban climate governance? 178

The role of environmental data justice for the development of the voluntary carbon market. 179

Translating Sustainability: Mobilizing AI-Supported Terminology Work for Democratic Participation and Social Movement Knowledge 180

Transnational Governance and Digital Technologies at the Climate-Biodiversity Frontier..... 181

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes 182

What about the environmental crises in AI Policy? How AI is brought into being in international organisations' policy-relevant documents 184

Between the spectacular and the mundane – examining the transformative potential of digital technologies in climate and biodiversity governance 185

Data governance in smart grids: A critical review of the academic literature 186

Digital technology refusal in environmental governance 187

Governing forests with ML tech: valuing machine learning – learning machine values 188

Imagining desirable aquaculture futures through artificial intelligence 189

Making 'Patchy Air': A Patchwork Ethnography of Co-Creating a Sensor Kit 190

Mundane governance of relations with nature: The case of automated species identification apps 191

Persuasive Imaginaries: establishing sustainable AI in words and deeds 192

The digitisation of air quality and its effect on public attitudes towards air pollution 193

The politics of data in timber traceability and trade: perspectives from Brazil and DRC..... 194

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling..... 195

A middle-range theory of climate action: convergent constraints- divergent policies in renewable energy development in Chile and Morocco 196

Climate Delay Discourses and Public Beliefs About the Economy–Environment Relationship in the United States 197

Climate Policy versus Economic Growth: Opinions of Ecological and Environmental Economists 198

Decoupling what counts: An augmented IPAT framework for beyond-GDP metrics 199

Growth vs. green: The role of economy-climate trade-offs in climate policy support in Chile and Mexico 200

Public beliefs about economic growth and emissions reduction: Ideological divides and their consequences for climate policy attitudes 201

Smarter about Exponentials, Smarter about Growth? Numeracy, Techno-Optimism, and Green Growth Support 202

The Political Feasibility of Degrowth versus Green Growth 203

Towards green growth or degrowth? A comparison of forest and energy sectors in Finland ... 204

Unlearning the Emissions Trap: Why Climate Strategy Must Fit Diverse Political Economy..... 205

19. Climate transition from below: Collective civic action for a fair climate transition 206

Between citizens and government–Can citizen-led climate intermediaries steer discourse to prevent climate policy stall? 207

Deliberating Collective Energy Solutions in Multi-Owned Apartment Buildings..... 208

Doing Environmental Justice through Climate Assemblies? Lessons learned from two case studies in Austria and Italy..... 209

Ecosocial Community Work Promoting Community Climate Commons 210

ENERGY JUSTICE IN PRACTICE: HOW ENERGY COACHES MEDIATE DATA AND PUBLIC VALUES 211

Fostering Democracy and Participation in Energy Communities: Pathways and Challenges in the European Energy Transition..... 212

From Commitment to Capacity: Social Work, Civil Society, and the Conditions for Fair Climate Transition in Sweden and Germany..... 213

Justice and Finance in Community Energy Transitions in Canada 214

Local Energy Communities: A Bottom-Up Approach to Resilience? A multi-disciplinary analysis of drivers in EU energy policies and academic research..... 215

Sense of community as a driver for circular just transition 216

When the Lights Go Out: Social Capital and Grid Resilience in Times of Energy Disruption..... 217

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?..... 218

Both heritage and resource A relational approach to forest owners' decision-making..... 219

Conservation-by-Alienation: Koliwadi forest estrangement in Maharashtra, India..... 220

Farming in Left-Behind Places: Governing effects on biodiversity and local solutions for change 221

Forest Ruins and Fragile Coexistences: The Loss of Oriental Sweetgum Forests in Western Mediterranean Turkey 222

How to remain critical and still get the work done? Reflections on social scientists' role in biodiversity offsetting research 223

On the road again: A nature value framework analysis of peatland management in a spatial planning project 224

Paradoxical Tensions When Navigating Sustainability: The Case of Nordic Forestry..... 225

Relational Values and Multispecies Well-being in Urban Landscapes: Insights from Finnish Focus Groups..... 226

Tracing Neoliberalism in Finnish Biodiversity Policy: Policy Entrepreneurs and Helmi Habitats Programme 227

Unpacking the meaning of 'local' in biodiversity strategies and policies 228

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies 229

Environmental Obstruction and Backsliding in Authoritarian States: Conceptualising Systemic Policy Resistance Across Environmental Domains 230

Can party-led effectiveness evaluations prevent backsliding in global pollution treaties? 231

Climate policy backlash: Geopolitics and the 'almost success' of decarbonization negotiations for shipping at the International Maritime Organization 232

Climate Rollback in the US under Trump 2.0: A three-dimensional approach 233

Corporate Climate Backsliding: Mapping Norm Change in Transnational climate Governance 234

How political sciences scholars can capture backlash around public policies? Insights from the case of ecological transition policies in France 235

Making sense of energy policy changes in the Biden-Trump transition 236

Policy implications of the Green Backlash for the EU Green Deal: comparative analysis of agriculture, consumer protection and transport policies 237

Political backlash against the Sustainable Development Goals: Exploring accountability challenges at the global-national nexus 238

Private Environmental Backsliding? A Longitudinal Analysis of Corporate Nature- and Biodiversity-related Commitments in High-Impact Sectors 239

The discursive mechanisms behind green policy backlash: Studying delegitimization practices using the case of a German heating bill 240

Turbulence, Polycrisis, and the Shifting Landscape of Voluntary Climate Action 241

What Drives Public Backlash to Climate Policy? The Case of the German Heating Reform 242

22. Understanding the bridge between literal climate change denial and cultures of ignorance .. 243

23. Energy justice, ethics and policies in contexts of 'overconsumption' 244

Between pride and shame: Navigating social conventions of vacations 245

Disentangling contrasting and coexisting narratives about forest-based bioenergy and its environmental implications 246

Enacting energy justice in the context of data centres and overconsumption in California, US - more affirmative or prohibitive justice? 247

Nuclear childhoods: Exploring children's roles in energy transition and nuclearity 248

Power over energy: Integrating the missing concept in energy poverty research through the Nordic case 249

Power to the People: The Local Economic Effects of Renewable Energy Communities 250

The Domestication Of Energy Technologies In the Dutch Energy Transition: Practices, Resistance, and Adaptation of Technology in Social Housing 251

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change 252

"Other than" as meaningful alternative: Theorising the transformative meaning of relational practice in human-animal assemblages 253

Affect and Emotion in contestations about the Wolf in the Netherlands 254

Cross-Country Learning for Coexistence: Evaluating Governance of Pastoralism and Wildlife in Europe 255

Encountering Seaweed: Life In and Beyond Macroalgae Farming Through Lived Experience of Farmers 257

More-than-human skilled visions: Farmers, bovines, and critters working for regeneration 258

Why farmers work with horses 259

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond 260

Collaborative governance under pressure: Sámi-industry agreements in the green transition 261

Competing perceptions of (in)justice in sustainability transitions – the case of Sámi reindeer herding and industrial forestry in Sápmi/Sweden 262

Energy transition or energy expansion? Challenging un-green imaginaries 263

Green Extraction, Just Transition? Discursive Framings and Future Injustice(s) in The Planned Per Geijer Mine 264

Green Justice in the Swedish Arctic: Indigenous Rights and Power Dynamics in Green Transitions on Sámi 265

Human rights impact assessment in Sápmi: a methodological framework 266

Iconoclasm in the Green Transition? Protecting Sacred landscapes in Sápmi 267

Is the Boundary Just? Bordering the Swedish–Finnish Iron Frontier 268

Land Rights and Land Use in the Energy Transition – What Can We Learn from Härjedalen, Sweden? 269

Rickard Länta on extractive pressures on reindeer herding in Sápmi 270

26. Knowledge for action: Democratic participation and social movements in sustainability transformations 271

A White Cis-Woman, a Gay Conservative Man, and an Urban Sámi Walk into a Room to Deliberate: Can Feminist Deliberative Democracy Deliver Justice? 272

Citizens' assemblies – from experiment to governance for transformation 273

Climate Activism 3.0: From Protest to Social and Economic Reconstruction 274

Contesting Green Consensus: Earth Uprisings and the Resurgence of Political Antagonism in French Environmental Movements 275

Extra Time: Exploring Football Fans' Potential for Transformative (Climate) Action 276

Form Follows Function: Guiding Principles for Sustainability Institutions 277

From protests to roundtables: the Swedish climate movement's staging of a democratic and just transition through local climate assemblies 278

Gender, Age and Urban Space in Nea Smyrne: From Everyday Knowledge to Collective Empowerment through Feminist Action Research 279

Governing Through Incompleteness: Democracy and Grassroots Movements in Sustainability Transitions 280

Green citizens, green cities: how active citizenship in management of urban green spaces promotes urban biodiversity 281

How the theoretical setup of Street Experiments shapes their transformative capacity 282

Implementing urban climate justice: an exploration with civil servants at the municipality of Gothenburg 283

Intergenerational knowledge sharing and recognition of young people in biodiversity conservation and sustainability transformation 284

Localizing Sustainability Transformations in the North Karelia Biosphere Reserve 285

Mapping Controversies in Critical Mineral Extraction 286

Mapping the Demands of Indigenous Women's Organizations in Peru: Exploring Discourse Coalitions for Climate Change Adaptation 287

Non-profit actors in Swedish sharing economy 288

Polytactics vs. Monotactics: Advancing Theory in Environmental Movement Strategy 289

Reclaiming the Green Commons: Civic-Ecological Agency and Democratic Transformation in Denmark's Common Housing Landscapes 290

Sidelining just transition? – A critical analysis of (de-)politicising strategies in the European Parliament 291

Terrains of resistance in extractive places 292

The Legacy of an Ambition: The Indo-Norwegian Project and the "Anti-Politics" of Kerala's Marine Fisheries 293

The Promise and Limits of Place-Based Deliberation in Local Urban Governance 294

Walking Together: Knowledge Sharing and Environmental Participation in Algerian Hiking groups 295

27. Bridging temporal gaps in low-carbon transitions 296

Beyond Human Timescales: Recognizing Future Generations in Subsurface Development Policy 297

Looking at infrastructure through time: An integrative review on maintenance, repair, and environmental concern 298

Low-carbon transition, inequalities and changing temporal orders 299

Making time for (and with) plants: Vegetal metabolism, net zero, and the contingent temporalities of low-carbon 'transition' 300

Making time for the transition; temporal conflicts and potential synergies regarding a Paris compliant pathway in Swedish regional climate governance 301

Out of Sync: Misaligned Temporalities in Low-Carbon Heat Planning 302

Past-present-future entanglements in solar hydrogen innovation: the case of photoelectrochemical technologies 303

Pluralizing low-carbon transition temporalities: Exploring non-linear conceptions of time in post-Soviet Hungary and post-industrial Southern Italy 304

Rhythmanalysis as Critical Phenomenology of Time: Lessons for Studying Low-Carbon Energy Infrastructure Projects 305

The double paradox of the Anthropocene 306

Volatile temporalities: Insights from the Danish Agri-Food Transitions 307

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning? 308

Affective Hotspots and Urban Decision making in revitalised post-industrial cities: Developing a Participatory Emotional- Mapping Toolkit 309

BYRESAN – a citizen participatory approach that increased local interest and commitment to sustainable travel, traffic safety and cycling 310

Concerning conditions for aging: service provision for older people in remote areas 311

Engaging citizens in deliberating carbon-free mobility transitions 312

Impacts of large-scale infrastructure planning projects on diverse values of nature 313

Perception of local public transport deprivation and support for climate change mitigation policies across Europe 314

The effects of depoliticisation and context on impacts: The case of the Swedish national citizens' climate assembly 315

29. Private diplomacy within global climate governance 316

A new constituency in the global climate regime? The carbon dioxide removal community in the UNFCCC process from 2015 to 2025 317

Business Spaces: Influencing the United Nations' Conferences of the Parties on Climate Change 318

Corporate Private Diplomacy in Global Climate Change Governance 319

From Advocacy to Diplomacy: Non-State Policy Advisors in the UNFCCC Arena 320

International Cooperative Initiatives (ICIs) and Global Climate Cooperation in the Era of Polycrisis: An analysis of the Breakthrough Agenda 321

The Rationales Behind Climate-related Financial Disclosure and the Role of UNFCCC COP Side Events 322

30. Bridging the gap between ambition and implementation in marine governance and fisheries management 323

Anchoring Sustainability: How fisheries and local governance intersect in coastal development 325

Bridging Spatial Risk and Marine Governance: Joint Impacts of Offshore Wind Farm Development and Shipping Activities in Finland's EEZ 326

Deadly numbers: The Baltic Herring in the EU fishery politics 327

How Ecosystem-Based Management Reconfigures Environmental Expertise: A Comparative Study of Forestry and Marine Policy in Sweden 328

Remedial measures to aid the recovery of declined fish stocks – a review of spawning closures for pelagic fish in the Baltic Sea fisheries management 329

Staying afloat: How Swedish small-scale fishers navigate decline and transition 330

Tensions and opportunities in fisheries governance: Mapping stakeholder perspectives on Gotland, Sweden 331

The role of local knowledge and citizen science in conflicted governance context: the cormorant–fisheries case 332

Wild cards in the Baltic Sea – are we ready for the unexpected? 333

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment 334

A place in limbo – how clashing temporalities shifted the imagined sustainability in Frihamnen. 335

A Political Theory from Somewhere: Storytelling and Situated Theorizing for the Anthropocene 336

A Research Agenda for Climate Policy Imaginaries 337

Between imagined and enacted futures: grounded imaginaries and subjectivities in eco communities 338

Beyond the Crisis of Imagination: Reconceptualizing Technē for Alternative Climate Futures 339

Black ecofeminist storytelling and the affective labour of environmental future-making 340

Climate Imaginaries and Democratic Experimentation 341

Corporate storytelling and eco-governmentality: The discourses and rationalities of corporate environmental pacts 342

Farmers' visions of fossil free farm and food systems in Sweden, and plural pathways for sociotechnical transformations 343

From national visions to local practices - the dynamics of climate adaptation imaginaries in Norway 344

Future-making through grassroot food citizenship practices 345

Going visiting - land stories of diverse economies 346

I cannot go back to what I was…": Reading and Writing Speculative Fiction as Methodology for Interdisciplinary Understandings of the More-Than-Human. 347

Imagining future homes: The prefiguration of (un)sustainable homes in everyday practices... 348

Journeys to the futures with environmental policymakers 349

Mining futures: Narrating 'the green transition' through exhibitions and visual art 350

Modellers as storytellers: 'What's the problem represented to be' in Integrated Assessment Models? 351

Narrating conflictive worldviews of climate risk management in Madagascar 352

Narrative anchors to digital waves: The influence of strategic narratives and ontological security on technology adoption in smart ports 353

Opening up Futures through Play: A Conceptual Exploration in Environmental and Sustainability Education. 354

Poetry workshop as a modality of documenting climate injustice and visioning transformative futures 355

Rising Sea Levels & Rising Emotions: Local storylines building resistance towards technocratic geoengineering in Venice and the Dutch Wadden islands 356

Socio-technical imaginaries of the future in Swedish municipal water infrastructure Planning 357

Speculative Landscapes: Embodied practices for Intergenerational Futures. 358

Storytelling Across Scales: Political Imaginaries and Stories of Survival in Sustainability Transformations 359

The lake under the lake 360

Trails and tales – From (re)interpreting pilgrimage walking to mediating human-landscape relations in patchy Anthropocene 361

UnWorlding and reWorlding: re-imagining 'the human' in a multispecies world 362

Visual Narratives for the Future: Producing speculative fiction short films to act upon planetary transformations 363

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems 364

Actor power to change dietary patterns: a case study of the grain legume system in Sweden 365

An overview of food systems injustices experienced by marginalised groups: A rapid scoping review of reviews 366

Between commitment and constraint: biodiversity-friendly farming and biodiversity-degrading institutional logics 367

Can democratic innovations foster care and bridge economics and sustainable futures in the food system? Case youth citizen jury in Finland 368

Digital empowerment of alternative agrifood spaces: An ethnographic exploration of digital practices on Swedish small-scale organic farms 369

From Words to Action: Governing Food Security in the Era of Climate Change 370
Governing by consensus: Legitimacy and the limits of agri-food transformation in Wales 371
Levers for change: sustainable niche for livestock production and consumption in Finland 372
More-than-capitalist economies of wild plant and mushroom gathering in Norway 373
Re-thinking food systems transformation: A theoretical integration of assemblage thinking and systems thinking approaches 374
Restructuring of Food Aid in Finland: Expectations and Outcomes 375
33. Towards a less material intensive economy: Strategies and practices for bridging the gap 376
A healthcare system running in circles to be circular: Sociotechnical barriers to a circular economy transition 377
Addressing Environmental and Social Injustices in Housing – A Consumption Corridors Approach 378
Bridging the Emissions Gap: The Baumol Effect 379
Caring for Circularity: Grassroots Value Creation and the Governance Tensions of Low-Material Transitions 380
Contrasting Outcomes Across Three Macroeconomic Models: Tax Policy Scenarios for Sustainability and Equality in Sweden 381
Cooperative Economies as Sufficiency Infrastructures: Linking Housing, Food, and Mobility for a Low-Material Future 382
Examining just waste transitions: community-based approaches and grassroots green skills in the UK 383
Is idleness the answer? 384
Material Intensity of Lithium-Ion Batteries: Future Trends and Explanatory Models Based on Historical Data 385
Mobilising values in municipal governance? Exploring sustainable consumption transitions in the case of Gothenburg 386
Re-defining our relations to overconsumption – the case of the Finnish junk trade initiative 387
What is the role of intermediaries in circular urban transitions towards? Towards a typology. 388
List of authors 389

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

This session addresses the escalating dilemmas and tensions inherent in the accelerating energy transition. In Nordic contexts, where democratic traditions and environmental values are strong, these tensions are particularly pronounced. Ambitious policies and technological solutions are being pursued to meet urgent climate goals, ensure energy security, and enable industrial electrification. These "urgency-driven" transitions risk undermining long-term democratic resilience and generate new multifaceted conflicts. Conflicts are often related to negative impacts on nature and landscapes, aspects of procedural and democratic unfairness, and profound issues of distributional injustice. Lack of legitimacy and social acceptance is increasingly creating barriers for energy development, and questions of energy justice in the energy transition are arising in both research, policy and practice.

This session will explore the multifaceted nature of these conflicts to discuss alternative pathways for energy transition. Some potential key questions:

- How can we reconcile the need for a rapid, efficient energy transition with the imperative for democratic fairness and social justice?
- What new governance and planning approaches are needed to address emerging conflicts over land use, community engagement, and resource distribution?
- How can institutional capacities be built to better manage the complex dilemmas of energy transitions, particularly at the local and regional levels?
- What role can experimental approaches to community energy and local ownership play in fostering a more just and legitimate transition?
- How can knowledge production and expert authority be democratized to support more inclusive energy transitions?

The session aims to foster a critical dialogue to develop a new research agenda for energy policies and practices that are socially and spatially equitable. The session will contribute to a more nuanced understanding of the energy transition, moving beyond simple socio-technical solutions to address its fundamental societal and geographical dimensions.

We welcome fully drafted manuscripts with different theoretical, methodological, and empirical approaches that explore the friction between the imperative for a swift transition and the need for inclusive, fair, and democratically legitimate processes, and propose alternative pathways. We encourage papers that further new theoretical perspectives and methods to address the green transition in a Nordic perspective.

Convenors

Mikaela Vasstrøm, Department of Global Development and Planning, University of Agder, Norway
Therese Bjärstig, Department of Political Science, Umeå University, Sweden
Lasse Peltonen, Department of Geographical and Historical Studies, University of Eastern Finland

A framework for understanding land use justice in the green transition

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Halvor Dannevig[1]
Ragnhild Freng Dale[1], Karen R. Moberg[1], Simo Sarkki[2], Jasmiini Fransala[2]
[1] Western Norway Research Institute
[2] Oulu University

Introduction: The literature on energy justice and environmental justice has been rapidly growing in the past decade. While this body of research provides a plethora of perspectives on the procedural, distributive and recognition aspects of justice in relation to economic development, the focus on energy and/or environment often misses the importance of land and land use as central to conflicts that arise, particularly concerning development of energy infrastructure. In this research paper, we present the findings of an integrative literature review mapping how philosophical, normative and applied theories of justice have been operationalized in academic literature.

Methods: Our review focused on creating a holistic understanding of relevant literature for building a justice framework with land use and land use change at its core, as well as revealing gaps in understandings and conceptualisations in the justice literature relevant for land use change. The initial search in Scopus yielded 279 articles. After abstract screening we were down to 236 articles for our full text review. During the full-text review, we used NVivo software to code relevant sections and concepts. In addition, we made notes of key contributions of the articles, and new codes were added inductively.

Results: The review revealed that there is a lack of criteria and sub categories that enables assessment of capabilities and procedural, distributive and recognition justice, as well as frameworks that integrates this with identification of pluralistic values tied to land. We have thus developed an analytical framework for assessing justice in land use processes and outcomes in cases related to the green energy transition. We have defined a set of criteria for each sub- set of justice, which also is tied to identification, attribution and recognition of pluralistic values.

Conclusions: To enable this focus on land and land use as central to justice, we introduce the concept ‘land use justice’. This reflects how it is not only the landscapes, but also the human and non-human practices within them, that are at the heart of contestations, alongside a recognition of pluralistic valuations of nature.

Changing wind and solar licensing processes: implications for local influence and democratic fairness

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Tor Håkon Jackson Inderberg[1]
Lars Gulbrandsen[1], Siddharth Sareen[1]
[1] Fridtjof Nansen Institute

Introduction: Norway aims to develop more wind and solar power plants to reach its climate targets, meet its skyrocketing demand for renewable power and industry development, and uphold an acceptable security of energy supply. However, over the last years new electricity generation projects have been stymied by legitimacy crises, lack of local support, and challenges for involvement and democratic fairness, with additional roots in land-use changes and nature impacts. As a response, the Norwegian authorities reformed the wind power licensing scheme in 2022. In 2025, the process for utility-scale solar power licensing followed. The licensing processes for wind and solar diverge strongly in design, but with a common denominator in empowering host municipalities significantly. While the municipality now has gained the formal competence to stop wind and solar power developments, these developments are challenging to manage for local municipalities. For wind power, the increased local responsibility has been paired with boosted economic incentives. This has not happened within solar PV.

Using an energy democracy approach, this paper analyses the changes in licensing processes in participation and influence. We investigate the likely implications for the role of municipalities, in terms of local democratic and public administrative capacity, technical knowledge needs, and citizen influence.

Methods: The paper rests on empirical data from three conducted and seven planned interviews with developers, politicians, and public officials. In addition, we analyse policy and licensing documents, and media articles for wind power processes and current solar power processes.

Results: The paper shows that increased municipality influence on national developments is not a silver bullet for democratic fairness. Local anchoring of the developments is crucial. But while the legitimacy of the renewable developments in Norway was negatively impacted by a highly centralized and top-down licensing system, the local municipalities are not always equipped to manage controversial processes like this in an effective and fair manner.

Conclusions: We conclude that simply allowing municipalities the formal competence to influence and determine renewable developments in Norway is insufficient, without facilitating the institutional capacity and planning expertise required to manage emerging land use conflicts, polarised community engagement, and a fair approach to resource distribution.

Differences in power and experienced energy justice among landowners leasing land to wind power infrastructure – A case study in Western Finland

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Panu Runko[1]
[1] Natural Resources Institute Finland/University of Eastern Finland

Introduction: The growing urgency for climate action has led to a rapid increase in deploying renewable energy production infrastructure. Within the Finnish context, this has manifested in significant increase of wind power production around the west coast. Although wind power in Finland is generally viewed as a positive, wind power projects in Finland often face local resistance (Peltonen et al., 2024) indicating a presence of a significant social gap. This article aims to identify some of the reasons behind resistance (and support) towards a wind power project in Western Finland among landowners potentially hosting wind power infrastructure of said project.

Methods: The data consisting of 12 semi-structured interviews from landowners potentially hosting wind turbines and transmission lines were gathered between May and June of 2025. These interviews are to be analyzed through the lens of energy justice to estimate how the power dynamics between the actors involved affect the realization of distributional and recognition justice, as well as to the agency of different actors.

Results: The (preliminary) results reveal, that by overlooking the facilitation of participation of local stakeholders, the project developers do not only risk increasing local resistance towards the project but may also disrupt local social dynamics leading to social conflict between locals which are invisible to people outside the community. Actors involved in the wind power projects enjoyed varying levels of power and agency, putting them in unequal positions in negotiation processes. Combined with an insufficient communication and a lack of official channels for information by the developer, an environment fertile for misinformation, rumors and conflict was formed.

Conclusions: This article provides examples of both already existing and potential social consequences of lackluster facilitation and failure in the realization of energy justice through a case study. The interviewed landowners wished for increased solidarity and hoped to organize to reduce potential injustices. Transparent and continuous (two-way) communication starting as early as possible was identified to have potential in both decreasing resistance and potential social conflict. Although somewhat context dependent, the results can be used to pinpoint areas of improvement in making renewable energy infrastructure deployment and the green transition more socially just.

Evaluating perceptions of justice in critical raw materials provision in Finland: Perspective on dimensions and governance

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Inkeri Saarenaho[1]
Paula Kivimaa[1], Harri Kaikkonen[2], Mari Kivinen[2], Topi Turunen[1]
[1] Finnish Environment Institute, Finland
[2] Geological Survey of Finland, Finland

Introduction: Literature on critical raw materials indicates the necessity for a holistic approach to justice in extractive societies to enhance low-carbon transition fairly. Finland plays a key role in the European Union as one of the most significant producers of critical raw materials, including nickel, cobalt, and platinum group metals. Despite its well-established minerals sector, advanced geological expertise, and stable political environment, Finland has not avoided tensions and sustainability challenges associated with mineral exploration and extraction. Moreover, the cultural territory of the indigenous Sámi people extends into Finland's Northern part, creating particular responsibilities to safeguard the rights of the Sámi against various land-use pressures and oppressive activities.

Methods: This paper examines how Finland accounts for justice in governing critical raw materials extraction and processing, based on relevant policy documents and expert interview analyses. It applies an analytical framework on climate policy justice, in which justice is investigated through the dimensions of distributive, procedural, recognition, restorative, cosmopolitan, and intergenerational justice. Originally developed to provide insights for promoting climate policy justice, the framework's applicability to critical raw materials governance is also evaluated.

Results: The findings show that the policy documents handle justice elements with differing emphasis. Procedural aspects are given most attention, stemming from the documents' explicit aim to enhance social acceptability of the minerals sector. Other common accounts relate to the distribution of economic and employment benefits, and environmental challenges. Along with distributive and procedural aspects, it is essential to recognise sociocultural vulnerabilities. In this regard, the documents refer to the rights of the indigenous Sámi in legislation and international treaties, whereas other vulnerabilities, cumulative impacts, and intergenerational aspects do not receive attention, thereby limiting the scope of justice considerations in the sector.

Conclusions: Companies' performance has a significant influence on how fairly practices are perceived, as the legislation forms the minimum frames for the sector. However, the increasing use of critical raw materials has long-term cultural, environmental, and economic impacts. Therefore, this research suggests a comprehensive and nuanced public governance approach to critical raw materials governance to better address vital questions of justice and ensure a fair energy transition.

Exploring the uncharted waters of legal drivers and barriers for pumped hydro storage in Sweden

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Noomi Westling Öhman[1]
[1] Luleå Tekniska Universitet

Introduction: In Sweden, traditional hydropower has played a key role in the electricity system for over a hundred years whilst simultaneously causing adverse effects on the environment. Out of Sweden's roughly 2000 hydropower plants only three consist of pumped storage hydropower plants, making pumped hydro storage (PHS) somewhat uncharted waters. What both forms of hydropower operations have in common is that the legislation used when the operation was established is outdated by today's environmental standards. To legally operate a hydro powerplant, whether the plant consist of a traditional hydropower plant or PHS, the operator needs a valid license decided in accordance with the Swedish Environmental Code. Since all the current pumped hydropower plants were built using old legislation that lacked in environmental aspects, the legal knowledge regarding licenses for PHS in Sweden is currently inadequate.

Methods: By analyzing both Swedish national and EU law, studying traditional hydropower licenses, identifying the environmental effects of PHS and studying the case of Juktan, the paper identifies the legal drivers and barriers that may emerge when applying for a license to operate PHS in Sweden.

Results: The preliminary result of the study shows that there are both legal drivers and barriers to operate PHS in Sweden. Firstly, by using old mines and dams, locations that are beyond the point of restoration could be used for the electricity system instead of being a costly eyesore that needs to be dealt with, which is in line with the legally established appropriate location principle. There are, however, still some uncertainties regarding the possible environmental effects of PHS, which complicates the legal process to obtain a license as the Swedish Environmental Code, which contains a strong precautionary principle, leaves no room for uncertainties when it comes to a possible jeopardization of the environment. Secondly, the result of each individual court proceeding to obtain a license will vary depending on how well the operator is able to comply with the overall objective of the Swedish Environmental Code.

Conclusions: Therefore, it seems unclear to what extent and in which scenarios PHS could be operated in accordance with the Swedish Environmental Code.

Fragmented governance and cumulative impacts: Challenges in governing Finland's renewable energy planning

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Uula Saastamoinen[1]
Jonne Hytönen[1]
[1] Finnish Environment Institute

Introduction: The rapidly accelerating energy transition in Finland illustrates the tensions between different decarbonisation goals. Growth is expected to bring investments needed to expand renewable energy (RE) production, but the governance of cumulative environmental impacts remains fragmented. When RE projects, developed one patch at a time, focus on local impacts as mandated by the environment impact assessment (EIA) and fail to acknowledge wider regional impacts, tensions between rapid deployment, democratic legitimacy, and social acceptance are created. This study addresses the research gap in how cumulative impacts of RE production are governed in Finland, and explores pathways toward more holistic and just planning frameworks, where clarity, predictability and transparency of procedures are the cornerstones of legitimacy and social acceptability.

Methods: We have organised 30 semi-structured interviews with key stakeholders from both public and private sectors from national, regional and local levels, and a 50 expert workshop. Content and discourse analyses were used to identify positions of different actors, as well as development needs. A document analysis of policy papers, guides, and research reports was conducted to examined how environmental and social impacts are valued relative to economic imperatives and other goals set for decarbonisation.

Results: The findings suggest governance challenges:

- Ambition level of the EIA varies between regions, and the results are hard to utilise in planning and municipal decision-making.
- Municipalities and regions face resource and knowledge constraints in planning, and managing project impacts.
- Environmental protection is strong primarily for species listed in the Habitats Directive, leaving broader ecological considerations unaddressed.
- Juridical-rationalist discourse, with strong belief on procedural compliance but little follow-up on actualised impacts means the procedures lack ambition.

Conclusions: These dynamics undermine legitimacy, lead to larger than necessary environmental impacts, and challenge the social acceptability of RE projects. Successfully governing cumulative impacts requires a more robust role for the state, clearer guidance, and improved institutional capacity at regional and municipal levels. We suggest, for example, that clear national boundary conditions for RE planning and the inclusion of citizens in negotiating the strategic framework for RE placement in their own municipalities will increase legitimacy while improving the consideration for environmental and other social impacts.

Land-sea interactions in an expanding blue economy: exploring the match of value chains, stakeholder needs and governance frameworks

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Andrea Morf[1], Nikolaos Xafenias[2], **Dana Gilliland-Wiström**[2], Nils Ólafur Egilsson[2], Rut Meyersson[3], Ivonne Aimee Nuñez Valadez[1], Madeleine Prutzer[1], Megan Smilikis[1]
[1] Swedish Institute for the Marine Environment, University of Gothenburg
[2] Industrial Technology, Chalmers Technical University
[3] Research Institute RISE

Introduction: The accelerating expansion of offshore wind, with over 100 GW in development versus 2 GW permitted, marks a profound shift in marine space use in Sweden. On the West coast, this transition intersects with fisheries and emerging aquaculture, creating a need to minimise conflicts and find and exploit synergies in the offshore and at the land–sea interface. Coastal communities depend on marine resources for employment and cultural identity, while offshore wind is central to national climate targets. These dynamics expose both gaps and conflicts between policy ambitions at different institutional levels, the available strategic planning tools, and the practical implementation of coexistence. Their addressing requires integrative approaches that address competing claims, anticipate mutual impacts, and foster collaboration across sectors. In the MISTRA C2B2 programme (www.c2b2.se), LivingLabs are tested as a forum for cross-cutting knowledge sharing and learning, to promote the co-creation of place-based and workable solutions.
Methods: The study applies a mixed methods case study approach to explore different dimensions of land-sea interactions (LSI) in the above three marine sectors, especially from an economic and a governance perspective. It is also grounded in LivingLab methodology and EU-ESPON guidance for LSI analysis and includes:

- Value chain analysis to trace socio-economic dependencies between offshore wind, fisheries, and aquaculture.
- Mapping of relevant users, governance actors and institutional interfaces.
- Interviews and interactive workshops to capture perceptions of e.g. trade-offs and decision-making processes as part of the LivingLab approach.
- Spatial overlays and scoping matrices to complement qualitative insights, revealing bottlenecks and opportunities for adaptive solutions.

Results: Preliminary insights in content indicate open questions about the evolving economy and an incoherent governance system and differences in active participation. Even if spatial conflicts persist, indirect linkages like ports, labour markets, and logistics can offer entry points for multi-use and multifunctionality. We will explore further to what extent collaborative learning can contribute to the identification of gaps, weaknesses and possible ways forward for economic value chains and related governance systems.
Conclusions: We expect the study to inform strategic marine and coastal planning for coexistence that aligns renewable energy with sustainable food production and a resilient coastal economy and environment.

Localities under pressure in the green transition – issues of acceptability and governing capacity in Nordic municipalities

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Lasse Peltonen[1]
Jakob Donner-Amnell[1], Therese Bjärstig[2], Mikaela Vasström[3]
[1] University of Eastern Finland, Department of geographical and historical studies
[2] Umeå University, Department of political science
[3] University of Adger, Department of global development and planning

Introduction: Nordic localities are facing the challenges and pressures of the green transition, including local governance challenges arising from the recent deployment of (onshore) wind power. We use the framework of governance capacity to analyse the kinds of pressures and related capacities that Nordic municipalities may hold and mobilise in view of the green transition - related pressure points. The analysis builds on elements of governance capacity, including (1) collective action, (2) coordination, (3) resilience, (4) learning, and (5) resources. The analysis also draws on theories on energy justice, and we discuss how municipal competence and capacities for planning and decision-making contribute to procedural and distributional justice in the energy transition.

Methods: We conduct a comparative synthesis of wind energy developments in three Nordic countries—Finland, Sweden, and Norway—drawing on recent research, and other secondary sources. The study use case-based evidence from national policy frameworks, municipal planning practices, and documented negotiations around wind power deployment.

Results: Nordic countries display both similarities and differences in local acceptance dynamics, linked to municipal roles in planning and permitting. A key trend is increased consideration of local benefits and governance capacity, alongside failed centralization attempts and municipal pushback. Decentralization of government authority is seen as a remedy to improve local acceptance through enhancing local procedural justice. However this creates new governance and planning challenges for small rural municipalities navigating multiple pressures from both large energy developers, national renewable targets, and local stakeholders and citizens.

Conclusions: The Nordic experience highlights tensions between socio-political/market acceptance and local acceptance, shaped by power relations between state and municipalities. While decentralization can improve legitimacy, it also demands enhanced local capacity to ensure procedural and distributional justice. Conflicts around wind power underscore the need for collaborative governance and instruments that support local acceptance. Future energy transition policies must critically address how local governments can secure transparency, democracy, and broad value creation in renewable energy development. The findings point to a need for balancing efficiency with justice in rescaled governance frameworks.

Mobilisers of Co-Creation: Understanding the Reflexive Institutional Work and Democratic Legitimacy of Municipal Officials in Local Energy Transitions

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Gustav Osberg[1]
Max Halbwachs[2, 3]
[1] Lund University, International Institute for Industrial Environmental Economics (IIIEE)
[2] Halmstad University, Department of Business, Innovation and Sustainability (FIH)
[3] Lund University, Centre for Innovation Research (CIRCLE)

Introduction: Local governments are pivotal for advancing climate action. In Sweden, strong municipal autonomy and EU-shaped multi-level governance have enabled ambitious initiatives even as national ambitions stall. Many municipalities pursue co-creation with public, private, and civil actors. Recent research highlights the decisive role of individual municipal officials whose reflexive and relational capacities (beyond technical expertise) shape mandates, mobilise resources, and convene actors. Yet, the rhetoric of co-creation unfolds against siloed bureaucratic structures, creating ambivalence around traditional categories such as the politics–administration boundary. Within this tension, officials' interpretive work becomes critical, raising fundamental questions of democratic legitimacy and accountability. Conceptualising such officials as "mobilisers," this study examines how they navigate institutional ambiguities around formal rules and tacit norms to translate politically anchored goals into climate action, and with what implications for the democratic quality of local energy transitions.

Methods: A multiple-case study of Swedish municipalities selected for variation in political leadership, administrative capacity, and co-creation experience. Data include semi-structured interviews with mobilisers and partners, participant observation, and analysis of policy and project documents. Data from three municipalities to date. Thematic analysis follows an abductive logic.

Results: Mobilisers operate within an ambiguous space between formal administrative rules and informal norms, what one interviewee termed "ambivalence in the system." Bureaucratic logics often misalign formal processes with co-creative aims, producing frictions. This ambivalence can limit action but also create interpretive room for implementing broadly stated political goals. Effectiveness hinges on institutional positioning ("where one sits") and the ability to leverage procedural instruments. For example, in one case, public procurement was used to finance a public–private network, justified through arguments about broader public value rather than price alone. Across several observed cases, elected politicians were largely absent from co-creation arenas, shifting interpretive authority toward officials and foregrounding questions of representation, accountability, and the democratic mandate in collaborative governance.

Conclusions: Mobilisers broker across the administration–politics boundary to render co-creation actionable. Their reflexive, relational work enables action but might redistribute democratic agency, shifting decision-making away from elected representatives. We discuss conditions for legitimate mobilisation: transparency, mandate clarity, inclusive participation, and implications for accountability, legitimacy, and the governance of local energy transitions.

Policy Coherence for Energy Landscape Governance: A Case Study of Spatial Planning in Sweden

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Frida Öhman[1]
[1] Department of Earth Sciences, Uppsala University, Sweden

Introduction: The development of renewable energy affects landscapes around the world but institutions show weak capacities to consider the multiple values that often are at stake and to engage multiple governance levels. Spatial planning is a key instrument for landscape governance and thus for the renewable energy transition, but requires integration of top-down and bottom-up approaches. Governance systems must ensure coherence across national, regional, and municipal levels, but while municipalities provide place specific knowledge, they often struggle to translate national goals and manage conflicting interests. In Sweden, the regional level has recently been given a stronger planning role, to guide municipal level by providing regional core values, addressing multiple landscape functions at a broader scale, and improving the synchronisation of municipal comprehensive plans (MCPs). However, little is still known about how the regional and municipal planning levels and instruments intersect in practice, particular in relation to coherence for renewable energy in landscape contexts.

Methods: Based on document analysis and semi-structured interviews with municipal civil servants, this study analyses coherence from a landscape governance perspective between MCPs and regional plans, with a focus on municipalities in Region Skåne, being one of three regions with a new formal planning mandate.

Results: The study identifies institutional capacities needed to strengthen landscape governance for renewable energy and makes theoretical contribution by complementing a policy coherence framework with perceptions of policy implementation, an element that policy coherence frameworks have previously lacked.

Conclusions: A set of governance recommendations are provided.

Resisting the Acceptance Model: 'What More Do We Need to Do to Be Worth Saving?' A Just Approach to Public Participation in Wind Power Development

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Eric Brandstedt[1]
Georgia de Leeuw[1]
[1] Human Rights Studies, Lund University

Introduction: Effective and just development of renewable energy hinges on meaningful public participation – yet what more must be done to ensure that communities feel valued and engaged in these processes? This paper challenges the prevalent acceptance model of public participation in wind power development to advocate for a more just and meaningful engagement process. The acceptance model treats participation merely as a tool to mitigate and overcome objections in order to legitimise pre-made decisions, often resulting in tokenism (Armeni, 2020).

Methods: We adopt an "engaged ethics approach" (Brandstedt et al., 2024) to theorise the normative grounds of just wind power development based on interviews with individuals experiencing injustices related to wind power expansion in Falköping, Sweden – a municipality with high ambitions with regards to wind power development, energy self-sufficiency, and social sustainability.

Results: We reveal that procedural injustices in decision-making reflect broader democratic concerns, structural grievances and power dynamics that are potentially aggravated in superficial inclusion schemes. We also show that individuals having these deep-seated grievances seek discursive support for them, both within mainstream politics and beyond. Some argue for the necessity of nuclear energy, including local mining for uranium (which is relevant in Falköping), as an alternative to wind power; others are led towards general scepticism of climate policies.

Conclusions: We argue that acknowledging these deep-seated grievances is essential for revitalizing trust in the climate agenda, for ensuring a constructive policy dialogue and just energy transition. Addressing these issues is crucial for moving beyond mere acceptance to foster genuine participation and legitimacy.

References

Armeni, C. (2020). *Public Participation in Decision-Making on Wind Energy Infrastructure: Rethinking the Legal Approach Beyond Public Acceptance*. University College London.
Brandstedt, E., Busch, H., Lycke, E., & Ramasar, V. (2024). Winds of change: An engaged ethics approach to energy justice. *Energy Research & Social Science*, *110*(January), 103427. https://doi.org/10.1016/j.erss.2024.103427

Ruling for Sustainability: Exploring new ideas of collaboration for an improved knowledge basis in the environmental courts

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Johanna Alkan-Olsson[1]
Beatrice Hedelin[2], Ruth Lindhé[2], **Åsa Ågren**[3]
[1] 1: Lunds universitet, Miljö- och geovetenskapliga institutionen
[2] 2: Karlstads universitet, Institutionen för Samhälls- och kulturvetenskap
[3] 3: Karlstads universitet, Handelshögskolan

Introduction: We want to discuss a running project that **aims** for more effective decisions in the Swedish Land and Environment Courts by improving its *knowledge basis*. This is central, because values that cannot be described monetary or quantitatively are generally valued less in the courts' decisions (Ågren 2022). Currently, numerous extensive legal processes are planned to continue till after 2040 due to EU demands to relicense hydropower in Sweden. A new model for stakeholder collaboration has been prescribed to precede the court trials (SFS 1998:1388). This can be considered a large-scale intervention - an opportunity to explore and test innovative collaborative ideas for an improved knowledge basis. From studies on public participation and stakeholder collaboration, it is well known that stakeholders can contribute to a more comprehensive knowledge basis (Mcaulay et al 1999; Hage et al. 2010). For this to happen, however, the selection of stakeholders as well as the quality of the process is essential. **Objective:** Examine the new pre-trial collaborative processes and their effect on the knowledge basis and ruling of the Land and Environment Courts.

Methods: The project utilizes multiple methods including literature review, focused group interviews, analysis of legal documents, meeting observation and interviews with public officials and stakeholders.

Results: We see signs of that the ongoing processes and decisions are heavily focused on trade-offs around electricity production and the river's ecology, i.e. indicating lack of a more holistic perspective. We also see problems with how collaboration works and who gets access. Levels of conflicts have risen.

Conclusions: This is worrying. Actors with knowledge of local hydrology and energy production, nature and other needs such as recreation, housing, heritage, energy system security, flood risks etc. need to be represented and involved in well-thought-out ways. We have identified a number of factors that can explain this development, and hence, also may provide guidance as to how to revert it. Examples are: unclear roles and mandates, lacking incentives and lack of support and knowledge for the process leaders.

The tortuous trajectory of stakes in rooftop solar in Norway, 2015-2025

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Siddharth Sareen[1]
Gustav Opsahl[1], Per Ove Eikeland[1], Tor Håkon Jackson Inderberg[1]
[1] Fridtjof Nansen Institute

Introduction: While Norway has rarely been associated with solar photovoltaics (PV) installations, cost declines and existing electricity flexibility based on reverse hydro pumping capacity have made PV feasible since the mid-2010s. Medium and large solar plants in megawatts are emerging in the mid-2020s, but land use change concerns slow permitting. Studies show that rooftop PV can help progress towards Norway's 2030 goal of 8 terawatt-hour (TWh) annual solar generation using existing building stock. Yet a cloudy policy horizon has stymied progress, reflected in variable patterns of deployment. While PV prices have fallen with significant technology development, sporadic and hesitant changes in the society-technology relationship undermine progress. These include few and unstable policy stimuli and a subsidised household electricity tariff (norgespris) for 2025-2026. Yet a guaranteed solar tariff in the 2025-2029 coalition government's budget negotiations shows scope for change.

Methods: This paper maps the tortuous trajectory of stakes in rooftop solar in Norway during 2015-2025, to link present developments to key historical and institutional relationships. These include the dominance of other renewables in a decarbonised electricity sector and challenges for emergent industries; insufficient linkages between a domestic PV wafer industry, domestic electricity sector, and political decisionmakers; and established policy and institutional settings that favour other goals and technologies. These relationships have shaped the rooftop solar industry's slow start, gathering optimism, and impending bankruptcy. Primary and secondary research on solar energy transitions in Norway within a Nordic perspective has been carried out from 2024 onwards in the context of the ongoing SolNor project funded by the Research Council of Norway until 2027.

Results: Our analysis suggests that lack of central understanding and support for this fledgling industry underlie this jumpiness, nationally expressed as regulatory and institutional barriers. The aptness of rooftop solar to fulfil industrial needs and national targets nonetheless holds promise and is reshaping actors' proclivities.

Conclusions: We argue that inconsistent policy priorities wither blossoming domestic renewable relations while conversely advancing corporate interest in solar power. Our historical, institutional, and policy insights show how liberalised governance inhibits active citizen roles in energy transitions.

Urgency vs Inclusion: Gender and Governance Challenges in Nordic and Baltic Energy Transitions

1. Towards a just energy transition: Exploring governance dilemmas and democratic pathways in a Nordic context

Viena Lahtinen[1]
Nina Tynkkynen[1], Wilma Henning[2], Nína María Saviolidis[3], Kristel Edelman[1], Vilija Šatienė[4]
[1] Åbo Akademi University
[2] University of Gothenburg
[3] University of Iceland
[4] Vytautas Magnus University

Introduction: European climate governance has relied heavily on the promise of ecological modernisation, highlighting technological innovation and efficiency. While this approach may de facto accelerate decarbonisation, it offers limited ground for the profound cultural and behavioural shifts needed for socially inclusive transitions. We argue that urgency-driven energy transitions risk reinforcing institutional path dependencies and undermining democratic fairness, raising questions of energy justice and gender sensitivity.

Methods: As Nordic countries have for long been considered pioneers of gender equality and climate action, we examine seven countries in the Nordic and Baltic regions; Sweden, Finland, Denmark, Norway, Iceland, Estonia, and Lithuania. We use semi-structured interviews with civil servants working in national climate policy institutions, and national climate policy documents as primary research data. Currently, the data consists of 52 interviews that have been conducted in the autumn-winter of 2025. The aim is to complete approximately 50 more in the spring of 2026. With qualitative methods, we explore how gender manifests in energy transitions, and the institutional obstacles to linking gender equality with transition governance. The goal is to identify governance approaches and path dependencies that hinder or enable just energy transitions while advancing gender equality. Whenever possible, intersectional perspectives are included, recognizing that gender intersects with other social categories in shaping policy impacts and legitimacy.

Results: The results indicate that gender is largely absent from energy transition strategies across all the studied countries, and country-specific differences introduce unique, context-dependent challenges and topics. Some institutional challenges include limited knowledge and resources, as well as shifting political priorities. Path-dependencies, such as assumptions of neutrality and technological optimism embedded in ecological modernisation, reinforce the exclusion of gender considerations. However, fractures in these paths are emerging: for example, the social and historical context of the Baltic countries creates distinct opportunities and constraints for integrating gender into energy policy.

Conclusions: Our findings show how urgency-driven transitions, rooted in ecological modernization, risk deepening injustices when gender is ignored. Challenging path dependencies is thus essential for creating trajectories that combine rapid decarbonization with democratic fairness and social inclusion. Governance must explicitly integrate gender into energy justice to maintain legitimacy and avoid widening inequalities.

2. Bridging the green gap: Helping, manipulation or something else?

This workshop was cancelled by the convenors.

The term “green gap” refers to discrepancy between environment-friendly values and actual choices. For example, individuals may express support for public transportation, yet continue to use private cars in their daily commute. Green gaps have been found also in the contexts of food and cosmetics, for example.

Various public policies have been used for narrowing the green gap. They include, but are not limited, to (dis)incentives, (mis)informing, and educating, as well as different forms of behavioral public policy such as nudge, think, boost and nudge+.

The proponents of these policies often describe them as a form of helping. Fathers of nudging Thaler and Sunstein (2009) use the term “help” throughout their book. In similar lines Banarjee et al. (2022) describe how “Nudge+ adds consciousness to the nudge and helps motivated decision–makers make better choices”. At the same time, nudges – even the most iconic ones such as Carolyn’s cafeteria – have been understood as instances of manipulation:

"...if Carolyn’s cafeteria is in a school, or hospital, or health club, we might argue that we should expect encouragement to make healthy choices in those settings, even if some of that encouragement is manipulative. […] The fact that her nudge employs trickery constitutes a strong case for thinking that it is manipulative."

The aim of this workshop is to discuss how different policies aiming to bridge the green gap should be understood and described. What are the criteria for calling a policy "helping"? Should neutral language be preferred in this context, and is that possible? Moreover, what are the ethical and practical implications of different ways of describing the policies? Are the choices made “merely rhetoric” or rather something we should be concerned about?

We welcome and are hoping to receive fully drafted manuscripts from various different disciplines and to include viewpoints both from empirical and theoretical research.

References

Banerjee, S. et al. (2022). What works best in promoting climate citizenship? A randomised, systematic evaluation of nudge, think, boost and nudge+. London School of Economics and Political Science.
Noggle, R. (2018). Manipulation, salience, and nudges. Bioethics 32(3), 164-170.
Thaler, R. H. and Sunstein, C. S. (2009). Nudge: Improving Decisions about Health, Wealth, and Happiness. Penguin Books.

Convenors

Helena Siipi, Department of Psychology and Speech-Language Pathology, University of Turku, Finland
Jani Sinokki, Department of Philosophy, University of Turku, Finland
Olivia Mörck, Department of Philosophy, University of Turku, Finland

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Scholars highlight the need for substantial government intervention to address ongoing crises such as biodiversity loss, natural resource depletion, and climate change. A central challenge lies in bridging the gap between ambitious political environmental goals and their practical implementation. A core assumption of this workshop is that public opposition to such policies remains a critical obstacle. Advancing our understanding of citizens' attitudes towards policy measures is therefore essential for improving the feasibility of effective interventions.

Research on public opinion toward environmental policy instruments has developed into a rich interdisciplinary field, with contributions from political science, sociology, economics, and psychology. Important insights have been gained, but the field is evolving rapidly, driven by new methodological approaches and theoretical debates.

This workshop seeks to bring together scholars pushing the boundaries of research on large scale environmental policy issues. We especially welcome contributions that:

- Advance methodological approaches, including natural or quasi-experimental designs, register data, and innovations in survey methods.
- Develop theoretical and conceptual understandings of public opposition, support and legitimacy of environmental policy.
- Systematically review and synthesize findings across the field.

To help bridge the gap between environmental goals and implementation, we are particularly interested in fully drafted manuscripts that explore the tensions between demands for efficiency and effectiveness on the one hand, and the need for democratic legitimacy and public support on the other. While we encourage studies situated in Nordic contexts, we equally welcome comparative and international perspectives.

This workshop aims to provide a platform for exchange among scholars working on climate and environmental policy support and resistance, fostering dialogue that can move the field forward both theoretically and methodologically.

Convenors

Niklas Harring, Department of Political Science, University of Gothenburg, Sweden
Steffen Kallbekken, Cicero – Center for International Climate Research, Norway
Lauren Yehle, Department of Political Science, University of Gothenburg, Sweden

The Effect of Engagement with Global Environmental Justice on Public Preferences for Climate Policy Implementations

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Gracia Brückmann[1]
[1] Institute of Political Science & Oeschger Centre for Climate Change Research, University of Bern, Switzerland.

Introduction: Increasing domestic opposition to the implementation of domestic climate mitigation policies in high-income, high-emission countries makes shifting these greenhouse gas emissions reductions to low- and middle-income countries (LMICs) a more attractive option. Reducing greenhouse gas emissions in LMICs is more cost-effective, which may help overcome domestic opposition due to distributional effects. Then high-emitting countries contribute through foreign emissions reductions to their domestic climate commitments (Paris Agreement, Article 6.2) while LMICs generate additional revenues and materialize local benefits (such as cleaner air) when selling their excess emissions reductions. What in theory seems beneficial could also have adverse effects, such as prolonged domestic carbon lock-ins, and foreign emissions reductions could crowd out climate aid (helping underfinanced LMICs instead of counting foreign emissions reductions towards domestic Nationally Determined Contributions (NDCs)).

So far, few countries have utilized international transfers of mitigation outcomes, which is often attributed to home bias and doubts about the effectiveness of projects implemented abroad, as well as concerns about environmental justice. Henceforth, public opinion on the legitimacy of reaching domestic climate goals abroad is understudied, a critical gap this study aims to close.

Methods: As Switzerland is among the first countries to have legislation in place that allows the use of emissions reductions abroad to meet domestic climate goals, an online survey experiment (n = 1520) was conducted in Switzerland to examine how environmental justice considerations shape public preferences for the location of climate policy implementation. The randomly assigned treatment consists of information on different global environmental justice principles and historical emissions by world region, and engagement was induced through a sorting task.

Results: The treatment, despite median engagement of more than 50 seconds, does not significantly alter support for emission reduction abroad to contribute to domestic NDCs, nor does it alter preferences for unilateral climate aid, multiple regressions show. These results will be enhanced by studying pre-registered heterogeneous treatment effects using supervised machine learning for heterogeneous treatment effects to understand for which groups the treatment is effective.

Conclusions: This study provides new insights into the complex relationship between costs, morality, and (ethical) international cooperation, which shape public opinion on addressing climate change.

Adapt now or mitigate later? Flood risk and oil revenue allocation in Namibia

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Sofia Henriks[1]
Gustav Agneman[2]
[1] University of Gothenburg
[2] The Norwegian University of Science and Technology

Introduction: Extreme weather events are increasing in frequency, intensity, and cost. While research on how these events shape climate attitudes and political outcomes is growing, there is still no consensus on whether exposure to such events change public opinion. The mixed results are often traced to correlational designs and how exposure is measured. However, we would argue that they also reflect the questions we ask. To this end, we examine how exposure to flash floods shape climate policy preferences. In contrast to work that expects extreme weather to shift general climate attitudes, such as concern and support for mitigation policies, we hypothesize that exposure primarily shift preferences toward adaptation policies.

Methods: We field a survey experiment in Windhoek, Namibia, combining randomized temporal risk information with an objective spatial flood risk measure, and a "divide-the dollar" task, asking respondents to allocate expected oil revenues between near-term adaptation and long-term mitigation policies. The data collections is expected to be completed early next year, with a planned sample of approximately 1,000 adult residents selected with a stratified sampling strategy across high- and low- flood risk neighborhoods. The set up of our experimental design let us tests whether (1) risk of flood exposure increase support for adaptation policies, and weather these effects are moderated by socioeconomic status, and previous flood exposure; (2) perceived flood risk leaves support for new offshore oil projects largely unchanged.

Results: We expect that risk information will shift concrete policy choices, rather than generalized climate concern and that limited resources make respondents prioritize adaptation over mitigation, as mitigation may function as a "luxury good". Additionally, that the main effect is moderated by previous exposure, measured through proximity to river beds.

Conclusions: By shifting the lens from general climate concern and mitigation, towards adaptation, the study clarifies when and how extreme weather translate into political attitudes, and whether it is primarily for policies that help people live with climate change, rather than long-term prevention.

Could rationing for climate mitigation be perceived as fair? A survey experiment

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Oskar Lindgren[1]
Sverker Jagers[2]
[1] Uppsala University
[2] University of Gothenburg

Introduction: The question of whether fuel rationing (henceforth, rationing) could be a fair climate policy instrument has recently gained traction among researchers. Proponents argue rationing is fair as it provides each citizen with a fair share, thereby ensuring that all individuals change their behaviour and preventing disproportionate burdens from falling on the least well-off. This paper casts a critical eye on this claim by highlighting the need to consider the various ways in which rationing can be designed and how people judge climate policies' fairness. Based on emerging empirical evidence, we construct a taxonomy of four common unfairness objections against climate policies: the equality objection, the needs objection, the merit objection and the harm-avoidance objection. After theorizing on alternative rationing designs, we present hypotheses for how the design of rationing is likely to influence individuals' perceived fairness of the instrument. Our general theoretical claim is that individuals' unfairness objections to climate policies cluster around four main concerns – equality, need, merit and harm-avoidance – and that different policy designs vary in their ability to pre-empt these concerns.

Methods: We test these hypotheses through a preregistered conjoint experiment with roughly 1,000 respondents from a European country (e.g., Sweden or the UK). To test whether particular rationing designs can pre-empt different unfairness objections, we measure respondent's agreement with each objection, employing subgroup analysis to explore whether respondents who endorse different objections favour different rationing designs. The main outcome variable will be respondents' choice of the fairer option from a pair of rationing proposals that vary randomly across four design dimensions. The survey will be fielded in January 2026 and we expect to have a full draft ready for NESS.

Results: We expect respondents' assessment of rationing to depend on which unfairness objection they endorse the most. For example, an individual considering climate policies unfair when they treat people differently (*the equality objection)* will prefer a rationing system with equal allocation and no individual trading, as this would ensure equal treatment.

Conclusions: To be presented in NESS manuscript, but our hypothesis is that respondents' unfairness objections (i.e., their fairness preferences) will influence their design preferences.

Everyday Adaptation and Policy Legitimacy under Arctic change: Insights from a Place-Based Survey Experiment with the Iñupiat Community of Wainwright

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Caroline Schill[1, 2, 3],Simon West[2, 4], Kinga Psiuk[5]
[1] Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences, Stockholm, Sweden
[2] Stockholm Resilience Centre, Stockholm University, Sweden
[3] Anthropocene Laboratory, Royal Swedish Academy of Sciences, Stockholm, Sweden
[4] Crawford School of Public Policy, Australian National University, Canberra, Australia
[5] Centre for Sustainability Transitions, Stellenbosch University, Stellenbosch, South Africa

Introduction: Drastic environmental change in the Arctic is the “new normal,” yet how local communities perceive and adapt to these changes remains insufficiently understood. In partnership with the Iñupiat community of Wainwright, Alaska, we first examined which environmental changes matter most to residents, and how these affect subsistence lifestyles (Fieldwork 1), and then how environmental policy and governance approaches may support or hinder local adaptive capacity (Fieldwork 2). Combining interpretive and behavioural social-science methods, we aimed at developing a community-grounded understanding of everyday adaptation and policy legitimacy.

Methods: We used participatory photography, photo elicitation, and interviews in Fieldwork 1. In Fieldwork 2 we examined perceptions of "top-down" versus "co-developed" hunting regulations via a pre-registered survey experiment, designed based on priorities and governance concerns identified in Fieldwork 1.

Results: Fieldwork 1: Residents highlighted thinner sea ice, ice forming farther from shore, and permafrost thaw causing land shifts and erosion. Hunters and non-hunters tended to notice different changes. Impacts on subsistence lifestyles were mainly experienced as shifting hunting seasons requiring flexibility and preparedness. While such changes prompted ongoing adaptation, they were not viewed as alarming. Stronger concern centred on the threat of restrictive top-down regulations that could constrain local adaptive strategies – reflecting issues of policy legitimacy and “interrupted agency.” These insights shaped the experiment phase.
Fieldwork 2: We hypothesized that top-down governance would be seen as more constraining and less conducive to adaptation, and less fair than co-developed governance. Preliminary results (N = 30 per treatment, over 10% of Wainwright’s adult population) show no significant treatment effects. Respondents in both scenarios felt that hunting regulations, regardless of how developed, would limit the community’s ability to adapt, and no fairness differences emerged.

Conclusions: We provide novel empirical insight into how Arctic Indigenous communities interpret environmental change and assess the legitimacy of external policy interventions. Methodologically, it introduces ‘place-based survey experiments’ as a core innovation, showing how experimental designs can emerge from interpretive fieldwork, community priorities, and local governance realities. Integrating constructivist and behavioural approaches can advance theoretical debates on policy legitimacy while offering a methodological pathway for more context-sensitive and trusted environmental governance research.

Fee & redistribution - a silver bullet for effective and accepted climate policy for food and air travel?

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Jörgen Larsson[1]
Emma Ejelöv[1], **Jonas Nässén**[1], Niklas Harring[2]
[1] Chalmers university of technology
[2] University of Gothenburg

Introduction: Food consumption and air travel account for nearly half of the climate footprint of Swedish households. Technological solutions have limited potential to reduce emissions in these sectors in the near term. New policy instruments targeting consumer behavior are therefore needed. Traditional climate taxes often face low public acceptability. A climate fee and redistribution design, in which revenue is returned to all residents as an equal cash payment, has been proposed as a possible solution. However, little is known about public attitudes toward such policies across countries.

Methods: Data were collected through a survey administered by Yougov in Denmark, Germany, France, Poland, Italy, and Spain in October 2024. Approximately one thousand respondents per country participated. Respondents were randomly assigned to one of four policy descriptions: one tax directed to the general budget and three framings of a fee and redistribution design, focusing on a general description, an effectiveness rationale, and a fairness rationale concerning low income households.

Results: All versions of the fee and redistribution policy for air travel and meat received significantly higher acceptability ratings compared to the tax directing revenues to the general budget. Differences between the redistribution framings were very small and not significant. Across all models, subjective financial outcome was the strongest predictor of acceptability. Expecting to be positively affected predicted substantially increase support.

The analysis also compares subjective and objective financial outcomes of a fee and redistribution system. The objective outcome is calculated based on respondents' self-reported consumption of beef and air travel. Preliminary calculations show that a substantial majority of respondents would benefit financially. However, only about a quarter of those who would actually gain recognize this, and a similar share incorrectly believe they would lose.

Conclusions: Fee and redistribution designs generate higher public support than traditional climate taxes. Subjective financial outcome was the strongest predictor of acceptability. However, many respondents misjudge their financial outcome, which limits the potential support that such policies could achieve. Successful communication is likely necessary to fully realize the acceptability benefits of redistribution-based climate fees.

From Affordability to Climate Action: How Social Safety Nets Enable Public Support for Higher Energy Prices

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Pär Dalén[1]
[1] Swedish Institute for Social Research, Stockholm University

Introduction: The European energy crisis beginning in 2021 created a policy dilemma: while citizens support renewable energy in principle, immediate cost concerns undermine acceptance of higher prices required for decarbonisation. Existing research on welfare states and environmental policy has focused on broad regime typologies or overall spending levels, overlooking how specific social policy instruments shape public attitudes. This study examines two mechanisms: long-term, means-tested social assistance providing structural income protection, and temporary energy support measures introduced during the 2021–2022 crisis. The theoretical argument proposes two pathways: welfare programmes enhance citizens' ability to afford higher energy prices by reducing economic hardship, and safety nets for vulnerable groups foster solidarity, making others more willing to support costly environmental measures.

Methods: The analysis combines individual-level data from Eurobarometer 97.4 conducted in 2022 (N approximately 20,142) with country-level indicators from the Social Policy Indicators database and the Organisation for Economic Co-operation and Development Energy Support Measures Tracker across 23 European countries. Multilevel regression models test direct effects, mediation via self-experienced economic hardship, and cross-level interactions between climate worry and social assistance generosity. The study examines two dependent variables: ability to afford higher energy prices and willingness to pay higher prices for renewable energy.

Results: Preliminary analyses show that generous social assistance is positively associated with both ability to afford and willingness to pay higher energy prices for renewable energy. Part of this relationship is mediated by reduced economic hardship, supporting the affordability pathway. The positive association extends beyond economic capacity alone, suggesting a broader legitimising effect of welfare generosity on climate policy acceptance. The effect of social assistance is strongest among citizens concerned about climate change: economic security enables environmentally motivated individuals to translate concern into support for higher energy prices. Temporary energy support measures show no significant association with either outcome, implying short-term crisis interventions lack institutional and symbolic effects needed to sustain public backing for decarbonisation.

Conclusions: These findings demonstrate that structural welfare provisions reduce vulnerability and reinforce moral and political foundations of collective climate action. Long-term welfare programmes protect those most exposed to energy price shocks while building broader legitimacy for climate transition policies.

How wealth legitimacy shapes public preference for climate policies targeting the rich

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Kajsa Emilsson[1]
Håkan Johansson[1], Max Koch[1], Jayeon Lee[2]
[1] Lund University
[2] University of Gothenburg

Introduction: The rich contribute disproportionately to carbon emissions and climate impacts, motivating calls to shift mitigation focus toward the "super-rich" and other high emitters (Otto et al. 2019; Schöngart et al. 2025; Wiedmann et al., 2020). Proposed approaches include targeting high-emitting practices directly or targeting income/wealth given the strong association between affluence and emissions (Chancel 2022). While policy-specific beliefs are known to shape public support for climate policy (Bergquist et al. 2022; Coleman et al. 2022), there is still limited research on public support for policy instruments that explicitly target the emissions of the rich/high emitters. Drawing on deservingness research in social policy scholarship (Rowlingson & Connor 2011), we propose that perceived wealth legitimacy - whether wealth is seen as deserved and socially legitimate - helps explain why some people view the wealthy as appropriate targets of restrictions and taxation, while others resist targeted approaches.

Methods: We test this argument using representative survey data collected through the Swedish SOM survey of 2025. The main outcome variable is support for climate policies targeting high emitters and the rich, measured by support for proposals such as bans on private jets, carbon taxes on luxury consumption, wealth taxation earmarked for climate mitigation, and restrictions on private fossil-fuel investments. Perceived wealth legitimacy is measured through (a) meritocratic/deservingness beliefs (e.g., hard work and education versus inherited advantage and social connections) and (b) evaluations of the wealthy as a social group (e.g., earned vs inherited wealth; societal contribution vs tax avoidance; political influence; perceived emissions and sustainability efforts) (Korom 2023). We estimate multivariate regression models controlling for socio-demographics, ideology/party orientation, and climate beliefs.

Results: We expect lower perceived wealth legitimacy to predict stronger support for targeted high-emitter policies, while stronger meritocratic beliefs predict weaker support.

Conclusions: By identifying **wealth legitimacy as a distinct fairness mechanism** shaping preferences for climate policies targeting the rich - beyond the role of carbon inequality information (Andretti et al. 2024; Nielsen et al. 2024; Nockur et al. 2025) - the study contributes to the understanding of a key legitimacy challenge in designing effective climate policies.

Making or Breaking Climate Policy Support: How Welfare State Generosity Shapes Carbon Tax Acceptance in Sweden

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Maria Nordbrandt Bergström[1]
Moa Mårtensson[1]
[1] Department of Government, Uppsala university

Introduction: Carbon taxes are widely recognized as an effective climate policy tool, yet they often face resistance from voters who perceive them as unfair and economically burdensome. While prior studies have examined how compensation strategies can alleviate these concerns, the role of the welfare state in shaping acceptance is still poorly understood.

Methods: This paper investigates how welfare state generosity affects public acceptance of carbon taxes, providing causal evidence from two rounds of conjoint survey experiments conducted in Sweden in 2023 and 2024, involving a total of 10,512 respondents. Participants repeatedly chose between policy packages combining varying levels of carbon taxation with either expansions or retrenchments in four core social protection programs: child benefits, pensions, unemployment insurance, social assistance, and sickness insurance.

Results: The main finding is that greater welfare state generosity enhances public acceptance of carbon taxes. The strongest positive effect comes from pension expansions – a preference consistent across demographic and political groups. The results also highlight a pronounced asymmetry: while welfare state expansions enhance support for carbon taxation, retrenchments lead to substantially larger declines in acceptability. This suggests that welfare state retrenchments damage climate policy support more than expansions strengthen it. Qualitative analysis of 5,854 open-ended survey responses further underscores the influence of deservingness perceptions in shaping respondents' evaluations. Moreover, a fiscal analysis reveals that recycling carbon tax revenue into welfare expansions is fiscally realistic, with most policy combinations avoiding deficits.

Conclusions: Overall, the paper makes two central contributions. First, it develops a more nuanced understanding of how established welfare state institutions can enhance or erode public acceptance of costly climate policies. Second, it provides robust empirical evidence that welfare state expansions represent a politically feasible strategy to foster broader support for costly climate policy while retrenchments are detrimental for public acceptance.

Measuring Eco-Social Risk and Its Implications for Support for Climate Action

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Manuele Citi[1]
Zhen Im[2]
[1] Copenhagen Business School - Department of Management, Society and Communication
[2] Lappeenranta-Lahti University of Technology - Department of Social Sciences

Introduction: Public opinion can constrain climate policy: as citizens experience the uneven costs and benefits of the transition, they might develop polarised attitudes towards it. The literature acknowledges that both climate vulnerability and climate policy vulnerability matter for public opinion. Recently, some scholars proposed to incorporate multiple dimensions of climate vulnerability (climate risk, climate-related job vulnerability, policy vulnerability) into a single concept termed eco-social risk. This concept links environmental hazards with social vulnerability and institutional protection, as households may simultaneously confront physical climate hazards, distributional exposure via job losses in carbon-intensive activities, and variable protection through welfare and environmental policies.

Methods: We contribute by providing an empirical measurement of *eco-social risk* based on the operational definition provided by Mandelli and colleagues (2024) and then testing it on three climate attitudes: worry about climate change, willingness to pay for climate mitigation, and perceived fairness of climate policies. We combine country-level data with an original citizen survey fielded in 11 advanced democracies. The survey includes demographically representative samples from the United States (n = 4,000) and Denmark, Finland, France, Germany, Italy, Poland, Sweden, the United Kingdom, South Korea, and Norway (n = 2,000 each).

Results: First, we find that there are sizeable cross-national differences in the level of eco-social risk. Second, we find that there is a non-linear (quadratic) relationship between eco-social risk and worry for climate change. We also find that the relationships between eco-social risk and willingness to pay for climate mitigation and perceived fairness of climate policies are curvilinear. By integrating climate exposure, employment vulnerability, and institutional protection into a single measure and documenting their non-monotonic association with climate attitudes.

Conclusions: This study highlights the importance of perceived eco-social risk in individual attitudes toward costly climate policies, and empirically shows the complex, non-linear relationship between eco-social risk and support for climate action.

Ocean for Climate: Exploring Public Support for Carbon Dioxide Removal Policies

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Lauren Ebert[1]
Ekaterina Rhodes[1]
[1] University of Victoria, Canada

Introduction: Achieving net-zero emissions requires the removal and long-term storage of carbon dioxide emissions (CO2). While carbon dioxide removal (CDR) encompasses many methods, we focus on Solid Carbon, which proposes a permanent ocean storage solution. Due to the high cost of CDR technologies, solely voluntary adoption is unlikely, necessitating stringent public policy to incentivize large-scale deployment. Understanding public support for CDR-enabling policies is critical for designing publicly acceptable policy mixes, especially amid growing political divisions and affective climate polarization. This study examines public support for CDR-enabling policies in British Columbia, Alberta, Washington, and Oregon —key jurisdictions for Solid Carbon. This research asks: 1) What are the levels of support for different CDR-enabling policies across jurisdictions? 2) What are the characteristics of support for different types of policies? 3) How does coupling CDR-enabling policy with justice measures affect support? 4) Is there heterogeneity in public preferences for CDR-inducing policies?

Methods: We will survey a representative sample of citizens in the region by December 2025 (n=4,000). Respondents will rate their support for Solid Carbon technology and eight CDR-enabling policies, including three combined with justice measures. We also collect data on different CDR technology characteristics, policy and technology awareness, technology and environmentally oriented lifestyles, political orientation, trust, affective climate polarization, and socio-demographic factors. These variables serve as controls in predicting policy support. We will use descriptive and inferential statistics to answer our research questions, producing the first paper draft by May 2026.

Results: We expect compulsory policies, such as industrial carbon pricing and an emissions cap, to face greater opposition than voluntary policies like subsidies. However, we expect that levels of opposition may not be as high as those for economy-wide climate policies, given CDR's industrial focus. We will produce novel insights into public support for carbon takeback obligations, carbon contracts for difference, and border carbon adjustments. We expect higher opposition to CDR-enabling policies in Alberta, and that the inclusion of justice measures will increase support.

Conclusions: The results will provide practical insights for scaling the carbon removal sector, including identifying effective policy designs and the characteristics of opposition audiences to avoid policy backsliding.

Presentism and policy-tradeoffs among the public and politicians

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Troels Hedegaard[1]
Kristian Kongshøj[1]
[1] Aalborg University, Denmark

Introduction: Climate and Earth system scientists continue to issue urgent calls for immediate political action to address the escalating climate crisis (Calvin et al., 2023). While public support for stronger mitigation remains high (Andre et al., 2024), global climate action continues to fall short (UNEP, 2024). Scholars increasingly attribute this gap to *presentism,* the prioritization of immediate concerns over long-term challenges (Boston, 2021; Jacobs, 2011). This study advances the field in two key ways. First, research designs that include both decision-makers and the general public remain rare. Most existing studies focus on citizens, while a smaller number examine politicians in isolation. Public-focused research often rests on the assumption that if citizens support climate policies, politicians will be inclined to enact them. This perspective overlooks the role of politicians themselves and whether their temporal orientations differ from those of the public. Second, little is known about whether presentism shapes the prioritization of climate spending relative to other policy areas. Political decision-making rarely concerns support for a single policy in isolation; rather, it involves choosing among competing and equally pressing societal needs: *Do the public and politicians share similar preferences for public spending, and to what extent are these shaped by presentist attitudes?*

Methods: To study whether the public and politicians have similar preferences for public spending, and to what extent are these shaped by presentist attitudes we have collected surveys among both local policians (N=466) and the public (N=3008) in Denmark. Spending preferences are measured to a budgeting simulation of a windfall at the municipal level.

Results: The findings show that while the policians are markedly less presentist than the public then they only allocate a slightly larger share to climate initiatives (15 per cent of the budget versus 12 per cent for the population). Further analysis, based on a cluster analysis, also shows that only for a small subset of the politicians and the public are spending attitudes correlated with presentist attitudes.

Conclusions: Based on the results, we question whether presentism is a deciding factor explanation of lacking climate action, as parts of the literature suggests.

Self-interest and biased beliefs in policy perceptions: experimental evidence

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Steffen Kallbekken[1]
Nina Bruvik Westberg[1], Sofie Waage Skjeflo[1]
[1] CICERO Center for international climate research

Introduction: Public support is widely recognized as essential for successful climate policy implementation. Survey-based literature consistently identifies perceived fairness and perceived effectiveness as the strongest predictors of support for mitigation policies. This has motivated extensive research into revenue recycling and correcting misperceptions about policy impacts. However, individuals' self-interest, their own economic exposure to a policy, may also influence policy perceptions. If so, stated beliefs about fairness and effectiveness may not reflect stable preferences, but instead respond to whether individuals expect to be personally affected. Such belief updating could arise through directional motivated reasoning or strategic reporting. Yet, causal evidence on whether self-interest shapes stated policy beliefs remains limited. This study addresses this gap.

Methods: We conduct a preregistered online survey experiment (n = 2,000) to test whether being personally exposed to a climate policy causally affects beliefs about the policy's fairness, effectiveness, and support for the policy. The empirical setting is a hypothetical frequent flyer levy (FFL). Respondents are randomly assigned to a treatment group, which is told they would face the levy under the proposed policy, or to a control group, which is told they would not. The experiment tailors the scenario to each respondent using self-reported flight counts and random allocation to eligible levy thresholds.

Results: We hypothesize that exposure to the levy reduces perceived effectiveness, perceived fairness, and support for the policy. In exploratory analyses, we will examine whether these effects depend on the intensity of exposure (i.e., the number of levied flights). We expect the impact of personal exposure on beliefs and support to increase with the number of flights subject to the levy. We will also explore heterogeneous treatment effects by prior knowledge of FFL and political orientation.

Conclusions: If being directly affected by a policy causally shapes how people perceive policy impacts, aggregate public opinion becomes a biased signal of welfare trade-offs, potentially leading policymakers to reject efficient reforms based on motivated objections.

The macro-public's reaction to a climate assembly: Effects of media framings that emphasis process or results.

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Tim Daw[1]
Mikko Leino[2], Marina Lindell[3], Molly Lundgren[1], Simon Niemeyer[4], Frederik Pfeiffer[5], Lauri Rapeli[3]
[1] Stockholm Resilience Centre, Stockholm University
[2] University of Turku
[3] Åbo Akademi
[4] Canberrra University
[5] Gothenburg University

Introduction: Can discussions within a climate assembly influence broader publics? Climate assemblies allow random, diverse groups of citizens to deliberate and advise on climate policy. While their direct influence on policy has been scrutinised (with mixed results), less is known about their potential as trusted intermediaries for the public on complex policy areas. Experimental studies using vignettes, have shown public legitimacy of citizens' assemblies are affected by outcome favourability and perceptions of process legitimacy and inclusivity. However almost no empirical studies explore the effects of real-life media coverage and framings.

Methods: Our survey experiment tests the effects of two clips from Swedish Television, and/or factual text about the Swedish Climate Assembly (SCA). One clip emphasises the diversity of SCA members and their deliberative process, the other emphasises high ambitions of the SCA's recommendations. A demographically representative sample of 3000 from a randomly-selected national panel were allocated into one of five treatment groups with combinations films and/or text information and compared with a control group who received no information. We test the effects on subsequent survey items capturing percieved saliency, urgency and skepticism towards climate change, as well as support for climate policy measures, some of which are explicitly mentioned by the films and text treatment. We evaluate whether co-variates such as political attitudes, education, demographics, political trust and media habits demonstrate heterogeneity in the responses to media. For example whether more typically skeptical respondents demostrate a 'backfire effect', or show greater movement due to information that contrasts their existing views. We also test whether proceedural perceptions of the SCA, e.g. that participants included 'people like me', were competent, or received biased information have a mediating effect.

Results: The data were collected in mid-2025 and will be analysed with regression models to test pre-registered hypotheses about the effects of film and text treatments on climate salience, skepticism and support for policies. Interaction terms will be used to test for heterogeneity by political ideology, and we will explore whether perceptions of the SCA mediate any of these relationships.

Conclusions: We discuss implications for the potential role of climate assemblies, and for strategies to communicate about them.

The moral hazard of non-CO_2 mitigation in aviation

3. Closing the legitimacy gap: Advancing research on environmental policy attitudes

Steffen Kallbekken[1]
Marie Kirkedam[1]
[1] CICERO Center for International Climate Research

Introduction: This study investigates whether communicating a new low-disruption mitigation option in aviation, navigational contrail avoidance (NCA), affects public support for and perceptions of conventional CO_2-oriented climate policies. Contrails are thin ice-clouds formed by aircraft that may cause up to half of aviation's total warming. Avoidance involves small route adjustments to prevent flights through ice-supersaturated regions and could cut aviation's climate impact by up to 25%. However, if the public perceives this as a sufficient "fix", it might crowd out support for climate policies in aviation. The survey experiment is the first to test to what extent such moral hazard effects arise for NCA, and whether communicating uncertainty about avoidance mitigates any such effects.

Methods: We will conduct a pre-registered survey experiment across India, the UK, the USA and South Africa (N=800 per country). The four countries are selected as they represent substantive variation in economic development, aviation habits, culture, and climate policy context. Participants will be randomly allocated to one of three groups: Positive information about NCA, information about NCA stressing uncertainties, and a control group receiving no information about NCA. The main outcome variable is the level of support for four policies: A CO_2 tax, a Sustainable Aviation Fuels mandate, a mandate for hybrid/electric aircraft on short-haul flights, and a ban on short-haul flights; and three personal actions: Flying less, taking holidays closer to home, and purchasing carbon offsets when flying. We will test whether providing information about NCA 1) crowds out support for aviation polices and personal actions; 2) this crowding-out effect is stronger for the more disruptive mitigation options; and 3) whether communicating uncertainties of NCA reduces the crowding-out effect.

Results: The survey has not been fielded yet, but will be within a few weeks. We expect to observe some level of crowding-out, which in this context would entail that providing information about NCA diminishes support for other mitigation measures and personal actions.

Conclusions: This study provides the first quantification of the potential moral-hazard effects of NCA, clarifying whether it reinforces or substitutes established mitigation measures and to what extent its' overall climate effectiveness depends on avoiding such behavioural feedbacks.

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

On many accounts, environmental law has been a legal and governance success story of the 20th century, especially in the Global North. Despite post-war pressures, the ozone layer is recovering, and local gains have been made in species, habitats, and air and water quality. Yet, systemic and global environmental challenges (i.e., biodiversity loss, climate change and pollution) are pressing on, entwined with economic and social drivers across the globe. Although many legal measures have been taken to address these problems, they continue to escalate, leading many to question environmental law's ability to address systemic issues.

The session explores, from a legal perspective, why environmental law falls short of its goals and how the gap between ambition and implementation can be bridged. The failures of environmental law and governance have often been explained with factors external to law, such as power imbalances, vested interests, consumer culture, marginalised groups' lack of agency, and institutional patterns like election cycles that sustain these dynamics. On other occasions, explanations have been sought from the flaws in the design of environmental law. Environmental law often relies on rigid, human-defined categories that clash with the interconnected nature of ecological systems, producing siloed approaches overlooking root causes. It also reflects an anthropocentric worldview, protecting nature mainly for human benefit and thereby leaving loopholes that allow harm. Critical scholarship highlights underlying extractivist and post-colonial dynamics. However, legal systemic structures arguably also play a key role. By exposing systemic legal barriers to environmental goals, we aim to identify specific legal changes to strengthen environmental law's effectiveness. We ask:

1. How do legal systems (conceptual, constitutional, procedural etc.) – by themselves or with links to other systems (e.g., the economy) – interact with environmental legal instrumentation dampening its impact?
2. How can such legal systemic counter forces be navigated and their legal systemic impact evaluated?

Fully drafted manuscripts on institutional and legal dynamics across governance levels and sectors (e.g., EU–member states, constitutional–environmental law) are especially welcomed.

Convenors
Niko Soininen, Law School, University of Eastern Finland, Finland
Seita Vesa, Law School, University of Eastern Finland, Finland
Suvi-Tuuli Puharinen, Law School, University of Eastern Finland, Finland

Bridging silos and governance levels to better mitigate climate change and air pollution: Challenges and opportunities in the EU's multilevel system

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Niklas Löther[1]
[1] University of Eastern Finland

Introduction: Unlocking synergies while avoiding trade-offs between different environmental objectives is an ongoing challenge for the European Union (EU). Interconnected problems like climate change and pollution demand integrated solutions, as do Article 11 TFEU and the European Green Deal (EGD). Indeed, to maximise effectiveness, these problems' governance must be integrated not only horizontally within EU institutions but also vertically, across levels of governance. Yet, while policy integration is stated ambition and legal principle in the EU, institutions implementing its environmental objectives often work in silos, limiting coordination between policy sectors and governance levels.

Methods: I analyse whether and how the EGD's implementation affected policy and vertical integration over time, with integration between climate and clean air governance as a case study. The EGD combines climate and pollution objectives in one strategy and calls for all levels to collaborate in the implementation. Using an analytical framework capable of evaluating and comparing levels of policy integration across jurisdictions and time, I trace its effectiveness in reshaping key sectoral policies and laws on the EU-, national- and city-levels. Specifically, Italy with Milan and Finland with Helsinki are case jurisdictions. By comparing them, I investigate where progress occurred and where it is lacking. In triangulation with 17 key informant interviews, this serves to identify political, legal and institutional obstacles - as well as potential pathways - to a more integrated approach.

Results: Overall, the EGD's horizontal integration has had only limited effect on sectoral silos and proved less successful still in advancing greater vertical integration. While policy integration progressed considerably in some jurisdictions, it unravelled in others, so I find no coherent approach across all levels of governance. Key barriers include systemic reasons, rooted in both the EU's general multilevel governance framework and specific climate and clean air laws, as well as more contextual political factors.

Conclusions: Combining insights from multilevel governance and policy integration - too often treated separately in previous research - enables me to suggest targeted legal and policy interventions to overcome silos within *and* across different jurisdictions. This new approach can also be applied to other policy integration issues in multilevel contexts besides EU environmental governance.

Can critical raw materials regulation be leveraged for better operationalization of climate and biodiversity policies?

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

David Langlet[1]
[1] Uppsala universitet

Introduction: Climate change and biodiversity loss are major contemporary challenges and often described as parts of a triple planetary crisis. Despite policy and legal measures to address them being developed at least since the 1990s, these problems persist. Increasingly, they are also seen as interconnected. The pursuit of a 'climate transition' often comes with impacts on biodiversity. While biodiversity impacts from e.g. deployment of wind power have been rather extensively researched other facets of the relationship between climate and biodiversity policy remain poorly understood, not least in terms of how conflicts play out in the legal operationalisation of such policies and how they are affected by procedural and institutional features of legal systems.

Measures aiming to secure access to critical raw materials (CRMs) have expanded rapidly in recent years. While CRMs play a vital role in the energy transition, as well as many security-related applications, extraction, processing and sometimes also use of CRMs tend to have significant impacts on biodiversity.

Methods: The paper will trace the policy processes preceding the adoption and the subsequent evolution of substantive and procedural instruments aimed at securing access to CRMs to reveal how biodiversity and climate concerns have been acknowledged and catered to. Legal acts affecting European and Swedish self-sufficiency in CRMs will be looked at through legal dogmatic analysis and from a comparative perspective. The interaction between relevant features of EU and domestic law will be discussed based on theories of multilevel governance and policy integration and coherency.

Results: The paper will reveal to what extent and how climate and diversity objectives are recognised and operationalised in the pursuit of increased self-sufficiency of CRMs in a European and Swedish context and what substantive and procedural elements determine the realisation of such objectives in CRM-related legal processes.

Conclusions: The conclusions will enable better understanding of how delivery on and balancing of climate and biodiversity objectives are affected by the rise of CRM self-sufficiency as a core interest at EU and Swedish level and to what extent and how legal instruments operationalizing CRM policy have potential to support achievement of climate and biodiversity objectives in a balanced way.

Exceptions and exception options of EU's Nature Restoration Regulations in relation to its Habitats, Birds and Environmental Liability Directives

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Volker Mauerhofer[1, 2]
[1] Ghent University, Ghent, Belgium
[2] /Meiji University, Tokyo, Japan

Introduction: The Nature Restoration Regulation (NRR) of the European Union (EU) entered into force 2024 and added norms to the existing restoration rule of law. It has already initiated extensive scholarly discussion about its general scope and impact for the years to come. But its detailed relation to the existing EU rules related to its exceptions and exception/suspension options have attracted less scholarly attention in law yet.

The existing legal framework does not show such exceptions and exception/suspension options. Despite, the new norms could be seen at the first view as an trial to weaken the existing legal framework in the sense of "the empire strikes back" of the topic of this Workshop 4. While the new norms have been explicitly announced to be introduced in order to support and complement the existing legal framework on restoration.

Methods: Methods applied are various legal interpretation methods within an overall hermeneutical research approach.

Results: The paper will first provide an general overview on the relation among species, habitats and habitat types covered by the new and the existing rule of law. This overview provides a more profound understanding of the scope of these two legal systems and particular how they differ and how they overlap.

Afterwards, first a general overview on the system of a suspension option, of obligations with its general exceptions and exception options will be provided. This part will divide also between the general obligations (Art. 4 and 5 NRR) and the specific ones (Art. 8-13 NRR).

Second, the suspension, general exceptions and the exception options of the NRR will be scholarly explained related to the existing rule of law of the EU, in particular the Habitats, Birds and Environmental Liability Directives as well as further legal acts. The respective exceptions and/or the exception options will be analysed, also in the context of the overall endeavour of the NRR as well as the existing jurisdiction of the Court of Justice of the EU.

Conclusions: It is possible to interpret the new rules in a – admittedly rather reductionistic - way that they support and complement the existing legal framework.

Permitting Fisheries in Baltic Sea Natura 2000 Sites: Legal-Systemic Obstacles to Effective Environmental Control

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Niels Krabbe[1, 2]
[1] University of Gothenburg, Department of Law
[2] Åbo Akademi University Faculty of Human and Social Sciences, Law

Introduction: The Baltic Sea presents an example of how environmental law's formal requirements fail to translate into effective governance of systemic ecological pressures. Although EU law obliges Member States to assess and control activities that may significantly affect Natura 2000 sites, fisheries in and around Baltic marine protected areas appear to frequently proceed without environmental permitting, despite known risks of benthic disturbance, trophic disruption, and cumulative ecological effects. This paper examines the legal–systemic reasons behind this regulatory gap, focusing on how national permitting frameworks interact with EU environmental and fisheries law.

Methods: The study draws on analyses of available material from permitting procedures, including administrative decisions, guidance documents, and legal frameworks relevant to fisheries operating in or affecting Baltic Natura 2000 sites. These sources are examined through doctrinal legal analysis, with particular attention to the interpretation and application of Article 6(3) of the Habitats Directive and to the structural interface between national permitting regimes and the Common Fisheries Policy. The method also incorporates a problem-oriented, systems-legal approach to identify how conceptual, procedural, and institutional factors shape regulatory outcomes.

Results: The analysis reveals three clusters of systemic legal obstacles. First, recurrent fishing activities are routinely characterised as "ongoing" rather than as new projects, despite EU case law requiring renewed assessment when risks of significant effects remain after site designation. Second, permitting practice inadequately integrates the ecological realities of the Baltic: indirect and cumulative effects—central to trophic functioning and benthic integrity—are seldom considered, and fishing operations are evaluated largely in isolation. Third, the interface with the Common Fisheries Policy introduces procedural and institutional barriers: measures affecting foreign-flagged vessels are complex to adopt, fisheries management tools dominate over environmental permitting, and administrative responsibilities remain fragmented.

Conclusions: These structural legal barriers collectively explain why environmental permitting currently fails to regulate fisheries impacts in Baltic Natura 2000 sites. Strengthening permitting practice requires clearer legal classification of recurrent fisheries as assessable projects, systematic incorporation of cumulative ecological effects, and improved coordination between environmental and fisheries authorities. Addressing these obstacles would enhance the capacity of EU and national law to protect ecologically vulnerable marine areas in the Baltic Sea.

Politics over environmental protection? The mechanisms behind the ability of the Swedish government to circumvent environmental laws

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Tara Olsen[1]
[1] University of Copenhagen

Introduction: One potential legal barrier to protecting the environment in Sweden is the ability of the government to circumvent environmental laws. The Swedish Cementa case provides an interesting basis to discuss the tensions within the mechanisms which allows governments to circumvent environmental laws. When the Land and Environment Court of Appeal denied the cement company Cementa to extend its permit due to an incomplete environmental impact assessment (EIA), the government proposed a new temporary law which was subsequently adopted by parliament. This allowed the government to circumvent the laws laid out in the environmental code in order to extend Cementa's permit without the need to update its EIA.

Methods: Within this paper, I plan to conduct a legal doctrinal analysis to explore the mechanisms that allow the circumventions of environmental laws through government powers. Moreover, I plan to explore whether this design within the Swedish legal system limits environmental protection in Sweden.

Results: I expect to include a legal analysis highlighting the mechanisms which allow for the circumventions of environmental laws within the Swedish legal system. This may include analysis on the separation of power between the legislative and judicial institutions, as well as the tensions between the proportionality and precautionary principles. The paper will further provide a discussion on whether such legal systemic designs limit the protection of environmental protection in Sweden and potentially suggest ways of navigating these tensions to ensure environmental protection.

Conclusions: I expect the paper to have provided insights on the mechanisms enabling the Swedish government to circumvent environmental laws and potential avenues to navigate this to strengthen environmental law's effectiveness.

Sovereignty Against the Climate: How U.S. Conceptions of Sovereignty Prevent Climate Action

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Dave-Inder Comar[1]
[1] Grotius Centre for International Legal Studies at Leiden University

Introduction: This paper will examine how the United States of America (U.S.) uses the language of "sovereignty" as a systemic legal counter force to undermine international environmental law and prevent the cooperation needed to halt global warming and transition off of fossil fuels. Across multiple administrations, but particularly in recent years, the U.S. has articulated an increasingly absolutist conception of sovereignty: one defined not by compliance with international legal rules, but by the rejection of any such rules as binding on the U.S. In the climate context, this posture is now blocking the development of an international legal regime that can restrain high-emission States. The result is a *de facto* "state of exception" whereby the U.S. can act outside of the law and in breach of the law whenever it deems fit. These dynamics threaten core principles of the international legal order, including the sovereign equality of States and the equal rights and self-determination of all peoples.

Methods: The paper conducts a doctrinal and discourse review of:

- U.S. written submissions to the International Court of Justice in the Climate Change Advisory Opinion;
- Statements by the U.S. executive branch emphasizing sovereignty in rejecting environmental obligations such as the Paris Agreement; and
- Statements related to sanctions imposed on the International Criminal Court, revealing broader patterns in U.S. conduct.

Other policy documents will also be reviewed.

Together, these sources illuminate how "sovereignty" is invoked as a justificatory framework for maintaining U.S. prerogatives to act outside of international law.

Results: Preliminary analysis indicates that the U.S. expressly relies on the concept of sovereignty as a counter force to international environmental rules. This has the effect of signaling to other powerful States that international environmental obligations are optional.

Conclusions: The U.S. conception of its own sovereignty is not consistent with core principles of international law or the international climate regime. Addressing climate change will require confronting this structural power imbalance. Empowering the international legal order to ensure compliance by powerful high-emissions States becomes an essential element of a stable climate. This may require new kinds of enforcement mechanisms and courageous policy choices from less powerful and vulnerable States.

Sovereignty, Legitimacy, and the Limits of Cross-Border Due Diligence

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Franca Angela Bülow[1]
Stephanie Christina Sousa Viera[2], Kathleen Evers[2], Saumya Satishbahai Raval[2], Jelto Zissis Makris[1]
[1] Leuphana University Lüneburg, Governance and Sustainability (INSUGO)
[2] Leuphana University Lüneburg, Law & Transformation/public and international law with a focus on sustainability

Introduction: Mandatory human rights and environmental due diligence (mHREDD) has become a central response to the failures of voluntary corporate responsibility in global value chains. European states have increasingly converted soft-law expectations from the UNGPs, OECD, and ILO into binding duties, narrowing the accountability gap that long allowed transnational corporations to hold rights without equivalent obligations. Yet mHREDD regimes expose sovereignty and legitimacy tensions that limit their effectiveness. Extraterritorial obligations generate overlapping claims to authority and often marginalise Global South actors, raising questions about whose norms prevail and how legitimate these regimes appear to affect states and communities. These dynamics highlight a deeper structural challenge: territorially bounded legal systems struggle to govern decentralised, cross-border production networks, constraining mHREDD's potential for transformative change.

Methods: We draw on political and legal theory to examine how mHREDD reconfigures sovereignty and generates new legitimacy dilemmas. We analyse how expanding corporate responsibilities interact with constitutional principles governing state authority, procedural constraints, and the systemic misfit between national legal orders and global supply chains.

Results: Our analysis shows that cross-border due diligence is reshaping state–corporate relations and generating legitimacy tensions. Sovereignty provides a key lens for understanding mHREDD's structural limits, as extraterritorial obligations create competing claims to authority that both challenge and reproduce existing hierarchies, especially constraining Global South states. Legal compliance often outweighs procedural transparency, while limited state capacity shifts oversight to NGOs and affected communities. Implementation also exposes inequalities in voice and representation, and national frameworks remain second-best to a robust multilateral regime. Hybrid governance arrangements, which increasingly cast corporations as quasi-regulators amid geopolitical tensions, reinforce these structural challenges.

Conclusions: Overall, our findings suggest that the shortcomings of environmental and human rights regulation cannot be explained solely by gaps in enforcement or corporate behaviour. Instead, they reflect deeper structural constraints embedded within territorially bounded legal architectures that struggle to govern cross-border production networks. Addressing these sovereignty and legitimacy tensions is therefore essential if mHREDD is to evolve from a compliance-driven model into a genuinely transformative form of transnational governance.

Spatial planning, wind power and municipal veto rights

4. Empire strikes back – legal systemic counter forces to ambitious environmental laws and how to navigate them

Aron Westholm[1]
[1] Department of Law, University of Gothenburg, Sweden

Introduction: Has strategic spatial planning played out its role in Swedish wind power deployment, due to municipal "veto rights" and rapid shifts in public opinion? This paper presents a study of Swedish municipal planning and municipal decisions concerning wind power deployment during the years 2009-2025.

In Sweden, municipalities are responsible for the planning of the land and water areas within their borders. This is often referred to as "the planning monopoly", as the central government has limited possibilities to interfere with the municipal planning. The main tool for determining the long-term use of the municipal space is the comprehensive plan. While not legally binding, it provides guidance in subsequent decisions concerning land-use. It is common that these comprehensive plans have appendices covering specific themes, such as wind power. An important function of these plans is to guide subsequent decision-making concerning land use, e.g. in environmental licensing processes. In 2009, a new provision was introduced to the Swedish Environmental Code, stating that for any new licenses for wind farms to be given, the municipality in which the farm was planned, had to give its approval. This is popularly referred to as the "municipal veto", as a park cannot attain a license without the approval. The municipal veto has been frequently discussed in the years since its introduction, as it is a political tool that highly affects the much-needed energy transition.

Methods: This paper compares municipal planning documents concernign wind power with decisions on the use of the "veto right" in municipalities in three Swedish regions in the years 2009-2025.

Results: The results will show if comprehensive plans still have a guiding function in the licensing process, and the "vetos" concern areas that are not indicated in the plans, or if the "veto" is unrelated to planning and is used without regard to indications in the comprehensive plans.

Conclusions: The paper will answer the question if Swedish comprehensive planning has played out its role as a strategic land-use instrument in relation wind power.

5. Whose knowledge counts? Co-creation in industrial and energy mega-projects in Arctic Fennoscandia

This workshop was cancelled by the convenors.

Across Arctic Fennoscandia, large-scale industrial and energy mega-projects - including mining of critical minerals, oil and gas development, hydropower, wind power, aquaculture, and industrial fisheries - are reshaping landscapes, seascapes, governance regimes, and livelihoods. These projects do not occur in isolation; rather, they produce cumulative and systemic transformations that many local communities experience as profound encroachments on land, waters, and cultural continuity.

This workshop asks: Whose knowledge counts in shaping these transitions, and whose voices hold authority in governance and decision-making?

Research and policy often focus on single projects or sectors, neglecting the cumulative and interconnected impacts on ecosystems, livelihoods, and culture. Western expert systems continue to dominate decision-making, while Indigenous knowledge, local perspectives, and long-term embedded research are frequently sidelined.

Large universities, despite their resources, often engage in short-term “helicopter” research, extracting data without sustained collaboration or cultural understanding. In contrast, smaller northern institutions and long-term fieldworkers emphasize co-creation, trust-building, and attentiveness to local realities, yet their contributions remain consistently undervalued. Although decolonial approaches and knowledge co-creation are widely endorsed in theory, in practice they too often remain tokenistic, invoked as slogans rather than enacted through the time, sensitivity, and reciprocity they require. Building trust and deep understanding cannot be achieved in one- or two-week research visits. In rapidly transforming land- and seascapes and livelihoods, continuous re-engagement, rather than one-off research trips, is essential.

We invite fully drafted manuscripts that address these challenges of epistemic dominance and fragmented research in the context of large-scale industrial and energy mega-projects in Arctic Fennoscandia. How can co-creation and inclusive governance become conditions sine qua non of research and policy? What forms of time, trust, and collaboration are required to make space for diverse voices and complex impact assessments in decision-making? A collective paper is anticipated as an outcome of the session.

Convenors
Thora Herrmann, University of Oulu, Finland
Karolina Sikora, Arctic Centre, University of Lapland, Finland
Stephan Dudeck, University of Tartu, Estonia

6. Governing global trade: Facilitating effective policy mixes from the local to the global

European countries are deeply embedded in the global economy, which often results in the outsourcing of environmental impacts to other regions. In response, a wide range of governance interventions has emerged to promote the sustainability of European supply chains. These include voluntary certification schemes, corporate commitments, binding human rights and environmental due diligence laws, and environmental provisions in trade agreements.

Despite these initiatives, multiple challenges persist. Policies often face limited legitimacy or support in producer countries, political pushback and dilution within Europe due to geopolitical tensions and competitiveness concerns, insufficient transparency and traceability along supply chains, as well as delays and gaps in implementation. Another challenge is to meaningfully incorporate the lived experiences of actors in producer countries into policy design and implementation, ensuring that these policies are responsive to on-the-ground realities. Beyond the shortcomings of individual instruments, the central challenge lies in designing a coherent policy landscape that fosters synergies and complementarities across different interventions, while avoiding conflicts and governance gaps.

Key questions include:

- What are the limitations of individual governance instruments, and how can these be addressed through well-designed policy packages?
- To what extent can experiences from different sectors such as mining, agriculture, and textiles, as well as from different countries and governance levels, provide transferable lessons?
- What implementation gaps persist in Nordic countries, and how might they be closed?
- How can scientific evidence inform policy debates in a European political climate that has become increasingly resistant to mandatory supply chain regulations?

This workshop invites fully drafted manuscripts that offer both theoretical and empirical contributions on the environmental governance of global supply chains, drawing on diverse cases, sectors, and national contexts. We seek comparative insights across these experiences while also aiming to identify policy mixes that can most effectively tackle sustainability challenges associated with global supply chains. Submissions using a wide range of methodological approaches are welcome, including qualitative, quantitative, and mixed-methods research.

Convenors
Johanna Coenen, Department of Political Science, Stockholm University, Sweden
Martin Persson, Physical Resource Theory, Chalmers University of Technology, Sweden
Malaika Yanou, Physical Resource Theory, Chalmers University of Technology, Sweden

Do Regulations Shape Outcomes? An Analysis of the Global Lithium Value Chain

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Yuru Yang[1]
André Månberger[1], Lars J Nilsson[1]
[1] Lund University

Introduction: The green revolution leads to new supply chains and geographical dependencies. This requires cooperation and consistency. Geographically, raw materials needed for green transition are unevenly distributed. Some resource-abundant countries lack proper or transparent policies while the importers at the same time demand thorough supply chain due diligence. Similarly, the refinery capacities are different in different countries. Countries importing final products must also conduct due diligence process in the midstream refinery countries as well. This study analyses the lithium raw material supply chain. We evaluate national polices from major exporters, refiners and users (e.g. Chile, Argentina, China, Japan, Korea and the EU) and voluntary industry led initiatives such as certification schemes.

Methods: This study applies a comparative policy framework analysis across the lithium value chain to analyze the national and regional legislation and policies, and certifications in producing, refining, and importing economies. Some emphasis will be given to the EU Corporate Sustainability Due Diligence Directive (CSDDD) and other relevant regulatory frameworks, initiatives and industrial certifications. By mapping out policies across production, midstream processing, and downstream market dynamics, the paper identifies governance gaps and to what extent different legislations and policies are compatible.

Results: The analysis is expected to reveal critical gaps in current policy frameworks across different economies, including insufficient coverage of midstream processing, the potential for green labelling, inconsistencies between national and international standards, and limited transparency in resource-abundant production countries.

Conclusions: Although some government entities have attempted to establish regulations and frameworks to build a resilient and transparent global lithium value chain, it is still very hard to monitor and regulate the lithium supply chain without strong international cooperation. To make the regulations such as the CSDDD more effective, cooperation with mid- and upstream economies are essential. More dialogues and information exchanges are needed to implement the directives.

Effects of Global Supply Chain Due Diligence Regulations: A Meta-Analysis of Governance and Implementation Dynamics

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Jens Newig[1]
Jelto Makris[1], Buelow Franca[1], Henrike Jost[2], Michel Ortland[2], Andrea Lenschow[2]
[1] Leuphana University Lüneburg
[2] Osnabrück University

Introduction: European efforts to regulate the sustainability of global supply chains – through due diligence laws such as France's Duty of Vigilance, Germany's Supply Chain Act, and the forthcoming EU Corporate Sustainability Due Diligence Directive – aim to address outsourced environmental and social harms. Yet despite their proliferation, evidence on their real-world effects remains fragmented across individual case studies, sectors, and jurisdictions. Persistent challenges include limited legitimacy in producer countries, implementation gaps within Europe, unclear interactions with voluntary governance arrangements, and uncertainties regarding corporate behavioural change. To contribute a systematic, cross-sectoral understanding of these developments, this study synthesizes the empirical literature on due diligence regulations and their governance implications.

Methods: We conduct a meta-analysis based on a comprehensive systematic review of 498 empirical and conceptual studies on human rights and environmental due diligence (mHREDD) laws. Building on an emerging case-survey design, we develop and apply a multi-dimensional coding scheme that captures regulatory design features, multi-level governance dynamics, power constellations, corporate responses, implementation challenges, and observed impacts. Intermediate steps include AI-assisted text analysis to identify patterns across regions, sectors, and actor constellations, followed by in-depth coding of cases structured around regulatory units, sectors, or country–product pairings. This approach enables comparison across diverse interventions and governance levels.

Results: We anticipate identifying recurring governance mechanisms and tensions surrounding mHREDD implementation, including capacity gaps among public agencies, legal ambiguities, layering with existing voluntary standards, and contested legitimacy in producer countries. Preliminary findings indicate strong concentration of research in the Global North, dominance of legal and conceptual papers, and limited empirical work on implementation dynamics. We expect to detect both intended effects – such as norm diffusion, increased transparency, and corporate restructuring – and unintended consequences, including supplier exclusion, governance fragmentation, and market leakage.

Conclusions: Our meta-analysis will generate comparative insights into how different policy instruments interact, complement, or conflict across levels of governance. The findings aim to inform the design of more coherent and context-sensitive policy mixes that bridge European regulatory ambition with producer-country realities, ultimately contributing to more effective and equitable global supply chain governance.

From Fragmentation to Coherence: Rebalancing Access and Risk in ASM Mineral Supply Chains

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Lena Easton-Calabria[1]
Constance McDermott[1]
[1] University of Oxford

Introduction: This research investigates how polycentric governance systems shape access and exclusion within artisanal and small-scale gold supply chains between the Amazon rainforest and Europe. Drawing on insights from polycentric governance and the theory of access, the study introduces the concept of polycentric lock-in to explain how fragmented and overlapping governance arrangements generate self-reinforcing patterns of exclusion across scales. These dynamics highlight a central challenge in governing global trade: how current policy mixes aimed at improving sustainability in supply chains can unintentionally reproduce regulatory gaps, market avoidance, and uneven risk distribution.

Methods: The study draws on semi-structured interviews, policy analysis, trade-flow analysis, and multi-sited fieldwork. Fifty-one interviews have been conducted across miners and civil society actors in the Amazon region and refinery leaders, industry actors, and policy officials in European regulatory and refining hubs. We also incorporate analysis of over twenty-five key regulatory and policy documents, trade data, and observations of refining activity and mineral governance meetings in Europe.

Results: Findings indicate that policy incoherence, reputational risk aversion, economic competition, and financial non-viability collectively reinforce exclusion for both upstream and downstream actors. These theorised regulatory, market, and economic lock-in mechanisms create feedback loops of mutual exclusion that persist despite stated efforts and commitments to overcome them. We find that refineries face substantial operational and reputational exposure while bearing responsibility for improving conditions beyond their governance capacity, while miners and local communities experience the heaviest consequences of disengagement. Interview and trade-flow data show that the boundary between legal and illegal gold is blurred, producing an "illusion of exclusion" in which avoidance strategies fail to prevent illicit gold from entering formal channels yet deepen marginalisation.

Conclusions: The findings suggest that fragmented and partially enforced governance instruments cannot be addressed through isolated interventions. Instead, more coherent policy mixes are needed to redistribute risk, facilitate feasible engagement in high-risk contexts, and incorporate the lived experiences of producer-country actors into policy design. Restructuring the global risk architecture of mineral supply chains may enable more equitable risk-sharing and improve socioenvironmental outcomes in regions affected by small-scale gold mining.

Global South Stakeholders in Public-Private Supply Chain Governance

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Lucas Villanueva Legler[1]
Lena Partzsch[1]
[1] Freie Universität Berlin

Introduction: New EU public legislation is emerging to regulate supply chains that were previously only overseen by voluntary sustainability standards (VSS). The legislation aims to prevent imports from causing harm in third (non-EU) countries. A central focus is on palm oil and soya, two sectors linked to human rights violations and environmental degradation in exporting countries, such as Brazil and Indonesia. Yet, scholars have highlighted the persistent underrepresentation of Global South stakeholders (GSS) in both public and private governance processes. Against this backdrop, this article provides an in-depth analysis of how GSS are considered in the policy design of supply chain governance: Do the parallel private and public governance channels provide new accountability pathways for GSS?

Methods: We look at the 2023 EU Deforestation Regulation (EUDR) and 2024 Corporate Sustainability Due Diligence Directive (CSDDD) alongside the most widely used VSS for palm oil and soya, namely the Roundtable on Sustainable Palm Oil (RSPO) and the Roundtable on Responsible Soy (RTRS). Our analysis is based on a qualitative content analysis of legislative texts, recent proposals for amendments, the VSS standards, and their respective implementation guidelines. In addition, we studied GSS submissions to the European Commission's "Have Your Say" platform, and conducted semi-structured expert interviews and participatory observations in stakeholder events.

Results: Our results show that GSS overwhelmingly demanded stronger regulation. Public laws and private VSS coexist with an emerging policy mix where VSS can support upstream engagement and on-site supervision. Both the public and private standards mandate (1) GSS consultations, but (2) EUDR and CSDDD originally meant to establish stronger sanctioning capacities. (3) While both public standards provide grievance mechanisms, only the original CSDDD would have introduced civil liability in combination with (4) a remedy clause.

Conclusions: GSS involvement in accountability processes remains weak and limited.

Green shipping corridors on the horizon? Multi-scalar and cross-national policy mixes for green ship fuel value chain development

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Hanna Bach[1]
Oliver Bugge Hunt[1], Teis Hansen[1]
[1] University of Copenhagen

Introduction: The maritime shipping sector, a hard-to-abate industry responsible for about 3% of global GHG emissions, remains heavily dependent on fossil fuels due to the limited availability of green ship fuels. To address the 'chicken-and-egg' paradox of adopting green fuels, an industry initiative to establish 'green shipping corridors' – zero-emission shipping routes between two or more ports where ships can refuel with the same type of green fuel – was launched in 2021. Since the sector is regulated at multiple levels –including the International Maritime Organization, the EU, national governments, and local port authorities – there is a complex, multi-scalar policy mix targeting different parts of green fuel value chains. This highlights the need for multi-scalar analysis and cross-country comparisons of the policy mix implications for the establishment of green shipping corridors.

Methods: We follow Pfeffer et al.'s (2025) suggestion to include the coordination of value chains in policy mix analysis to enable the identification of where drivers and barriers occur within a specific value chain. Empirically, we explore the implications of multi-scalar and cross-national policy mixes for the production, distribution, and consumption (onboard ships) of green fuels, through a case-in-case study of three green shipping corridor initiatives in the Nordic countries. Given the novelty of a value chain perspective in policy mix analysis, our conceptual aim is to refine its operationalisation for assessing multi-scalar policy mix coordination throughout value chains. The study's policy mix analysis is based on document analysis, including legislative texts, policy strategies, legal and technical guidelines, etc., as well as insights from interviews with regulatory experts and shipping companies.

Results: While still in the early stages, we expect to find scalar differences regarding policy focus throughout the value chain, which may be complementary but also highlight gaps in the policy mix. Furthermore, we expect cross-national differences in the level of policy support and the focus on specific fuels, pointing to potential barriers to creating green shipping corridors between countries.

Conclusions: The analysis will provide new insights into the parts of the value chain(s) that may need further policy support and at which governance level(s) such support should be implemented.

Hardening Seafood Sustainability Governance? Mapping Emerging EU Policy Mix and Its Implications for Global Value Chains

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Jelto Makris[1]
[1] Leuphana University Lüneburg

Introduction: The seafood sector supports food security and livelihoods but also generates socio-ecological pressures, including overfishing, habitat degradation, and labour abuses. In recent years, sustainability governance – particularly in the European Union – has begun shifting from predominantly private ordering toward mandatory regulations that might "harden" accountability for social and environmental standards in global seafood value chains. These include due diligence laws, market-access regulations, alongside existing international hard-law instruments (e.g., port state measures), each following distinct regulatory logics. While similar regulatory hardening has been examined in other sectors, its implications for seafood remain understudied. Moreover, it is unclear that binding regulations translate into improved sustainability outcomes – echoing Bartley's argument that transnational regulation can re-centre the state within hybrid governance regimes, but also Allison's analysis that fisheries governance often produces "big laws" with limited effects on the ground. This scoping paper therefore asks how the EU's emerging governance architecture is reshaping the regulation of seafood supply chains and what this may imply for social and environmental governance.

Methods: Drawing on document analysis and expert interviews with EU officials, industry actors, certification bodies, NGOs, and consultants (20-30 interviews to be done), the paper plans to map the evolving set of binding instruments in seafood governance, identify mechanisms through which they might contribute to regulatory hardening of sustainability governance, and explore actors' expectations regarding emerging governance and compliance challenges.

Results: Preliminary analysis indicate an emerging "hardening" through multiple points of pressure along the value chain: downstream firms face growing due diligence duties; exporters and producers encounter market-access rules on IUU fishing, forced labour, and food safety; and vessels and ports operate under intensified fisheries and port-state controls. These pressures are reinforced by expanding digital traceability infrastructures and potentially shifting roles for certification schemes and private standards, which increasingly operate in the shadow of re-centred state regulation.

Conclusions: As a scoping contribution, the paper does not assess realised impacts but highlights the need for research on how individual instruments – and, their interaction as a policy mix – shape practices and socio-ecological outcomes along global seafood value chains, including whether they foster meaningful improvements or primarily generate new compliance burdens and exclusions.

Legitimised by whom? New EU trade rules regulating forest and agricultural commodity supply chains

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Laila Berning[1]
Laura Walther[1], Rafaella Ferraz Ziegert[1], Cathrin Zengerling[1], Daniela Kleinschmit[1]
[1] University of Freiburg

Introduction: What are the legitimacy requirements for European Union (EU) extraterritorial trade regulations? While legitimacy requirements for political procedures beyond the state level are well-researched in the context of the EU issuing authoritative decisions that bind its Member States, EU decisions and policies also affect states beyond its Member States.

Methods: Drawing on legitimacy, accountability and normative power scholarship, we qualitatively analyse the perceived legitimacy of the new EU Regulation on Deforestation-free Products (EUDR) as a recent case of a unilateral extraterritorial EU trade regulation from the perspective of EU and tropical producer country public actors, particularly focusing on Brazil and Indonesia. Data include policy and legislative documents, media articles, key informant interviews and participant observations.

Results: We show how the EUDR's perceived legitimacy influenced its regulatory design and potential effectiveness in driving desired behavioural changes of target actors concerning halting global deforestation and forest degradation and associated human rights violations.

Conclusions: Our results suggest that including external actors in EU extraterritorial regulations *('throughput legitimacy')* is essential for effective policy outputs *('output legitimacy'),* even though it is not formally required in the EU legislative processes (*'input legitimacy').*

Scrutinizing Institutional Dependencies in the Sustainability Governance of Global Supply Chains

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Johanna Coenen[1]
[1] Stockholm University

Introduction: This paper aims to introduce the concept of *institutional dependencies* into the scholarly debate on global environmental and sustainability governance. It is increasingly recognized that no single public or private, national or international governance institution can address global sustainability challenges alone. Instead, a diverse set of public and private governance institutions have emerged to govern complex sustainability issues. Their interactions have become a growing focus of research. While existing scholarship has examined the complementarities, conflicts, and coexistence among various governance institutions, it has largely treated institutional dependencies only implicitly. I argue that explicitly recognizing and conceptualizing institutional dependencies offers a valuable lens for examining institutional interactions in global governance. A better understanding of the extent and ways in which the performance of one institution is contingent upon the existence or functioning of others can help identify not only vulnerabilities but also potential leverage points for more effective governance. To illustrate my argument, I present examples of institutional dependencies in the context of the sustainability governance of global supply chains.

Methods: This is a conceptual paper.

Results: In this paper, I define and conceptualize institutional dependencies, and present differnt types.

Conclusions: While research has long recognized institutional dependencies implicitly, greater attention to how institutions shape the conditions for others' performance remains essential. Acknowledging that an institution's effectiveness, especially in transnational settings, depends not only on its own capacities and resources but also on those of the institutions it relies upon underscores the need for measures that either support the functioning of these institutions or circumvent ineffective ones.

Seeing Like a Regulation: Sustainable Fisheries Standards Beyond the EU Territory

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Alin Kadfak[1]
Marie Widengård[2], Vanessa Jaiteh[3], Hanh Hai Tong Thi[4]
[1] Swedish University of Agricultural Sciences
[2] Gothenburg University
[3] University of Bern
[4] University of Sciences and Education, University of Da Nang

Introduction: European efforts to promote sustainable supply chains increasingly extend beyond the continent's borders. Among these, the European Union's Regulation on Illegal, Unreported, and Unregulated Fishing (IUU Regulation) has become a key instrument linking market access to environmental compliance.

Methods: Drawing on material from Ghana, Vietnam, and Thailand, we analyse how these countries have reconfigured their domestic fisheries management systems in response to EU pressures, and how implementation challenges and legitimacy gaps persist at the local level.

Results: Building on James Scott's notion of *seeing like a state*, this paper develops the concept of *seeing like a regulation* to explore how sustainability is rendered visible and governable through transnational legal instruments. We argue that the IUU Regulation embodies two forms of regulatory vision: *remote seeing*, which governs at a distance through digitalised traceability and certification, and *diluted seeing*, which flattens local socio-political complexities through standardisation.

Conclusions: The IUU Regulation exemplifies a broader policy mix through which the EU projects environmental responsibility along global supply chains, alongside the emerging Due Diligence Directive and trade-linked sustainability provisions. Rather than proposing policy solutions, the paper offers a critical account of what such instruments reveal about the possibilities and limits of governing sustainability through supply chains.

Structural Preconditions for Effective mHREDD: Unpacking Buyer-Supplier Dynamics in the Apparel Industry

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Vera Savulescu[1]
Luc Fransen[1]
[1] University of Amsterdam

Introduction: Mandatory human rights and environmental due diligence (mHREDD) legislation is expected to reshape corporate behaviour in global supply chains by promoting more sustainable production practices. However, these expected effects rely on structural assumptions about how buyer-supplier relationships function, including whether in-scope buyers hold sufficient leverage to influence supplier practices and whether they respond to mHREDD by supporting suppliers in addressing shortcomings rather than severing ties. Drawing on insights from the literature on power in global value chains, the paper develops a set of conditions under which mHREDD is expected to influence supplier behaviour and considers whether these conditions are reflected in actual sourcing dynamics.

Methods: The study examines power dynamics and patterns of interdependence between buyers and suppliers in the apparel industry, focusing specifically on the sportswear subsector. This subsector provides a useful best-case scenario for assessing mHREDD effectiveness, given its high market concentration, strong brand dominance, and the EU's position as a major importer. Using longitudinal trade volume data, the study measures the strength and duration of buyer-supplier relationships to observe how firms respond to due diligence obligations or the expectation of their enforcement. Relational metrics are combined with data on supplier characteristics, including certifications and sustainability performance, to analyse patterns of supplier turnover, shifts in sourcing geography, and changes in mutual dependence following mHREDD adoption or in anticipation of it.

Results: The analysis is expected to show whether buyers possess the structural leverage needed to influence suppliers and whether the conditions assumed to underpin mHREDD hold in practice. It may also reveal whether due diligence requirements lead to more sustained engagement with suppliers or reinforce existing tendencies toward disengagement when compliance risks emerge. In addition, the study is likely to uncover restructuring patterns, such as consolidation of supplier networks or geographic shifts in sourcing.

Conclusions: The study will assess whether the structural conditions necessary for mHREDD to generate transformative effects are present in the apparel sector. Insights from the sportswear supply network will inform broader debates on the feasibility of due diligence legislation, the constraints facing buyer-driven sustainability governance, and the implications of supply chain restructuring for suppliers and sustainability outcomes.

Voluntary sustainability standards can mitigate deforestation-export trade-offs

6. Governing global trade: Facilitating effective policy mixes from the local to the global

Eva Boonaert[1]
Janne Bemelmans[1], Martin U. Persson[2], Miet Maertens[1]
[1] Division of Bioeconomics, Department of Earth and Environmental Sciences, KU Leuven – Leuven, Belgium
[2] Physical Resource Theory, Department of Space, Earth & Environment, Chalmers University of Technology – Gothenburg, Sweden

Introduction: Agrifood trade is key for food security and climate change adaptation, but contributes to significant environmental impacts, including deforestation. The governance of sustainability in global food systems is shifting from the public to the private sector, with Voluntary Sustainability Standards (VSS) as the most widespread private governance instrument promoting sustainability through trade. However, their effectiveness in reducing deforestation at scale remains poorly understood as studies predominantly focus on farm-level analyses and overlook indirect land use change, spillovers, and broader trade-offs.

Methods: Here, we provide novel large-scale evidence by combining country-level analyses with innovative commodity-attributed deforestation data for seven major forest-risk commodities, 12 leading VSS, and 125 producing countries (2012 to 2020). We examine the relation between VSS coverage and deforestation, as well as potential trade-offs with export growth in forest-risk commodities, and further assess the role of VSS design.

Results: Overall, contrary to farm-level evidence, we find that VSS coverage is not significantly linked with reduced country-wide commodity-driven deforestation, but is associated with mitigating deforestation-export trade-offs. Associations vary across commodities—VSS coverage is linked with reduced deforestation in the palm oil sector but with increased deforestation in the cocoa and coffee sectors—and across VSS, which is explained by differences in design, with stronger enforcement, rather than stricter criteria alone, enhancing effectiveness. Results indicate that VSS can help reconcile export growth with forest protection, pointing to relative rather than absolute decoupling. Additionally, results point to temporal and cross-commodity spillovers linked to VSS.

Conclusions: This study provides evidence that private governance through VSS has the potential to reduce commodity-driven deforestation at scale, contingent on standard design, and that with certification, less forest is lost per dollar or ton exported, signaling progress toward more sustainable agricultural trade. Increasing VSS effectiveness in mitigating deforestation-export growth trade-offs requires prioritizing enforcement, addressing broader land-use dynamics, and stimulating uptake of certified commodities.

7. New directions in climate and environmental expertise

Experts play a significant role in shaping norms on how societies should respond to sustainability crises such as climate change, biodiversity loss, and plastic pollution. However, social science has not fully addressed recent shifts in the nature of expertise. There are indications of a rise of more policy-oriented and implementation-focused forms of 'transition expertise', which combines lay and scientific knowledge and operates through state and corporate networks (Frandsen & Hasselbalch, 2024). Likewise, sustainability consulting has become a significant business sector for advisory firms (Christensen & Collington, 2024). At the global level, concepts such as 'mega expertise' highlight new epistemic practices in global environmental assessments that aim to influence policy action (Lidskog, 2025). These developments reflect an increasing emphasis on making science policy-relevant and actionable to large scale societal transformations (Lidskog & Sundqvist, 2022) while retaining democratic sensitivity (Blok, 2019).

To advance research on expertise in the green transition, we invite environmental and critical social science scholars to explore how experts shape action across sectors and scales. Our ambition is to outline a research agenda that transcends disciplinary boundaries by reexamining traditional assumptions about experts and advancing novel conceptual frameworks and analytical tools. We invite scholars to develop an agenda that incorporates a three-pronged approach to examining emerging configurations of climate and environmental expertise: (1) Expert actors: Who is recognized as a legitimate green transition expert over time and across different contexts; (2) Expert content: What constitutes environmental expertise today, and what form of knowledge are marginalized; and (3) Expert context: What institutional conditions shape the role and authority of expertise in sustainability transformation?

Fully drafted manuscripts may address, but are not limited to, the following themes:

- Emerging forms of climate and environmental expertise and their role in shaping how states and organizations prioritize mitigation, adaptation and transformation efforts.
- Shifts in the authority and legitimacy of expertise, including whether environmental expertise is in decline, or is taking new forms.
- The significance of spatial, political, and cultural contexts in conditioning the role and influence of environmental experts.

Convenors
Rolf Lidskog, School of Humanities, Education and Social Sciences, Örebro University, Sweden
Søren Lund Frandsen, Department of Organization, Copenhagen Business School, Denmark
Jacob Hasselbalch, Department of Organization, Copenhagen Business School, Denmark

Being an expert in energy efficient renovation: forms of expertise beyond institutions and the epistemic

7. New directions in climate and environmental expertise

Chris Foulds[1], Sarah Royston[1], Ami Crowther[1], Aggeliki Aggeli[2], Rosie Robison[1]
[1] Global Sustainability Institute, Anglia Ruskin University, UK.
[2] BUILD, Aalborg University, Denmark.

Introduction: Considering the urgent need to reduce residential energy demand, this study examines how renovation expertise is constituted, claimed, and conferred in energy-efficient home renovations. We treat expertise as a form of authority tied to fluency – being understood, recognised, and validated within shared communities of practice and across actor networks. Focusing on relational and sociotechnical dynamics, we investigate who is treated as an expert in renovation processes, what kinds of knowledge are privileged or marginalised, and how these patterns shape retrofit outcomes.

Methods: We will utilise insights from four Knowledge Networks that were ran for ~12months in Lithuania, Hungary, Spain and Ireland. These place-focused Knowledge Networks involved both householders (with a mix of renovation experience) and renovation professionals (across a range of sectors and backgrounds), all of whom came together to develop renovation know-how through a series of interactive events. Together, these networks involved 140 individuals participating in 50 events. Our thematic analysis drew on 40 network member interviews (10/location) as well as reflective notes completed by the network organisers.

Results: Studies of expertise are dominated by conceptualisations of expertise as epistemic authority. However, we will analyse our data in conjunction with the Ancient Greek knowledge typology that says there is not only *episteme*, but also *techne*, *metis* and *phronesis*. We will explain four broader forms of expertise:

- Epistemic expertise: recognised fluency, status and authority regarding institutionalised codes and rules.
- Technical expertise: recognised fluency, status and authority regarding practical and material solutions.
- Metic expertise: recognised fluency, status and authority in localised adaptation, intuitive problem-solving and workarounds.
- Phronetic expertise: recognised fluency, status and authority in judgement, ethical considerations, big-picture social understandings or wisdom.

We will also reflect on interrelations. For example, how do power dynamics of expertise play out, including hierarchies? To what extent are those with less valued 'expertise' also people whose positionality means they are rarely heard? Who claims expert status, and how?

Conclusions: We argue for a relational reconceptualisation of (renovation) expertise, which looks beyond institutional credentials. Indeed, broader ideas of 'transition experts' will benefit from looking beyond the domain of professionals and intellectual training.

Contesting Climate Expertise: How the NGFS Reconfigures Authority at the Science–Finance Interface

7. New directions in climate and environmental expertise

Ian Gray[1]
[1] Johns Hopkins University

Introduction: New forms of climate and environmental expertise are emerging at the intersection of public administration, financial regulation, and global climate science. The Network for Greening the Financial System (NGFS)—a consortium of central banks developing standardized climate-risk scenarios—has become a central site where new expert actors gain visibility and authority. The NGFS formalizes collaboration between financial economists within central banks and climate scientists from integrated assessment modeling (IAM) teams, producing a hybrid expert community oriented toward portfolio and systemic risk management. Yet this expertise is uneven: NGFS scenarios offer strong coverage of transition risks stemming from policy and technological change, but physical climate risks remain a "blind spot" tied to IAM modeling limitations. This paper examines how distinct expert groups—central-bank researchers, IAM modelers, actuaries, climate scientists, and environmental advocates—struggle over jurisdiction and legitimacy as they seek to shape what counts as credible, policy-relevant climate knowledge at the "science–finance interface."

Methods: The study draws on approaches from science and technology studies and the sociology of public administration and includes (1) document analysis of NGFS scenario reports, technical papers, and consultations; (2) semi-structured interviews with central-bank staff, IAM modeling teams, financial regulators, and external critics; and (3) comparative analysis of debates surrounding NGFS scenario revisions (2020–2024).

Results: Preliminary findings indicate that NGFS work redistributes epistemic labor among expert groups and makes visible new forms of climate-financial authority. Central-bank analysts gain legitimacy as climate-risk interpreters, while IAM modelers become de facto standard-setters for what the financial sector can quantify. Meanwhile, actuaries, climate scientists, and advocates exert increasing pressure on the NGFS to integrate more heterogeneous, nonlinear representations of physical risks. These dynamics reveal not only competing claims to expertise but also tensions over whose knowledge is privileged or marginalized.

Conclusions: The NGFS exemplifies a new mode of regulation-oriented climate expertise in which authority rests on coordinating—and adjudicating between—diverse expert actors. Yet its dependence on IAMs constrain transformative ambitions. The case shows how evolving configurations of expertise shape, and limit, pathways for transformative climate action.

Counting Nature: The Rise of Statistical Expertise in Environmental Governance

7. New directions in climate and environmental expertise

Gisle Andersen[1, 2]
Monika Berg[3], Hogne Sataøen[3]
[1] Norce Research
[2] Centre for Climate and Energy Transformation (CET), University of Bergen
[3] Örebro University

Introduction: In recent decades, environmental governance has increasingly been influenced by expertise that converts ecological complexity into standardised, policy-relevant metrics. This paper explores the rise of statistical expertise in environmental policy, focusing on how infrastructures for measuring and representing ecosystems redefine the content and authority of environmental expertise. Ecosystem statistics constitute a new way of representing "Nature with a capital N", one that has gained broad legitimacy as both scientifically credible and politically actionable.

Methods: The paper combines historical and contemporary case studies from Norway to trace the development of nature statistics. Archival and policy documents are analyzed to compare early national natural resource inventories with the more recent Norwegian Nature Index. We also rely on 15 semi-structured interviews with representatives from government agencies, civic organizations and researchers. The analysis is guided by perspectives from science and technology studies and environmental sociology, particularly drawing on Thévenot's concept of "investments in forms" and Collins' notion of "interactional expertise".

Results: The findings show how nature statistics establish a new numerical mode of representation that renders ecosystems visible and governable. Quantification stabilizes shared standards of evidence and accountability, turning ecological systems into unified statistical entities that can be compared, optimized, and managed. Yet, ecological systems are measured through proxies such as biological indicators and depend on the processing, aggregation, and interpretation of data. The production of nature statistics relies on experts – ecologists, data scientists, and bureaucrats – who occupy a hybrid role at the intersection of science, administration, and policy implementation, creating a form of authority grounded in the ability to produce stable metrics rather than in disciplinary expertise alone.

Conclusions: Statistical expertise represents a distinct and increasingly influential form of environmental expertise. It rests on simplifying ecological complexity, not only in metrics but also in the processes that produce them. These processes transforms data on ecosystems into measurable wholes and relies on interactional expertise and the institutionalization of measurement systems and statistical procedures that link metrics produced. The rise of statistical expertise in environmental governance shifts both how nature is comprehended and how it can be managed, thereby redefining the epistemic and political boundaries of environmental governance.

Documenting carnivore presence in Sápmi: reindeer herding communities' knowledge claims from consultation to court

7. New directions in climate and environmental expertise

Camille Parguel[1]
[1] School of Global Studies - University of Gothenburg

Introduction: During recent decades, Indigenous Sami groups have been increasingly asserting their land rights before the courts. Here, I am focusing on reindeer herding communities on the Swedish side of Sápmi, which have been especially active in legal mobilisation. For a chapter of my thesis, I am analysing two series of administrative cases in which reindeer herding communities appealed a decision by the Environmental protection agency about minimum levels for carnivore population: Handölsdalen, Mittådalen and Tåssåsen committed to the first from 2020 to 2022, while Ran initiated the second in 2024.

Methods: Based on an analysis of policy and court documents as well as interviews carried out with participants, I am exploring how reindeer herding communities are engaging in consultations to decide on minimum levels for the presence of wolves, lynxes, bears and wolverines, and are following up by taking legal action. Approaching consultative spaces and courts as arenas for knowledge production, I am looking at how reindeer herding communities are challenging the other participants' 'knowledge claims' or 'epistemic arguments' (Panikkar 2020, 173) associated with proposed minimum levels. Far from just relying on existing knowledge, reindeer herding communities are also allying themselves with experts to co-create 'new technical knowledge' (Conde and Walter 2022, 150) for these particular policy and legal contexts.

Results: At consultations and court hearings, herders are sharing Sami traditional knowledge about damage caused by predators to reindeer. Allied researchers are also drafting reports feeding into these processes. Reindeer herding communities are thus combining traditional and academic expert knowledge. By contrast, one of the tasks of the Environmental protection agency is to produce biodiversity-related knowledge to inform policy-making. Civil servants and consultants are key to providing such technical expertise.

Conclusions: I am expecting that knowledge claims by different participants in consultations and court cases are linked to contrasting approaches to sustainability. On the one hand, reindeer herding communities may consider sustainability as sustainable reindeer herding that is not excessively pressured by predators. On the other hand, employees of the Environmental protection agency may assess sustainability from the angle of biodiversity conservation and see a decline in the carnivore population as a risk.

Economic forms of transition: power-to-x expertise between assetizing and commodifying green hydrogen

7. New directions in climate and environmental expertise

Julius Kob[1]
Julia Kirch Kirkegaard[1], Tom Cronin[1]
[1] Technical University of Denmark

Introduction: Departing from the intersection of valuation studies and political economy in science and technology studies, this paper approaches the crucial role of 'transition expertise' in the economisation of transition technologies as the dominant, technoscientific response to the socioecological crisis. Using the case of green hydrogen and 'power-to-x' technology, we posit that development and financing of transition technology can be seen as struggles between different forms and agents of expertise in constructing economic forms: After flattened enthusiasm in this emergent sector, green hydrogen 'after the hype' faces constraints not only materially but also in terms of financing. Market actors in the development of the European green hydrogen landscape seem to be divided along two trajectories competing for resources, in which one prioritises the build-out of integrated green hydrogen infrastructures as rent-producing *assets* (focusing on green hydrogen production, distribution and renewable energy grid balancing) and another prioritising more localised production of hydrogen derivatives (e.g. ammonia, e-fuels, and chemicals for industrial processes) as tradable market *commodities*. Each particular economic form – i.e., commodities for market exchange or rent-producing assets - requires different and potentially conflicting sociotechnical configurations and trajectories for them to be realised.

Methods: Based on a combination of planned expert interviews and observations in the European green hydrogen field - with e.g. technology and project developers, state and transnational agencies, financial institutions, market platforms – we are following struggles unfolding over the prioritisation between economic forms, and how these struggles to economise green hydrogen take shape in e.g. standards for 'green' hydrogen (RFNBO), techno-economic assessments, energy modelling and planning, project finance, and public funding and tenders.

Results: We discuss how the affordances and properties of different economic forms, relying on different types and configurations of expertise, produce different visions and trajectories of transition futures.

Conclusions: Two major conclusions are likely: in contributing to specific constructions of economic forms (asset and commodity), most types of transition expertise involved in green hydrogen further perpetuate consumption-and-production growth imperatives, while at the same time their struggles in realising competing economic forms are likely to hamper a coherent development path for green hydrogen-based decarbonisation altogether, further constricting manoeuvrability in an accelerating socioecological emergency.

Expertise in transition: Does incorporating social science to global environmental assessments make a difference?

7. New directions in climate and environmental expertise

Rolf Lidskog[1]
Karin M Gustafsson[1]
[1] Örebro University, Environmental Sociology Section, School of Humanities, Education and Social Sciences, Sweden

Introduction: What happens to the role of expertise in global environmental assessments (GEAs) when the social sciences are placed at the forefront? Historically, these assessments have been dominated by experts from the natural sciences. However, the growing recognition of the social dimensions of environmental challenges—and the framing of transformative change as a necessary response—has led to a more prominent inclusion of social scientists. Despite this shift, the role of the expert within such assessments has often been treated as uniform, irrespective of disciplinary background. Consequently, the evolving disciplinary composition of expertise and its practical implications for social scientists entering this role remain underexplored.

Methods: The study employs a qualitative research design based on ten in-depth interviews with social scientists who held leading roles in IPBES transformative change assessment as either Coordinating Lead Author or Lead Author. The interviews, each lasting between 60 and 90 minutes, were conducted digitally between June 2024 and January 2025. The data was coded and analyzed using the theoretical framework as guidance. A contextual thematic analysis was conducted, using *NVivo 14 Pro qualitative data analysis* software. These interviews provide insight into the dynamic of expertise in the assessment process, including expectations on expertise, capacity building throughout the assessment process, and relations between different forms of expertise within and across disciplines.

Results: The study identifies four significant findings. First, the expertise required for appointment as a GEA author differs from the expertise necessary to execute the GEA process. Second, when the composition of GEA authorship shifts to include more social scientists, these scholars are frequently assigned a distinct role as providers of interactional expertise. Third, GEAs exhibit oscillation between different overarching modes of interdisciplinarity. Fourth, the study highlights a persistent challenge: the absence of a self-critical perspective on the assessment process itself and on the role of IPBES in shaping transformative change.

Conclusions: The study contributes both empirical and theoretical insights into the types of expertise mobilized, the ways in which this expertise is utilized, and the broader implications for the evolving role of experts in interdisciplinary knowledge assessments.

From epistemic severing to epistemic pluralism? Investigating discursive practices of legitimation within the International Seabed Authority

7. New directions in climate and environmental expertise

Matteo De Donà[1]
[1] Aarhus University

Introduction: The International Seabed Authority (ISA) is an international organization (IO) with a conflicting dual mandate: on the one hand, it is tasked to regulate deep sea mining (DSM); on the other hand, it is entrusted to protect the marine environment in which DSM takes place. Over the last years, growing interest in DSM has intensified pressure on the ISA to make decisions that reconcile economic ambitions with environmental concerns. Against this backdrop, the ISA experiences the emergence of new organizations and regimes that may compete with it in the framework of an increasingly dense ocean governance landscape. While these developments may constitute sufficient reasons for the ISA to seek to legitimize its own governance role, additional legitimacy challenges arise from the epistemic front in which the ISA operates. Notably, given the organization's overreliance on scientific knowledge over other forms of knowledge, it has been argued that the ISA may run the risk of committing 'epistemic severing'. This does not only reveal that, as much as several other intergovernmental environmental organizations, the ISA exhibits epistemic selectivity. It also suggests that IOs can hardly afford to disregard demands for epistemic pluralism.

Methods: By mapping thematic patterns and analyzing the discursive practices through which the ISA legitimizes itself, this paper investigates how this IO addresses contestation of its epistemic authority. By doing so, it also explores if and how the ISA seeks to attain epistemic pluralism. Methodologically, the study uses a combination of qualitative content analysis and discourse analysis.

Results: The study is expected to produce new knowledge on how IOs respond to legitimacy challenges and navigate epistemic contestation in global environmental politics.

Conclusions: From both a theoretical and methodological perspective, the paper aims to contribute to the global environmental governance literature by establishing a link between (self-)legitimation practices and discursive manifestations of epistemic selectivity.

Global expertise in transition: comparing expert platforms at the global climate-health nexus

7. New directions in climate and environmental expertise

Holger Strassheim[1]
[1] Bielefeld University

Introduction: This paper centers on collaborative platforms of public policy advice and expertise at the nexus between global climate policies and global health. Policy nexus problems have been associated with fragmentation and unclear authority. At the nexus, fragmented institutions and authorities are transcending the boundaries between disciplines, sectors and policy areas, confronting policy actors with interdependencies. At the core of these and other challenges, however, seems to be a controversy about the very nature about the nexus itself, about who can claim responsibility and authority for how to define it and about the role of policy experts and advisors.

The climate-health nexus is a paradigmatic example of how expertise itself is shaped by discursive struggles, by power relations and competing claims for political as well as epistemic authority. It also seems that at the interfaces of global climate and health policies an especially rich 'ecosystem' of specific expert arrangements has emerged. There are various examples of new and emerging platforms of policy expertise including the *Lancet Countdown,* the *European Climate and Health Observatory and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).*

Methods: The paper is based on a semi-structured literature review of policy documents, project descriptions, governance guidelines, and thematic reports. It will also present some very first results of a qualitative network analysis mapping the various actors joining the expert platforms as well as the interlinkages between different platforms.

Results: Comparing these various arrangements and their underlying politico-epistemic logics can deepen our understanding of how policy expertise and advisory systems work under conditions of high uncertainty. It is shown that these policy expert platforms have developed a variety of politico-epistemic logics. The aim is twofold: firstly, to identify and compare existing politico-epistemic logics of dealing with uncertainty in and between expert platforms at the nexus; secondly, to get a better understanding of the structural and procedural characteristics of these expert arrangements, their characteristic conflicts and contestations.

Conclusions: The results of the paper will also shed some light on the potential of global expert platforms at the nexus of climate and health policies to produce more robust and acceptable knowledge.

Scenario spaghetti: Unpacking the Science-Based Targets net-zero standard for the financial sector

7. New directions in climate and environmental expertise

Erlend A. T. Hermansen[1]
Ida Sognnaes[1], Linda Soneryd[2], Göran Sundqvist[3]
[1] CICERO Center for International Climate Research
[2] Stockholms Universitet
[3] Göteborgs Universitet

Introduction: The Science-Based Targets initiative (SBTi) develops guidance for aligning company-level climate action with limiting global warming to 1.5°C, typically implying net-zero GHG emissions by 2050. A main pillar in the SBTi's work is to develop and manage *standards* for how decarbonisation can be distributed across sectors and time to reach net-zero GHG emissions. As such, the SBTi clearly displays ambitions to formalise future corporate mitigation efforts. Such standards inevitably include ideas about the future, more specifically when different emissions need to be reduced to certain levels, commonly expressed through emissions scenarios generated by Integrated Assessment Models (IAMs). IAM scenarios, however, contain a large range of different mitigation options at different timescales, consistent with varied pathways towards net-zero. Thus, alongside the SBTi ambition to formalise and constrain corridors for climate action on the one hand, the use and application of scenarios inevitably comprise expert judgments on the other, regarding which scenarios to rely on and which ones to discard.

Methods: Drawing on extensive document analysis, this paper unpacks the SBTi net-zero standard for the financial sector (FINZ), with a particular focus on the selection of certain emissions scenarios over others.

Results: We show that, while the end point is already decided by the SBTi (i.e. net zero GHG emissions by 2050), the FINZ standard (and SBTi standards in general) contains a vast space for expert judgment in terms of scenario selection. We demonstrate this in two ways. First, in the *making* of the standard, deciding which scenarios should form the basis of the standard, and are made eligible for meeting its criteria. Second, when *applying* the standard, financial actors must still make a number of judgments and choices within the formalised constraints of the standard. We show that this combined room for judgment results in several potential inconsistenccies across sectors and time, leaving considerable uncertainty and unpredictability, which runs contrary to the SBTi's aim of giving stakeholders 'confidence' in SBTs.

Conclusions: We sugget this inconsistency can aptly be termed a scenario spaghetti, and discuss the merits and limitations of formalisation and expert judgments, concluding with a call for more transparency regarding SBTi scenario choice.

The Causes and Consequences of Outsourcing Nationally Determined Contributions

7. New directions in climate and environmental expertise

Tanisha Fazal[1]
Maria Sanchez[2], Yoonsoo Kim[3]
[1] University of Minnesota
[2] Colorado College
[3] Solutions for Our Climate

Introduction: The 2015 Paris Agreement requires countries to set their own climate goals through Nationally Determined Contributions (NDCs). But many countries rely on external entities, such as NGOs, consulting firms, and UN agencies, to draft their NDCs. This phenomenon raises critical questions about the authenticity, effectiveness, and utility of these contributions, as well as the source and type of expertise brought to bear on their production.

Methods: Our empirical analysis, based on an original dataset, includes a quantitative review of the frequency of this practice, the types of organizations involved, and the potential consequences for international climate governance. To date, in addition to our analysis of NDCs themselves, we have conducted seven interviews with NGO staffers from groups that assist with NGO production. We are in the process of setting up additional interviews (we anticipate at least five) with relevant staffers from countries who engage with outsourcing, as well as those that fund outsourcing.

Results: We find that one third of recent developing country NDCs were at least partially outsourced. South Sudan's NDC, for example, boasts an extremely high production value, one that belies its low literacy rate, high maternal mortality rate, and low GDP per capita. One reason why is suggested in the Acknowledgements section of South Sudan's second NDC, the lastparagraph of which thanks "KPMG for producing South Sudan's second NDC." This example (and our interviews to date) suggests that, particularly for less industrialized countries with relatively low emissions, NDCs may serve a political function outside what is anticipated by the structure of the Paris Accord, focused more on adaptation than mitigation.

Conclusions: Outsourcing NDCs has received little scholarly attention but raises crucial questions about the deployment of expertise transnationally in addressing climate change. Perhaps especially as private companies appear increasingly likely to engage in bidding to consult on NDCs, it is increasingly important to understand the implications of outsourcing – and outsourcers – in global climate policy, especially as it generates long-term impacts on both national and international climate commitments.

The function and authority of practice-based experts in an era of biodiversity crisis

7. New directions in climate and environmental expertise

Jasper Montana[1]
[1] Australian National University

Introduction: In an era of intersecting planetary crises, demand for environmental expertise is at a high point. Environment agencies, universities, consultants and global environmental assessments combined with a range of new technological tools offer views on the planet that are unprecedented in human history. In this paper, I will examine the role of practice-based experts that work at the physical interface of people and nature as a feature of this rapid accumulation of expert insights.

Methods: The paper will be based on a combination of prior ethnographic fieldwork with conservation projects and a desk-based review of the literature.

Results: I will examine - through examples - the institutional conditions that shape the function and authority of practice-based experts for nature. These experts do not predominantly deal with numbers and words, rather they dig, plant, cut, kill or care for the non-human (or more-than-human) worlds that they inhabit. They span from conservation practitioners to recreational hunters, Indigenous peoples to domestic gardeners, and they rely on a combination of written and tacit knowledge that is acquired through experience of careful observation, informal experimentation and socialisation. Yet, given the high stakes of the biodiversity crisis and the boom of information and communication technologies, there are also moves to further formalise and standardise practice-based expertise around nature through textbooks, training and agendas such as ‘evidence-based conservation’.

Conclusions: I will conclude with an assessment of the extent to which practice-based experts physically working in and with nature are recognized (when and where) as legitimate experts in an era of biodiversity crisis and what might need to change in order to offer them an enhanced role in identifying and implementing more transformative responses to the continuing loss of nature worldwide.

The 'Glacier Knowledge Industry': A critical political ecology of mega-expertise and the global cryosphere-climate change governance

7. New directions in climate and environmental expertise

Aishwarya Sanas[1]
[1] PhD candidate

Introduction: This paper investigates how the emerging forms of mega-expertise in the domain of cryosphere-climate research and sustainable transformations are reshaping national expertise and epistemic practices required for addressing water security, adaptation planning, and hazard management, particularly in the Third Pole of the world. What makes this study pertinent for the Indian case is the intense scientific scrutiny and judgement faced by Indian glaciological community over concerns surrounding data authenticity, methodological rigour, and scientific and technical capabilities (after the 2007 IPCC report incident over Himalayan glaciers). Drawing on critical political ecology, it asks: How does the politics of data generation and its subsequent validation and use for global climate assessments and region-level trends shape epistemic practices, state-funded research agendas, and institutions of environmental scientific knowledge production within nations?

Methods: Methods used include historical sources, official state and international organisation reports, scientific publications, and secondary literature on history of climate governance, supplemented with semi-structured interviews of Indian and international glacier experts, senior officials of International Permafrost Association, International Association for Cryospheric Sciences, World Glacier Inventory, and IPCC, and officials from Indian government (target 20 interviews, 8 are done).

Results: The article tentatively argues that national scientific practices are shaped by global processes of knowledge legitimation, international membership, collaborative programs and bilateral partnership that discredit deviant epistemologies and practices outside the realm of relevancy where the ultimate beneficiary is the 'global cryosphere'. This has given rise to an incentive-based reciprocal arrangement where data (in this case, glaciological observations recorded on glacier sites as well as remotely) relevant for global environmental assessments and policies is circulated globally in return for expert legitimacy within the institutional framework conceptualised here as the glacier 'knowledge industry'.

Conclusions: The article aims to analyse the features of the global glacier knowledge industry. It intends to conclude that understanding the changing nature of expertise in large-scale environmental problems such as the climate-cryosphere change requires attention to the reconfiguration of national expertise; the role of countries located in the metaphorical South of the global climate politics can be understood through their engagement with the evolving glacier knowledge industry.

Think Tanks, Reflexive Political Technologies and New Anti-Climate Common Sense

7. New directions in climate and environmental expertise

Alexander Ruser[1]
[1] University of Agder, Kristiansand Norway

Introduction: In times when public opinion on environmental (and other issues) is increasingly polarised and in an era where people allegedly “have enough of experts” (Michael Gove), think tanks – key players in translating environmental research into political knowledge have to adapt to changing patterns of how expertise is used in public debate. Disputes about climate change and climate politics have been particularly affected by these changes and thinks tanks have abandoned strategies of simple opposition to climate science. Instead think tanks in the USA and increasingly in Europe have adopted what Andrew Wilson has described as “political technology” (PT) or “supply-side engineering of the political system for partisan interest). In recent years, think tanks had to further adapt to connect with and remain thought leaders among populist movements that claim to replace elitist expertise with common-sense knowledge. In this context, think tanks developed “reflexive political technologies” to aligned climate sceptic talking points with wider political projects and to function as brokers between heterogeneous groups by using targeted digital communication. In Europe this combination of political and technological changes benefited small organisations which succeeded to fuse disparate demands into comprehensive narratives and blur the lines between professional expertise and emotional, embodied identification.

Methods: The paper will draw on existing databases and think tank communication and use a combination of semantic and social network analysis to trace how think tanks facilitate the formation of organisational alliances and construction new reflexive PT in Europe.

Results: The analysis shows how the use of digital communication channels and targeted messaging on social media allows small organisations to influence public sentiments and political debate and forge networks between heterogeneous climate sceptic, market radical and far-right groups in Europe that help consolidating an “anti-climate change common sense”.

Conclusions: The formation of new anti-climate common sense narratives among populist and far-right movements across Europe can be related to the activities of think tank (networks) who successfully deploy reflexive PT. Small, well-connected think tanks serve as brokers between national movements and parties and help to align anti-climate expertise with anti-establishment and far-right "common sense" politics.

Trade, Climate, and Power: National Legal Experts and WTO law in times of crisis

7. New directions in climate and environmental expertise

Lukas Bogner[1]
[1] Roskilde University

Introduction: States continue to design and justify trade and investment policies within the legal framework of the World Trade Organization (WTO), even as its dispute settlement system remains stalled. This article examines how legal experts adapt their use of trade-law arguments in a context shaped by two intersecting pressures: shifting geopolitical power relations and the increasing need to mitigate and adapt to the climate crisis. Both increasingly converge in unexpected ways. Measures that operate as non-tariff barriers may be introduced to protect domestic industries or support industrial policy, but justified through climate-related reasoning. Conversely, policies connected to climate-related infrastructure may be covered by investment-screening mechanisms or other non-tariff barriers defended on national-security grounds. The relationship between trade law, geopolitics, and the climate crisis is filled with potential tensions and trade-offs.

Methods: The study expects to draw on 20 semi-structured interviews with experts involved in shaping and defending trade and investment policies, including officials in foreign ministries and members of states' permanent representations to the WTO. It will also use document analysis of policy papers and filings submitted to the WTO, including materials from dispute settlement. Taken together, these sources allow tracing the argumentative strategies through which trade-law concepts are interpreted and mobilized.

Results: Legal experts often engage in ('boundary work') practices through which actors define and negotiate categories of objects, concepts, and policy domains. Because law's proclivity to categorization, trade-law experts may play an important but overlooked role in shaping the boundaries of national security and environmental sustainability.

Conclusions: The article expects to show how trade-law expertise responds to climate imperatives and geopolitical competition. Expected conclusions may stem from the identification of patterns in how experts reinterpret (quasi-)legal categories such as "security interest" and "sustainability". These reinterpretations may privilege certain forms of industrial policy, screening mechanisms, or climate-related measures, while making others less feasible. The findings may shed new light on how states balance competing pressures while attempting to remain formally anchored in WTO law.

Transition expertise in global wind energy

7. New directions in climate and environmental expertise

Jacob Hasselbalch[1]
Søren Lund Frandsen[1]
[1] Copenhagen Business School

Introduction: The politics of climate change are not the same as the politics of decarbonization, and this distinction has consequential implications for knowledge politics. Whereas climate politics are structured around global norm-setting, the politics of decarbonization hinge on translating goals into investable and administratively actionable pathways. This translation increasingly relies on "transition experts," yet we still lack empirical studies of how such expertise operates in transnational settings. This paper examines two major international initiatives promoting offshore wind energy—the Global Offshore Wind Alliance (GOWA) and the Danish Energy Agency's Energy Partnerships—to analyze how expert actors and forms of expertise shape decarbonization trajectories and define what counts as feasible state action.

Methods: We draw on expert interviews with government officials, consultants, financiers, and technical specialists engaged in both initiatives, complemented by document analysis of strategies, technical guidelines, and diplomatic communications. Using a comparative approach, we analyze how expertise is mobilized, what assumptions underpin policy prescriptions, and how these assumptions align with emerging literatures on environmental expertise and de-risking.

Results: Our preliminary findings reveal two distinct but mutually reinforcing configurations of expertise. GOWA functions primarily as a political alliance oriented toward maintaining high decarbonization ambitions and creating diplomatic pressure for market-opening. Its membership integrates public, private, and multilateral actors—including financiers, consultants, and developers—who collectively promote a specific model of offshore wind deployment. By contrast, the Energy Partnerships operate as deeply technocratic, bilateral arrangements between government agencies, focused on technical, legal, and economic frameworks. Here, expertise is narrowly institutionalized: civil servants and technical specialists work to align regulatory structures with industry expectations. Across both initiatives, actors converge on a shared *solution model*: state-led de-risking to attract and stabilize private investment as the central mechanism for scaling offshore wind. This model organizes expertise, structures interaction, and narrows the imagination of feasible policy alternatives.

Conclusions: We argue that transnational decarbonization expertise is heterogeneous yet coordinated through shared assumptions about how states should enable market-led transitions. This highlights the power of expert networks to shape political possibilities, subtly privileging certain governance pathways while marginalizing others. Understanding these dynamics is essential for assessing the democratic and distributive implications of emergent decarbonization regimes.

8. What happens to crisis preparedness when the focus shifts to war?

As imaginaries of imminent military threats and total nuclear annihilation receded with the dissolution of the Cold War, the political agenda had space for more diverse crisis scenarios. The targets of preparedness and crisis governance became broader, ranging from climate change to 'hybrid' military threats. The term 'crisis' has since proliferated as a signifier for pandemics and military invasions alike, while disaster governance has cultivated an all-hazards approach, stressing preparedness for natural, technological, and societal emergencies. In Nordic policy the broadened riskscape is evident in the comprehensive and societal security models, as well as in how climate change is approached as one security threat among others.

Whether the Nordic security approaches have been successful at addressing and analysing diverse risks in an effective and balanced way is worth debating, but the war in Ukraine has tilted the balance altogether. Not only has military preparedness been strengthened in the Nordics through a substantial influx of resources and political and media attention, but the whole conceptual and political umbrellas dealing with crises seem to have reverted to a national defense framing. This shift creates a widening gap in relation to other risks, such as the urgent need for action for climate change, environmental degradation and other connected hazards.

We invite fully drafted manuscripts that explore the following questions and related points:

- Which crisis phenomena become overlooked or invisible when the societal focus shifts towards military and defence themes?
- What risks are there for societal crisis preparedness when the focus becomes fixated on defense?
- How do these manifest on different temporal and spatial scales?
- Do research and researchers have (or should they have) a role in widening the focus towards more diverse threats/crises?

We look forward to bringing together contributions that build a conversation on these broad topics. Beyond researchers, we invite policy-makers and practitioners to our session. We ask researchers to present a full paper draft.

Convenors

Eija Meriläinen, School of Humanities, Education and Social Sciences, Örebro University, Sweden
Maija Nikkanen, Helsinki Institute of Sustainability Science, University of Helsinki, Finland
Erik Persson Pavlovic, Center for Societal Risk Research, Karlstad University, Sweden
Sofia Hallerbäck, Center for Societal Risk Research, Karlstad University, Sweden

Changing futurescapes of Swedish food systems

8. What happens to crisis preparedness when the focus shifts to war?

Tilde Krusberg[1]
Henner Busch[1], Emma Johansson[1], Sara Brogaard[1]
[1] Lund University Centre for Sustainability Studies (LUCSUS), Lund University, Lund, Sweden.

Introduction: Decarbonising food systems have long been a key strategy for national climate mitigation. Increasingly, however, climate goals are being sidelined for the sake of prioritising geopolitical crisis preparedness and national resource sovereignty in food strategies and beyond. This study analyses the emergence and conceptualisation of fossil-free agriculture within future visions for Swedish food systems between 2005–2025 and critically interrogate how meanings attributed to fossil-freeness have changed over time.

Methods: We create a dynamic topic model of futural claims made on Swedish food systems during this period and use theory from Critical Futures Studies (CFS) to assess in what topical contexts fossil-freeness emerges, by which actors fossil-freeness is promoted, and who stands to benefit from the dominant narratives. The currently dominant future imaginary of the Swedish food system is synthesised through a collage created from the 2022–2025 corpus of the model.

Results: We show how Russia's full-scale invasion of Ukraine in 2022 impacted the futurescape and radically altered the meanings and implications of fossil-freeness in Sweden. Before 2022, fossil-freeness largely related to mitigating climate change and formed part of a bigger narrative of sustainability transitions within the food system. After 2022, fossil-freeness is instead highly intertwined with a narrative of national independence and crisis preparedness connected to a changed geopolitical situation in the EU. This new narrative – and the futures it enables – hinges on an ecomodernist discourse and related value system which promotes big industry actors over other stakeholders and technological decarbonisation over sufficiency- and nature-based approaches to fossil-freeness. Furthermore, it drives an increased discursive militarisation of food systems and legitimises political and governmental control over agricultural production which marginalises both climate and environmental concerns. The narrative is promoted by a set of actors which can be described as a "futural discourse coalition".

Conclusions: The militarised and ecomodernist food future empowers the currently dominant powers, excludes alternative- and smaller-scale farmers from the vision, and undermines food justice in the process. Challenging this and similar narratives is therefore paramount for achieving just outcomes in sustainability transitions in food systems and beyond.

Environmental policy in an age of creeping social-ecological crises

8. What happens to crisis preparedness when the focus shifts to war?

Janne I. Hukkinen[1, 2]
[1] University of Helsinki
[2] BIOS Research Unit

Introduction: Creeping social-ecological crises challenge contemporary environmental policy, which assumes crises are rare and temporary disruptions that can be handled with traditional emergency management. The age of creeping social-ecological crises poses unprecedented challenges to environmental and crisis management. Whatever is done in environmental and crisis management in the coming decades, will be done while recovering from the last crisis and handling the ongoing one. In this paper I examine critically contemporary environmental and crisis management approaches in relation to creeping crises. I propose a novel approach to urgent and far-sighted environmental and crisis management that takes seriously the challenges of creeping environmental crises and responds to them strategically.

Methods: The analysis is based on literature on creeping social-ecological crises and a synthesis of the results of two large research projects on strategic environmental crisis management conducted in Finland during 2018-2023. The methods in the projects included thematic interview techniques, participatory workshops, and qualitative content analysis. The data consisted of transcripts of interviews and workshops, scientific and professional literature, and output from weather models.

Results: To analyze the challenges of creeping social-ecological crises to environmental policy, I consider environmental and crisis management together as coupled policies. On one hand, environmental and crisis management can deny or accept creeping crises; on the other, it can be reactive or strategic. In contemporary environmental and crisis management, three of the four approaches can be found: “Grow green and put out fires”, “Dream green and buy guns”, and “Forget green and freak out”. The fourth approach, “Repairing the ship in storms”, characterizes the missing approach in environmental and crisis management. It strives to resolve the challenges of contemporary approaches by building social-ecological resilience urgently with a long-term perspective. In an era of creeping crises, societies need to be able to make immediate strategic investment decisions in social and physical infrastructure while still recovering from the last disruption and coping with the ongoing one.

Conclusions: I conclude with a synthesis of the key results and consider the individual level implications of creeping crises by articulating heuristics for a good life in the middle of disruptions.

From buzzword to practise in the era of polycrises: Ambitions, dimensions, definitions and ways forward with local energy resilience in the Nordics

8. What happens to crisis preparedness when the focus shifts to war?

Spilios Iliopoulos[1]
Sara Gustafsson[1]
[1] Linköping University, Department of Management and Engineering, Division of Environmental Technology and Management, Sweden

Introduction: Energy systems worldwide are undergoing profound changes to respond to a series of challenges including the expansion of electricity use, the growing share of renewable energy in response to climate change, extreme weather events that impact energy systems, as well as security concerns related to a changing geopolitical landscape. These challenges affect local conditions, pointing towards the need to enhance energy systems' resilience. There is no universal agreement on the different dimensions of energy resilience. This is also relevant for the Nordic region where resilience is broadly used in connection to diverse challenges also within the local administrative level.

The aim of this study is to contribute to an understanding of local energy resilience in the Nordic region in the era of polycrises. It does so by looking into the cases of Gothenburg, Malmö and Turku. Two research questions guide the study: 1) What dimensions influence local approaches to energy resilience in the Nordic region? 2) How is energy resilience is operationalized in municipalities?

Methods: The study will employ document analysis and semi-structured interviews with municipal department and unit officials, representatives from energy companies and politicians to look at the different cases described above. Documents related to local climate policy and energy plans will be analysed to identify dimensions, strategic priorities, activities and roles around energy resilience. The aim is to conduct 12 interviews until March 2026.

Results: Early findings suggest that even within the same municipality and between different departments and municipal companies there are different understandings of resilience. In some cases, resilience is not always a prevalent concept in municipal contexts, with terms like energy security or preparedness more commonly used. Climate policy and geopolitical shifts act as catalysts for resilience ambitions. Definitions and operational strategies vary, shaped by technical, institutional, and social dimensions and tensions and overlaps between climate change mitigation policies, adaptation and security as preparedness in the face of war.

Conclusions: The study anticipates the emergence of multiple faces of energy resilience and its interplay with sustainability, emphasizing the role of local administrations in navigating a landscape of multiple crises.

Geopolitical Risks and Social Vulnerabilities

8. What happens to crisis preparedness when the focus shifts to war?

Paulina Budryte[1]
[1] Kaunas University of Technology

Introduction: Together with an unclear future and a shifting status quo, various risks, including geopolitical ones, are on the rise. For a long time, geopolitical risks were slowly forming – appearing, disappearing, gaining or losing influence in the national and international arenas. However, Europe in the last decade has faced and is still facing several large-scale geopolitical challenges (like the war against Ukraine, unrests in Serbia, and the sensitive situation in Transnistria, and so on). Due to the war against Ukraine, all European countries conducted reevaluations of their geopolitical situation and checked some future scenarios. In this presentation, a Lithuanian case study is presented. Here, spatial analysis is applied to explore geopolitical risks and their links to the socio-economic situation, in particular to the social vulnerability index. Analysis discloses a mixture of the leftovers from the historical past, the neglect policy outcomes during the last decades and the vulnerabilities caused by them. Such spatial analysis could be a starting point for an in-depth debate about geopolitical risks and their formation, as well as a list of recommendations and a message to raise awareness for the future.

Methods: The spatial analysis tools are planned to disclose:
- distribution of geopolitical risks in the country
- links of social vulnerability and geopolitical risks on the spatial dimension.

Results: Earlier research shows the relations between geopolitical risks and education level in the local communities, minorities and their inclusion in the decision-making process. Primary data analysis of the Lithuanian case reveals a strong relationship between the historical past and the effects of neglect policies over the last decades. It is expected that in-depth analysis will bring forward an even more nuanced image of the current situation.

Conclusions: It is expected to present relations between geopolitical risks and social vulnerabilities as they manifest in the Lithuanian case.

Performative comprehensiveness in the context of climate, security and war

8. What happens to crisis preparedness when the focus shifts to war?

Rosa Rantanen[1, 2]
[1] Institute for Atmospheric and Earth System Research (INAR), University of Helsinki
[2] Helsinki Institute of Sustainability Science (HELSUS), University of Helsinki

Introduction: According to the recent Security Strategy for Society published by the Finnish Government (2025), in comprehensive security, 'the vital functions of society are taken care of in collaboration between the authorities, business community, organisations and citizens in all circumstances and at all levels of society'. The comprehensive security approach, adopted in the Nordic countries and beyond, emphasizes the importance of social justice, climate change & environmental issues as well as human (psychosocial) wellbeing, among others. I argue that while these elements are present in security political discussion, decision-making and research, a large part of the comprehensive approach is performative. In reality, discussions and policies are often guided solely by military, financial and political interests. Militarized language and politics tend to highlight urgency and necessity, which leads to neglecting values and actions that are crucial for social and environmental justice - and thus for actual overall security. To truly embrace a comprehensive security model we need to engage individuals, communities and different sectors of the society, including civil society and arts.

Methods: The paper will include of a brief critical literature review and analysis. The manuscript will draw from expert work that the author has conducted during the past 3 years in Finland and internationally. The importance of using transdisciplinary and artistic methods in crisis preparedness is analyzed, using examples from past transdisciplinary events. The manuscript focuses on climate change, the environment and social justice in relation to war, security and crisis preparedness.

Results: The results will consist of a brief transdisciplinary literature overview in the field of climate security and key critical action points that are aimed for researchers, policy makers and practitioners. The aim is to use the manuscript for outreach and as a base for planning transdisciplinary workshops to take concrete steps towards a comprehensive climate security approach.

Conclusions: The comprehensive security approach is used in a performative way both regarding values and operationally, increasingly so as the focus shifts towards war, military and defense. Truly embracing comprehensive security would lead to more effective, research-based prevention and preparedness regarding societal and environmental risks, thus increasing overall security/safety globally.

War framings and the interpretation of the significance of animal protein production in Finnish crisis preparedness

8. What happens to crisis preparedness when the focus shifts to war?

Nina Janasik[1]
[1] University of Helsinki

Introduction: Protein production, especially in the form of animal farming, forms a significant part of crisis preparedness in Finland. However, recently concerns of long-term sustainability of these modes of producing protein has challenged animal farming. As a result, demands have been voiced to enact a "protein transition". Although capturing the imagination of many protein experts and stakeholders, it has been argued that current conceptualizations of the protein transition involve harmful paradoxes that effectively lock in the required change process into the unsustainable status quo. These harmful paradoxes arise from the contradictory yet interdependent narratives reflecting different worldviews of the protein experts and stakeholders that advocate for them. Furthermore, much recent research on the protein transition shows that there is a significant narrative stalemate in the form of a polarization of traditional modes of protein production and challenging ones, with no immediate remedies in sight. To this already highly contested situation, the recent post-Ukraine war framings add yet another layer of complexity.

Methods: Against this background, in this paper I ask whether and how the shift toward war framings has changed existing assessments of the significance of animal protein production, especially production of meat products from livestock, for crisis preparedness in Finland. Based on thematic analysis of a central corpus of relevant documents as well as gathered interviews, I furthermore ask if there is distinct difference between pre- and post-Ukraine war interpretations of the significance of animal proteins in Finnish crisis preparedness. Do these contain differing views of risks and uncertainty?

Results: My preliminary hypothesis is that the issue is not one of visibility vs. invisibility as such, but that the shift towards war framings gives rise to significant interpretative flexibility regarding the place of animal protein in Finnish crisis preparedness.

Conclusions: I suggest that one of the main interpretative dividing lines goes along the dimensions of short-term vs. long-term, and that the placement of emphasis has much to do with the dimensions across and scales at which at which the issue is approached.

What happens to food supply in a crisis? The securitization of food in Swedish total defence preparedness

8. What happens to crisis preparedness when the focus shifts to war?

Johanna Pettersson Fürst[1]
[1] Department of Government, Uppsala University

Introduction: Recent geopolitical developments, such as the Covid-19 pandemic, 'tariff wars', and Russia's invasion of Ukraine, have put questions of preparedness and supply security back on the agenda in the Nordic countries. This new focus on supply security is particularly visible in the area of food supply, and stands in sharp contrast to the de-securitization of food that followed the end of the Cold War. This paper takes a closer look at historical developments in Sweden, as an illustrative case, where the entry into EU in the 90's saw previous emphasis on preparedness and stockpiling policies as part of total defence, turn into food policies that emphasised international competitiveness and just-in-time distribution. The recent turn 'back' to total defence and war preparedness strategies draws a lot of its vocabulary from the historical total defence tradition. But it remains unclear to what extent, and in what ways, food supply really is becoming part of the new security agenda. In the paper, we seek to understand the dynamics of food preparedness within overall crisis preparedness policies.

Methods: Using Swedish parliamentary data covering the last 100 years, the development of food as a security issue in the Swedish national context is analysed, capturing periods of both securitization and de-securitization of food. We hypothesise that food supply preparedness as historically been framed in two distinct ways, as either a part of total defence strategies, or as part of overall competitive market policies, an analyse the occurrence of these frames over time. Moreover, we test the hypothesis that the recent efforts to put food back on the security agenda, is distinct from the preparedness policies of the Cold War period in emphasising the market frame above the defence-frame.

Results: Preliminary results indicate a peak in the securitisation of food around 2020 comparable to the 1940s.

Conclusions: By understanding more about how food supply has been part of preparedness policy historically, we contribute to a better understanding of the conditions affecting the current state of food security in Sweden, which can inform a broader understanding of how crisis preparedness is reshaped in the new war preparedness context.

What is crisis preparedness in Swedish transport infrastructure planning? Changing meanings of transport-related resilience in times of polycrises

8. What happens to crisis preparedness when the focus shifts to war?

Karolina Isaksson[1, 2]
Linnea Eriksson[1], Jean Ryan[1]
[1] Swedish National Road and Transport Research Institute (VTI), Sweden
[2] KTH Royal Institute of Technology, Sweden.

Introduction: Transport policy and planning is an area of key political concern due to its importance for climate transformation and sustainability, but also for maintaining key societal functions in the event of crises linked to a changed geopolitical landscape. This paper aims to explore and critically discuss problem formulations and meaning-making regarding sustainability, crisis preparedness and resilience in Swedish transport policy and planning, with specific attention being paid to discursive shifts and changing meanings of key concepts.

Methods: The study draws on previous research on discursive framings and meaning-making in Swedish national transport policy and planning over the last decade. This forms the basis for a discourse analysis of written documentation from the recent round of national transport planning, which started in 2023. During this time, geopolitical uncertainty has grown whilst the Swedish Transport Administration (STA) has been tasked with the regular work to prepare a national transport plan for the next 12 year-period. The study explores political proposals and directives from the government and key supplementary documents alongside the STA's national transport plan (presented in 2025). This material is complemented by around 10 qualitative interviews with public officials from public national authorities, which will be carried out in Jan-Feb 2026.

Results: The paper provides examples of recent/ongoing discursive shifts regarding how objectives of sustainability, crisis preparedness and resilience are defined and motivated in contemporary transport policy and planning. It discusses how a stronger focus on military needs has led to significant changes in the meanings of crisis preparedness and resilience. The analysis highlights underlying assumptions that motivate what is framed as the most plausible and reasonable approach for the long-term development of the transport system, and how this is linked to prevailing models for scenario development and economic appraisal.

Conclusions: The results form the basis for a discussion of potential gaps and blind spots that could emerge in the wake of an increasingly dominant military framing of contemporary risks and threats, and how this impacts the possibilities to place and maintain a focus on more creeping societal crises, such as global warming, environmental degradation and related social risks.

9. On shaky ground? EU climate neutrality and democracy in turbulent times

This workshop evaluates the prospects for the European Union (EU) to achieve climate neutrality while strengthening democratic resilience, all in a world permeated by turbulence. When the European Commission launched the European Green Deal (EGD) in 2019 and with it the ambition to become climate neutral by 2050, it did so at a time of widespread climate support evidenced by youth protests and success of green parties. However, the tide has shifted for the implementation of the EGD. Member states are struggling to decarbonize in the wake of poly-crises such as climate change, Russia's war against Ukraine, and the cost-of-living and energy crises. Meanwhile, we are witnessing continued democratic backsliding and authoritarian populism. Furthermore, there are indications that Von der Leyen II prioritizes competitiveness and simplification at the expense of climate, and the European Parliament has become more right-wing and less climate ambitious after the 2024 elections.

This workshop invites fully drafted manuscripts that address the following questions, among others:

- How can the EU accelerate decarbonization while exercising global leadership in multilateral climate diplomacy amid a rapidly changing geopolitical landscape marked by crises, turbulence, and shifting power constellations?
- How does the interaction between EU institutions (European Parliament, European Commission and the Council) impact the EGD
- How will the EGD be reshaped by the shift in focus to competitiveness as reflected in the EU's Industrial Clean Deal?
- How have institutions of democratic governance at multiple governance levels across the EU evolved to respond to the challenges of the climate crisis and implementation of the EGD?
- To what extent can democratic innovations within the climate sphere serve to strengthen and reinvigorate democratic governance more broadly?
- To what extent will the Fit for 55 legislation and updated 2040 climate and energy framework deliver a just transition while ensuring the EU's climate goals are met?

We invite full papers from different theoretical and methodological approaches across disciplines of political science, law, sociology, EU and sustainability studies and economics, and particularly contributions from early career researchers. The workshop aims to foster dialogue across disciplines and methods for an interdisciplinary and integrated understanding of how the EGD can achieve decarbonization and societal transformation in turbulent times.

Convenors
Jana Gheuens, Department of Political Science, Stockholm University, Sweden
Diarmuid Torney, School of Law and Government, Dublin City University, Ireland
Matilda Miljand, Department of Political Science, Stockholm University, Sweden

A reluctant frontrunner? The evolution of an EU carbon removal policy and certification framework in a world of turbulence

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Lars H. Gulbrandsen[1]
Erlend A.T. Hermansen[2], Jørgen Wettestad[1]
[1] Fridtjof Nansen Institute, Norway
[2] CICERO Center for International Climate Research, Norway

Introduction: The EU has assumed a leadership role in developing net-zero emissions policies, including Carbon Dioxide Removal (CDR) policies. The process for CDR policies has intensified in the EU from 2018 on, further boosted by the adoption of a binding net-zero 2050 target in the European Climate Law in 2021. In December 2022, the European Commission put forward a proposal for a Carbon Removal Certification Framework (CRCF) which was adopted in the spring of 2024. Analyzing this proposal and the subsequent decision-making process is the focus of this paper. Specifically, we ask: *Why is the EU developing a carbon removal policy and certification framework, and what are the prospects for this policy development in world of turbulence?*

Methods: The study is based on document studies, secondary literature, and 8-10 planned interviews with EU policymakers in the Commission and European Parliament as well as some Member States and EU policy experts.

Results: Perceptions and positions differ among the EU institutions and state and non-state stakeholders. The European Parliament has expressed concerns that CDR policy may contribute to crowd out traditional mitigation policies, also known as mitigation deterrence. Positions differ also among member states in the Council, where some are far more skeptical than others. Moreover, policy interactions with the EU emissions trading system (EU ETS) have been and still is a key issue in the process. A key debate here is whether carbon removal credits should be integrated into the ETS, risking to negatively influence the dynamics of that market, or be organized as a separate, new market.

Conclusions: To meet the EU's net-zero target for 2050, it is widely acknowledged that development of CDR policies is essential. However, this study shows that what the 'net' in net-zero emissions implies is by no means clear, apart from the fact that it implies CDR at considerable scales and timeframes. Similarly, we find that the roles of the land sector in CDR and net-zero strategies are hotly debated topics in the EU. We conclude by reflecting on lessons learned from this study and implications for reaching the net-zero target in turbulent times.

Climate Advisory Bodies and Democratic Governance: Evidence from the UK's Climate Change Committee

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Alina Averchenkova[1]
Himanshu Pabreja[1]
[1] Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science, UK

Introduction: Over 140 countries have announced net zero targets and established advisory institutions for rigorous analysis of evidence and advising on climate policies to achieve these targets. Advisory bodies have emerged as key stakeholders in polycentric climate governance system, and increasing number of countries are relying on them with complexity of climate action extending beyond political cycles. However, literature largely focuses on their in-principle benefits; our study bridges this gap through empirical analysis of UK Climate Change Committee's (CCC) influence on UK's climate political discourse and policies during 2019-25, a period marked by impacts of Brexit, COVID-19, cost-of-living crisis and resistance against climate action.

Methods: We examine how CCC's output (reports, analysis, recommendations) was utilized in political discussions and influenced government policies during 2019-2025. Using UK Parliament records, we collected 1,700+ parliamentary contributions mentioning CCC between 01.01.2019 and 31.03.2025. We conducted content and thematic analysis exploring references' content and context, to examine CCC's influence through three indicators: evidentiary (use in political discussions), direct (impact on statutory targets and carbon budgets), and diffused (impact on wider climate-related legislations).

Results: We have observed extensive reliance on CCC as key evidentiary source for climate policy discussions across all major political parties. Government made highest absolute references to CCC, but lowest per-seats reference. CCC's analysis influenced 82 statutes and bills across diverse themes including flood protection, agriculture, biodiversity, transport, and buildings. Net zero (35%) and energy (15%) dominated thematic references, with deeper context analysis of references under Net Zero theme to explore how parliamentarians used its analysis to debate key policies like fossil fuel projects, climate backtracking, energy security. Both government and opposition substantially engaged with CCC output to support/criticize policies, seek amendments, demand ambitious action, and hold government accountable.

Conclusions: A part of RETOOL project, this study aims to comparatively analyse CCC's influence during 2008-18 (Averchenkova et al., 2021) versus 2019-25 amid green backlash. Our study confirms CCC's significant influence on UK's climate discourse, reinforcing its credibility as statutory adviser, knowledge broker and policy innovator. With over 57 climate advisory bodies in Europe, understanding how they influence climate policies offers crucial insights for EU climate neutrality goals.

Complexity, Confusion, and Misunderstandings: Understanding EU Environmental Policy Implementation Through Three Commissions

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Paul Tobin[1]
Jeffrey Rosamond[2], Charlotte Burns[3], Claire Dupont[2], Brendan Moore[4]
[1] The University of Manchester
[2] Ghent University
[3] The University of Sheffield
[4] Vrije Universiteit Brussel

Introduction: The European Union (EU) established a reputation as an environmental pioneer through its comprehensive body of legislation. Yet, in order to realise the goals of these policies, they must be implemented across 27 member states with differing levels of environmental and climate ambition. The conceptualisation of 'policy implementation' has a rich scholarly history, but in what ways do EU environmental practitioners understand and frame policy implementation?

Methods: We trace the interpretations of implementation of 70 policymakers in Brussels across a fifteen-year period. We draw from a comprehensive dataset of transcripts from interviews conducted with officials working at the Commission, the Parliament, the Council, and the member state permanent representations to the EU. Having conducted interviews across three Commissions (the Juncker Commission, the von der Leyen I Commission, and the von der Leyen II Commission), we analyse the discourses behind policies across time, rather than as a snapshot of brief narrative dynamics, as can be common when a single tranche of interviews is conducted.

Results: We identify five discursive framings of environmental policy implementation: as a practical challenge; as a low priority; as a means to stymy policy creation; as a way to relocate power to the national level; and as an inevitability that does not require expenditure of political capital. Initial analysis shows policymakers' discursive understandings of implementation shifting through successive Commissions, as committment to environmental and climate ambition ebbs and flows through changing political and economic contexts. Interpretations of implementation also vary depending on the interests which each policymaker represents, yet there is diversity in understandings of the concept even amongst officials from the same institution, illlustrating its complexity.

Conclusions: Through our study, we provide new empirical data for the field of European Union Studies, as well as developing the conceptual underpinnings of policy implementation for future, wider policy studies research. Our results are particularly relevant as the climate and environmental program of the von der Leyen I Commission faces major implementation challenges during the von der Leyen II Commission; risks of policy delay, dilution, and dismantling demonstrates continued dischord in understandings of effective implmentation between EU policymakers and member state governments.

Contextual conditions shaping meaningful public participation. A case study of EU climate policy.

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Lea Schewe[1]
Sebastian Oberthür[1, 2], Lara Stas[1]
[1] Vrije Universiteit Brussel
[2] University of Eastern Finland

Introduction: Whilst public participation is recognised as an essential instrument of legitimate, accountable and effective climate governance, a persistent implementation gap exists between meaningful practice and formal requirements for public participation (Faber et al., 2025; Oberthür et al., 2025). The latter successfully engages the public and enhances decision quality, while the first risks creating distrust, reinforcing inequalities, and fuel resistance to climate transitions (Sprain, 2016; Reed, 2008). The literature has therefore focused on determining what conditions distinguish meaningful participation from a box-ticking exercise. Scholars have identified participation design and context as criteria conditioning participation quality. While participation design has been extensively studied and practiced (Reed, 2008; Aarhus Convention, 1998), we lack empirical studies examining how institutional, political, and socio-cultural contextual factors influence participation quality (Baker & Chapin III, 2021; Newig et al. 2018). Therefore, building on existing evidence that participation quality in the EU varies substantially over time and across countries (Oberthür et al., 2025), we compare how the 27 EU member states implemented public consultations for their National Energy and Climate Plans (NECPs) under the 2018 Governance Regulation, and which contextual factors have affected this implementation.

Methods: To this end, we first conceptualise and assess participation quality based on data from two NECP cycles, including draft and final submissions due in 2018-2019 and 2023-2024. Second, we conceptualise national-level contextual factors likely to influence government's implementation of public consultations. Finally, we employ multilevel regression analysis to assess both what contextual variables affect participation quality over time, and which ones affect participation quality within countries. Specifically, using international open-access datasets, we test whether institutional capacity, democratic traditions and climate policy ambition drive participation quality; as well as whether inequality and political divisions hinder high-quality participation.

Results: At the moment, we developed both conceptual frameworks and are in the process of conducting the regression analysis. This research will provide a baseline for a future academic article aimed at assessing combinations of contextual factors.

Conclusions: Overall, we hope to provide a more nuanced theoretical understanding of how context shapes public participation in EU climate governance, as well as informing practitioners on how to implement context-sensitive participation mechanisms.

From Sustainability to Competitiveness: How Discursive Shifts Are Reshaping the European Green Deal in EU Agricultural Policy

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Nora Förell[1]
Anke Fischer[1]
[1] Swedish University of Agricultural Sciences

Introduction: When investigating environmental backsliding in the EU in populist times, a specific focus on food and agriculture will be crucial as the sector accounts for more than 10% of EU's GHG emissions. In 2020, the EU positioned agriculture and food production as central pillars of its sustainability agenda and its ambition to achieve climate neutrality under the European Green Deal (EGD). Since then, a notable discursive shift have occurred from sustainability- and climate focused problem framings toward an agenda centred on competitiveness, simplification, and the preservation of farming in Europe, shaped by geopolitical instability, farmers' protests, economic downturn, and a more right-leaning EU parliament.

Methods: This study investigates how evolving discourses legitimise new policy directions in EU agricultural governance by comparing documents from Ursula von der Leyen's first and second Commissions. The study employs critical policy analysis and post-structural discourse analysis to examine key strategic documents shaping EU agricultural policy. These include the Farm to Fork Strategy (2020) and the Vision for Agriculture and Food (2025). Through qualitative coding and comparative problem-framing analysis, the study identifies how dominant narratives shift and how these shifts shapes what solutions appear rational and possible.

Results: Preliminary findings indicate that while climate objectives remain rhetorically present, they are conditional on a "win-win-win" logic, in which climate mitigation is expected to follow from economic growth, security, and industrial competitiveness. Key pillars of the EGD and just transition discourse are reframed under the Clean Industrial Deal. The study also illustrates how instruments previously put in place to address earlier sustainability challenges are now presented as a barrier to the economic competitiveness of farmers. This results in a logic where "simplification" becomes the solution to these complexities. Findings also suggest that the seemingly positive term of simplification may act as a vehicle for policy dismantling of the EU's green agenda.

Conclusions: Understanding this discursive shift is important as it has material implications on the EU's capacity to deliver on climate neutrality and a just transition, for example, what initiatives receive economic funding, what constitutes necessary or unnecessary environmental legislation or who is rendered as a legitimate justice subject.

Implementing the European Green Deal: climate and biological diversity governance in Sweden

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Naghmeh Nasiritousi[1]
Mikael Karlsson[2]
[1] Linköping University
[2] Uppsala University

Introduction: The EU has introduced some of the most advanced environmental policy measures in the world. The European Green Deal represents an overarching policy framework that seeks to integrate several policy areas. In order for the EU to reach its ambitious goals, member states need to address both climate change and biological diversity holistically. This study investigates how Sweden, considered a climate leader, deals with these twin challenges. Specifically, the paper examines how Sweden's political–administrative system organizes, coordinates, and enacts its ambitions on climate transformation and biodiversity conservation.

Methods: Drawing on semi-structured interviews with policy makers and civil servants across national, regional, and local levels, complemented by extensive analysis of strategic documents, the study pursues three interrelated goals.

Results: First, it identifies and maps the key political institutions and public agencies responsible for climate and biodiversity policy, examining both their formal responsibilities and competencies and civil servants' perceptions of the roles, authority, and influence of different actors in implementing national strategies. Second, it analyses how policymaking and implementation unfold in practice across institutions with overlapping or interdependent mandates. Particular attention is given to the perceived dynamics of collaboration, coordination, and competition that shape cross-sectoral action. Third, the study identifies institutional barriers that hinder effective implementation of climate and biodiversity strategies - such as fragmented mandates, misaligned incentives, resource constraints, and mismatches between formal authority and practical influence - and assesses pathways for overcoming these obstacles.

Conclusions: The paper concludes with policy recommendations for strengthening institutional capacities, improving cross-sectoral integration, and enhancing the coherence of existing and future strategies aimed at addressing climate change and biodiversity loss in Sweden.

Institutionalizing Public Participation in EU Climate Governance Through NECPs

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Joshua Philipp Elsässer[1]
Lea Schewe[1], Brendan Moore[1], Sebastian Oberthür[1]
[1] Vrije Universiteit Brussel, Brussels School of Governance, Belgium

Introduction: Europe's climate transformation requires societal consent alongside technically sound policies. The EU's National Energy and Climate Plans (NECPs) are key instruments for translating EU targets into national reforms, with member states mandated to organize "early and effective" public participation (PP). In practice, however, participation has been uneven, raising an underexplored question: has EU-mandated NECP participation triggered durable participatory mechanisms or remained a box-ticking exercise? We ask: Under what conditions do NECP public participation measures become institutionalized into enduring mechanisms within domestic climate and energy governance?

Methods: The study builds on scholarship on public participation and democratic innovation, institutionalization, and multi-level governance. We conceptualize institutionalization as a gradual process through which new participatory norms, rules, and practices move from ad hoc consultations to codified, recurring channels integrated into regular policy cycles. To address the research question, we develop an analytical framework that links observable markers of institutionalization – legal codification, creation of organizational fora, administrative embedding, and procedural routinization – to enabling conditions identified in the literature and our earlier NECP research, including participation quality, domestic legal-administrative receptivity, societal demands, and multi-level pressures from EU oversight. Empirically, the study follows a qualitative comparative design of four EU member states (France, Germany, Sweden, Slovenia), selected on the basis of variation in initial NECP PP quality scores. We apply process tracing and triangulate NECP and legal documents, policy outputs, and semi-structured interviews with (sub-)national officials, Commission staff, and civil society actors.

Results: We expect to identify cross-national variation in the extent to which NECP participation has moved beyond one-off consultations toward more durable participatory arrangements. The analysis will identify which combinations of conditions are most conducive to the institutionalization of public participation following EU-level interventions and where these conditions are absent, contested, or undermined.

Conclusions: The study assesses the EU’s capacity to foster a top-down re-democratization of climate and energy policymaking through the NECP architecture. It will clarify when EU-mandated participation can generate lasting domestic participatory institutions and where it risks remaining procedural compliance only. In doing so, the paper offers implications for the design and strengthening of multi-level participatory institutionalization in EU climate governance.

Navigating Decarbonization Dilemmas: Competing Narratives in EU Raw Materials Policy

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Theresa Herdlitschka[1]
[1] Helmholtz Centre for Environmental Research - UFZ

Introduction: Demand for minerals and metals such as lithium, copper, and rare earths has surged, driven in part by decarbonization efforts. In response, the European Union adopted the Critical Raw Materials Act (CRMA) in 2024. Many policymakers and industry associations frame the CRMA as essential for achieving the Green Deal and strengthening Europe's strategic autonomy and competitiveness. Critics, however, argue that the CRMA may undermine climate neutrality and democratic resilience by marginalizing sufficiency-oriented strategies and resource justice perspectives, particularly amid the expansion of domestic mining. This paper aims to identify and analyze the competing narratives and discourses shaping the current phase of CRMA implementation.

Methods: Based on an in-depth analysis of 20 qualitative interviews with stakeholders from EU institutions, industry, civil society, and research organizations, policy documents, and participatory observations conducted between May and December 2025, this paper analyzes how key actors discursively navigate Europe's raw material transformation. It asks how and why policy narratives around competitiveness and security become dominant, and how narratives emphasizing demand reduction and global justice fail to gain traction.

Results: The findings show that security and competitiveness framings consolidate discursive power through co-optation, strategic normativity, and the reframing of supply as a geopolitical imperative. Meanwhile, circularity and sufficiency remain interpretatively vague. Participatory demands become further delegitimized through divide-and-conquer strategies and climate-conflict simplifications, reinforcing extractivist policy trajectories.

Conclusions: The study's results reveal discursive strategies through which competitiveness and security narratives gain hegemony in EU raw materials governance, while counter-narratives are rendered marginal despite heightened ecological and geopolitical stakes. The study contributes to broader debates on shifting discourses in EU (environmental) policies by identifying shared assumptions and drivers of narrative fragmentation. It thus questions the conditions under which progressive discourse coalitions might emerge in times of shifting hegemonies and polycrisis.

Policy advice in European Union climate governance: Institutions & knowledge utilization related to emissions trading & the 2040 greenhouse gas target

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Brendan Moore[1]
Claire Dupont[2]
[1] Vrije Universiteit Brussel, Brussels School of Governance, Belgium
[2] Ghent University, Department of Public Governance and Management, Belgium

Introduction: The EU has an extensive system for soliciting expert advice during the preparation of legislation. In the past two decades, a growing literature in EU studies has examined the institutions, actors, and operation of this landscape of policy advice. However, to date there has been little focus on how this advisory landscape interacts with individual policymaking processes over time. This is especially notable because these processes would be expected to have an especially important role for expert advice. To fill this gap, we examine two cases of the use of policy advice in the area of EU climate change policy: the creation of an emissions trading system for buildings and road transport (ETS2) and the setting of the EU's greenhouse gas reduction target for 2040. These cases are both prominent examples of EU climate policy under the European Green Deal and would be expected to have diverging patterns of expert advice utilization.

Methods: We trace how policy advice was constructed and how it influenced these policy processes, from policy formulation in the Commission to negotiations between the European Parliament and the Council. We do so through process tracing that draws on documentary analysis and semi-structured interviews with policymakers and stakeholders. We pay particular attention to how the increasing turbulence and growing resistance to climate policy following the 2024 European elections impacted the ways in which expertise was utilized in these processes.

Results: For the ETS2, the process would be expected to draw on long-standing systems of expertise, both within the Commission and in networks made up of interest groups, expert consultancies, and think tanks. The 2040 target would also be expected to be based on both internal Commission resources (for example, the PRIMES models, which underpin assumptions about future emissions) and external sources of information. The most prominent independent source may be the European Scientific Advisory Board on Climate Change, which was created in 2021 with the express mandate to provide scientific advice on the 2040 target.

Conclusions: These findings will allow us to draw broader conclusions about policy advice in EU climate governance and how this compares to other policy areas.

Proceduralisation of EU Climate Law: Blurring the Boundaries of Legitimate Authority?

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Katja Kurki[1]
[1] Finnish Environment Institute (Syke), Climate Solutions

Introduction: While the EU climate law framework has expanded into new sectors and policy areas, climate measures experience significant headwinds across Europe. At the heart of this resistance is contested legitimacy, where attempts to claim legitimacy are countered by efforts to undermine it. Consequently, justifying the source of the EU's authority, particularly in areas touching upon national sovereignty, is essential for achieving the ambitious climate objectives. In this setting, the presentation examines the interplay between the sharing of competences, the principle of subsidiarity, and the proceduralisation of legal instruments from the perspective of legitimate authority.

Methods: To clarify this issue, the presentation employs a conceptualisation of legitimate authority derived from global governance theories. This dynamic and relational understanding of legitimate authority can extend beyond, or be more limited than, the traditional formal-legal perspective that focuses on an actor's lawful position to issue commands. Essentially, this conceptual framework facilitates an exploration of the boundaries of authority, shaped not only by the EU's constitutional limits but also by the procedural legal instruments.

Results: First, the presentation argues that although the EU has broadened the scope and ambition of its climate law framework, proceduralisation is intended to uphold the subsidiarity principle by establishing indirect obligations in relation to the climate objectives, thereby allowing national discretion and protecting the legitimate sharing of competences. Second, proceduralisation facilitates the dispersion of authority beyond the bilateral sharing of competences by fostering informality and institutional multiplicity. Lastly, upholding the legitimate sharing of competences through proceduralisation presents challenges regarding the democratic implications of the subsidiarity principle. In particular, facilitating deliberative governance through instrumental means is inadequate to tackle the legitimacy challenges that arise from the combination of cross-cutting climate objectives, an unchanged EU constitution, and rigid and technical procedural requirements.

Conclusions: The presentation illustrates that for climate law to be considered legitimate, the EU must justify its exercise of power, whether indirect or direct in relation to climate objectives. Because legitimate authority is evaluated based on the scope of measures, operationalising the cross-cutting climate objectives inevitably invites legitimacy counterclaims – especially if the flexibility within the substantive legal framework is called into question.

Strengthening climate governance through democratic innovations: lessons learnt from European climate assemblies

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Alessandra Accogli[1]
Aishwarya Machani[2], **Alina Averchenkova**[2]
[1] Dublin City University
[2] London School of Economics

Introduction: Addressing the climate and ecological crisis requires deep and rapid economic and social transformation that will have a significant impact on citizens' lives. At the same time, democratic institutions are facing a crisis of legitimacy, with levels of trust declining across the EU. In this context, deliberative minipublics (DMPs), such as climate assemblies, have gained traction as a tool to meaningfully engage citizens in climate governance and enhance the acceptability, as well as the quality and justice of climate policy. Knowledge of the impact of DMPs remains fragmented. A systematic literature review conducted as part of the RETOOL project (Horizon Europe grant No. 101132661) revealed that whilst the impact of DMPs on climate action has received some attention, the impact of DMPs of democratic governance has been understudied. This paper seeks to address this gap in the literature by exploring the impact of DMPs in Belgium, Sweden and Ireland, on both climate action and democratic governance.

Methods: Drawing on findings from the systematic literature review and semi-structured interviews, we conduct a comparative review of the DMPs to better understand their potential to strengthen democratic climate governance, and to identify ways in which this potential can be fulfilled or increased.

Results: A review of 121 articles confirmed that academic research is focused on policy outcomes. However, empirical case studies in Belgium, Sweden and Ireland revealed a different reality. In practice, these assemblies often had a greater impact on "ways of thinking" and building governance resources than on immediate policy change.

Conclusions: The takeaway is clear: DMPs can shift discourse and build collective understanding that can strengthen both climate action and democracy.

The European Union's Struggle for Climate Leadership at COP30 in Belém: EU Climate Diplomacy under Pressure Ten Years after Paris

9. On shaky ground? EU climate neutrality and democracy in turbulent times

Charles Parker[1]
Karin Bäckstrand[2]
[1] Department of Government & Centre of Natural Hazards and Disaster Science (CNDS), Uppsala University
[2] Department of Political Science, Stockholm University

Introduction: The European Union (EU) has long aspired to be a leading actor in combating climate change at the global level. In the ten years since it played a crucial role in the adoption of the Paris Agreement, the EU has worked for the effective implementation of the agreement. The European Green Deal and Fit for 55 package exemplify the EU's attempts to lead by example as a global standard setter to spur climate ambition worldwide and achieve climate neutrality by 2050. However, these goals are in jeopardy as the international context has grown more competitive and turbulent in an era of polycrisis. Against a backdrop of multiple conflicts and geopolitical crises, such as Russia's invasion of Ukraine, strained EU-China relations, and political volatility in the United States, the EU must navigate the climate negotiations without reliable partners. Using the 2025 UN Climate Conference (COP30) in Belém as a point of departure, this paper examines the role that EU climate diplomacy and leadership played in shaping the conference outcome and analyzes the extent to which the EU achieved its negotiation goals of maintaining the viability of the 1.5°C temperature goal, advancing the transition away from fossil fuels agreed at COP28, operationalizing the Global Goal on Adaptation, and securing implementation of the New Collective Quantified Goal on climate finance.

Methods: We investigate these issues by conducting a theoretically guided qualitative content analysis of Council conclusions, Commission statements, and the adopted COP30 decisions, tracing how EU positions traveled from mandate to outcome.

Results: Preliminary findings suggest that while the EU preserved key elements of previous agreements and secured gains on adaptation finance, it was unable to advance stronger mitigation commitments facing opposition from an emboldened petrostate coalition.

Conclusions: The conclusions should shed light on how, in a fragmented geopolitical landscape marked by U.S. withdrawal and an emboldened BRICS-Arab coalition, the EU pursues its leadership strategies in relation to other powerful actors and what outcomes those efforts yield. These insights are crucial for understanding the EU's prospects for achieving its global climate change objectives and for exerting influence as an external actor on the world stage.

10. Nordic industrial policy for a just and effective green transition

China and the US have, in different ways, transformed their economies and geopolitical relations through strong industrial policy in recent years. With Russia also raising the stakes, Europe has scrambled to regain its agency in changing the trajectories of competitiveness and decarbonization of the continent. Through coordinated industrial policy, the EU (along with member states) wishes to rapidly strengthen its security and phase out fossil fuels while improving its competitiveness and the social conditions of its citizens. A green transition is now effectively inseparable from industrial policy, which changes the rules of the game also for environmental social scientists seeking to influence issues such as energy and climate policy. In the meantime, it remains unclear to what extent geopolitical and competitiveness ends may crowd out member states' social and environmental agendas.

We invite researchers, policymakers, and practitioners to contribute to a workshop exploring the role of industrial policy in driving a just and effective green transition. We particularly welcome contributions addressing:

- Lessons from the Nordic Region and Beyond – successes and failures of industrial policy across different contexts. What lessons can be drawn, what pitfalls avoided, and what elements must be reinforced?
- Conditionalities in Government Support – How should public funding and risk-taking be structured? What role should conditionalities play; for example, the principle of "public risk, public gain"? Alignment with the Nordic tripartite model, prevention of rent-seeking, and/or limitations on shareholder remuneration?
- Informational and Coordinative Capacities – What public capacities are needed to implement effective industrial policy in the Nordic institutional context? What role should science and researchers play in informing and coordinating such efforts?
- Towards a new Nordic Perspective on EU Industrial Policy – How can the Nordic countries and actors contribute to the formulation of a transformative and just EU-wide industrial policy?

We will prioritize fully or nearly fully drafted papers over research ideas or half-written texts. Papers need not, however, be close to submission, since our discussions aim to provide feedback for the development of the ideas, theories and methodologies.

Convenors

Paavo Järvensivu, BIOS Research Unit, Helsinki, Finland
Johan Rootzén, IVL, Swedish Environmental Research Institute, Sweden
Viktor Skyrman, Department of Business Studies, Uppsala University, Sweden

An emerging circular industrial policy: evaluation of the EU industry policies for circular transition.

10. Nordic industrial policy for a just and effective green transition

Marianne Ekdahl[1]
Jessika Luth Richter[1], Carl Dalhammar[1]
[1] IIIEE, Lund University

Introduction: Industrial decarbonization alone will not suffice to keep economic activity within planetary boundaries; reducing resource use is equally essential. Current green industrial policies must therefore be complemented with circularity-oriented measures. An emerging circular industrial policy (IP) is now taking shape: notably, the EU is increasingly using IP instruments to advance circular objectives, i.e. through the Clean Industrial Deal[1] (2025). However, academic understanding of these new policy tools remains fragmented, and their specific relation to circularity requires clarification. The objective of this study is to advance understanding of this emerging EU policy type by analysing its relevance and potential policy gaps. The research seeks to answer: How is circular industrial policy emerging in the EU? How does it enable circularity and other benefits? What policy gaps exist and what recommendations for improving the policy framework can be made going forward?

[1] European Commission. (2025). *The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52025DC0085

Methods: Data collection has begun with a literature review, including mapping of existing and forthcoming EU circular IP policies. A survey will follow with representatives from relevant sectors and institutions. The analysis also draws on an existing framework for analysing circular industrial policy[1]. A case study, the Ragn-Sells[2] phosphor recycling initiative, will provide detailed insights into the potential of circular IP to promote circular industry.

[1] Ekdahl, M., Milios, L., & Dalhammar, C. (2024). Industrial policy for a circular industrial transition in Sweden: An exploratory analysis. *Sustainable Production and Consumption*, *47*, 190–207. https://doi.org/10.1016/j.spc.2024.03.031
[2] Ragn-Sells AB. (2025). *Sweden calls for EU action to unlock phosphorus recycling*. https://newsroom.ragnsells.com/posts/pressreleases/newsroom.ragnsells.com/posts/pressreleases/sweden-calls-for-eu-action-to-unlock-phosphor Retrieved 8 December 2025.

Results: Initial findings from literature and anticipated survey and case study findings will give insights into the benefits, including competitiveness, comparative advantages and resilience. While reduced environmental impact and resource use should be prioritised, tensions with other priorities or barriers often arise. The current policy mix remains biased towards recycling, compared to other R-activities; however, survey and case insights can offer potential policies and strategies to overcome barriers and build capacity. Specific results will provide insights from different perspectives, forming the base for policy recommendations.

Conclusions: See above.

Analyzing emerging socio-technical trajectories through job postings

10. Nordic industrial policy for a just and effective green transition

Maja Svanberg[1]
Johnn Andersson[2], Hans Hellsmark[1]
[1] Chalmers University of Technology, Department of Technology Management and Economics, Sweden
[2] RISE Research Institutes of Sweden, Department System Transition, Sweden

Introduction: Transformative innovation policy emphasizes deliberate directionality—steering innovation toward societal goals rather than leaving trajectories to market forces. Sweden's Industrial Leap, beginning in 2017, exemplifies this approach, mobilizing actors around strategic technologies such as hydrogen, carbon capture, and batteries to accelerate decarbonization. Such a transformative policy not only reduces emissions but also reshapes sectors. Transitions do not simply substitute technologies; they reconfigure and reshape tasks and the skills required to perform them. However, few studies have examined transitions by analyzing how skill demand evolves. This paper addresses that gap by examining job postings as signals of emerging socio-technical trajectories in Sweden's green industrialization.

Methods: We analyze more than 8 million vacancies from Platsbanken, Sweden's national job board, spanning 2006–2024. Advanced data science techniques for processing natural language are used to create digital embeddings of the required skills for these postings. Factor analysis identifies 12 prominent skill dimensions, which we interpret qualitatively—examples include "engineering," "scientific research," "strategic planning," and "hospitality." We then track temporal patterns in postings that mention hydrogen, carbon capture, and batteries, and link these postings to skill dimensions.

Results: (Preliminary results) Mentions of the key technologies are negligible before 2017, the onset of the Industrial Leap. After 2017, postings emphasize scientific research skills. After a few years, vacancies emphasize soft skills that are otherwise most seen in customer engagement and community coordination roles, alongside construction-related skills. Strikingly, engineering skills remain underrepresented in technology-related postings throughout the period, both relative to other high-tech sectors and to the economy overall.

Conclusions: (Tentative conclusions) Our findings suggest that emerging green technologies initially rely more on soft skills than on hard technical expertise, consistent with qualitative insights from earlier studies. The limited number of vacancies for hydrogen, carbon capture, and battery technologies before the start of the Industrial Leap underscores the importance of government leadership in shaping the direction of these transitions.

Banking on derisking: Asessing the investability of carbon management in the Nordic

10. Nordic industrial policy for a just and effective green transition

Joachim Tilsted[1]
Allan Dahl Andersen[1]
[1] Department of Food and Resource Economics, University of Copenhagen

Introduction: The scaling of emerging carbon management value-chains is dependent on financial commitments to project development associated with novel socio-technical configurations, with individual projects often being dependent on the realization of other projects in the value chain. Financial commitments are put to the test when developers make their final investment decisions and take on the associated financial and legal project development obligations. These decision points thus reveal a commitment to the future and a belief in the viability of the said project. Despite the importance of investment decisions, the literature on the political economy of industrial policy has yet to explore the logics and criteria that structure final investment decisions amongst the involved actors. For emerging system complexes, however, which are characterized by uncertainty and open-endedness, the stabilization of risk expectations amongst financial actors shapes the speed, scope, scale and form of system complex formation.

Methods: In this paper, we study the formation of the carbon management system complex in Northern Europe, focusing on Denmark. Through interviews with key actors (30 interviews expected, 9 done so far), participant observation (15 industry events expected, 5 so far) and document analysis, we explore investments related to large-scale carbon management. Invoking the notion of bankability, which refers to the criteria that creditors demand in order to provide debt finance, we map the risk dimensions that project developers struggle to stabilise.

Results: We find that although broad-based hype and strong political commitments to carbon capture and storage have created a wealth of activity in Denmark in a relatively short time span, the efforts to stabilize risk are crucial to investment decisions, slowing down project development and narrowing its scope to align with commercial and financial imperatives.

Conclusions: This paper thereby presents an understudied medium through which power operates in transitions, analyzing the distribution and construction of risk within emerging carbon management systems.

Bridging the Climate-Air Quality Nexus: A Comparative Policy Analysis of China and the EU's Green Industrial Agendas

10. Nordic industrial policy for a just and effective green transition

Hermann Aubié[1]
[1] University of Eastern Finland, Center for Climate Change, Energy and Environmental Law

Introduction: The global green transition is deeply intertwined with strategic industrial policy, fundamentally altering green governance landscapes. For the EU and Nordic states, this demands faster integration of domestic decarbonisation, geoeconomic security, and industrial competitiveness policies. While the 2024 Draghi report noted the EU adopted a climate policy without a matching industrial strategy, China implemented a cleantech industrial strategy delivering multiple air quality and climate benefits. This research examines how China's synergetic climate-air quality approach and cleantech dominance compare with the EU's market-and-regulation-based policies (Green Deal, Net-Zero Industry Act), particularly regarding whether competitiveness and security concerns crowd out potential benefits of bilateral climate and environmental cooperation with China.

Methods: This qualitative comparative case study employs in-depth document analysis and expert interviews (15 done and I expect to have another 10 completed by the time of my full draft submission). The analysis systematically compares China's forthcoming 15th Five-Year Plan (2026-2030), 2035 NDC, and air pollution instruments against the EU's Green Deal, NZIA, and comparable policies. A novel analytical framework assesses respective policy integration levels and capacity to deliver desired outcomes, identifying synergies (e.g., climate-air quality co-benefits) and trade-offs (e.g., energy security versus competitiveness).

Results: The analysis should reveal key policy drivers: China's top-down, integrated approach prioritises national developmental goals (economic stability, air quality, energy security) alongside climate, achieving co-benefits through decisive state action and subsidies. The EU's framework with market principles, member-state sovereignty, climate leadership, and geoeconomic shifts, creating tensions where cleantech competitiveness and deregulation pressures could slow the broader green transition. As China transitions from carbon-intensity to absolute carbon cap, collision points (CBAM, EV tariffs) and convergence opportunities (carbon pricing, methane reduction) need to be anticipated.

Conclusions: While the EU and China are the twin engines of global climate action, the tensions between green industry and geoeconomic rivalries may present barriers to progress on global climate-air quality synergy which is essential to achieve Paris Agreement objectives. The Nordic region has a vital role in advocating a more integrated EU green industrial policy managing competition and strategic cooperation with China on climate and environmental goods, ultimately accelerating the paradigm shift towards living within planetary boundaries.

Building capacity for industrial policy: the important role of transition planning

10. Nordic industrial policy for a just and effective green transition

Paavo Järvensivu[1]
[1] BIOS Research Unit

Introduction: Industrial policy has the potential to guide national economies and the European Union in and through the polycrisis, blending the need for transforming social metabolism with the requirements of competitiveness and security, while fostering conditions that enable people to live good lives. More specifically, this involves transitioning production and consumption systems away from fossil fuels and excessive use of other natural resources. Industrial policy requires two categories of state capacity: informational and directive (Kapczynski & Michaels, 2024). This paper focuses on informational capacities and transition planning in particular. Recently, planning aimed at transforming economies has received increasing scholarly attention (Sorg & Roos, 2024; Ban & Hasselbalch, 2024; Bärnthaler et al., 2025). However, in the contemporary Western context, there is a lack of understanding of what is required of planning to enable transformative industrial policy.

Methods: This paper builds on our empirical studies and institutional experiments in Finland to further develop a pragmatic approach to transition planning. Our foundational insight is that high-quality theorising on transition planning requires close attention to the social and material realities of production and consumption system renewal. If we view transitions from too broad a perspective, we risk overlooking the very things that comprise the difficulties and complexities of planning.

Results: As a research outcome, we present a conceptual tool for transition planning involving multiple goals, enabling and limiting conditions, domains, and temporal and spatial zooming.

Conclusions: We argue that this tool significantly improves the quality of transformative pathways and reduces the associated uncertainties and risks.

European multi-level governance for transforming energy-intensive industries towards zero-emissions

10. Nordic industrial policy for a just and effective green transition

Simon Otto[1]
[1] Vrije Universiteit Brussel (VUB), Brussels, Belgium

Introduction: This paper analyses the European Union's (EU) multi-level governance framework for achieving zero-emission energy-intensive industries (EIIs). European EIIs face the dual challenge of decarbonising in line with the EU's climate targets while maintaining international competitiveness. Addressing these challenges requires a comprehensive and coherent European industrial policy approach. However, the development of thereof has been challenged by the EU's complex multi-level governance structure, competing political interests, and a mismatch of competences. This raises the question of how the governance of industrial transformation can be improved. To address this question, this paper analyses how the existing governance framework interacts across the EU and Member State level.

Methods: Conceptually, the paper builds on the literature on green industrial policy and multi-level governance to discuss how the state can steer the transformation of EIIs in a multi-level context. To that end, it outlines two key governance dimensions, including (a) comprehensive policy mixes (i.e. what policies aim to do), and (b) adequate institutional frameworks (i.e. how decisions are made). It further discusses the importance of strong alignment of these dimensions, both vertically (across governance levels) and horizontally (across member states). Empirically, the paper analyses in detail the existing policy mix and institutional framework for EII transformation across the EU and Member State level. Germany is used as an illustrative case study of how EU and member state policies interact in practice. The analysis is based on relevant policy documents, academic literature, and expert interviews with policymakers, industry, and academic experts (conducted in Berlin and Brussels).

Results: Preliminary findings show that the EU has a well-developed multi-level policy mix, but key gaps remain regarding demand-side policies and international competitiveness. Furthermore, a coordinated European vision of what EII decarbonisation means in practice and a common European 'governance space' to discuss these issues appear to be lacking.

Conclusions: The paper aims to better understand the strengths and challenges of the existing multi-level governance framework for EII decarbonisation, with a view to exploring potential options to address identified shortcomings. In doing so, it contributes to the literature on green industrial policy, industrial decarbonisation and multi-level governance in Europe.

Green macrofinancial regimes and transformative industrial policy in Nordic countries

10. Nordic industrial policy for a just and effective green transition

Jussi Ahokas[1]
[1] BIOS research unit

Introduction: Recent political economy research has increasingly focused on (green) macrofinancial regimes, understood as the institutional configurations shaped by financial market structures, monetary and fiscal policies, and broader economic governance. The interaction of these elements determines how effectively societies can implement projects that drive the green transition. As global political dynamics have shifted, the green transition has become closely tied to transformative industrial policy – policy aimed at addressing multiple societal challenges simultaneously in order to steer economies and societies toward sustainability. In practice, both the green transition and transformative industrial policy take the form of large-scale investment programs, which foreground the central role of finance. In contemporary capitalist monetary systems, major investment initiatives depend on the availability and direction of financing, which is always embedded in – and constrained or enabled by – a particular macro-financial regime. This makes such regimes especially important objects of study today.

Methods: This paper offers an empirical examination of Nordic green macro-financial regimes and the ways they have evolved in recent years. Drawing on typologies developed in recent political economy literature, it constructs a research framework that enables a nuanced description and interpretation of green macrofinancial regimes in the Nordic context. The goal is to conceptualize these regimes in ways that are practically useful for understanding and addressing the green transition, transformative industrial policy, and the investment projects associated. Methodologically, the study undertakes a macro-level structural analysis: it identifies the key institutions, processes, and dynamics that constitute these regimes, and then analyzes their trajectories across time and space.

Results: Building on earlier findings, the paper hypothesizes that Nordic green macrofinancial regimes can be understood as distinct forms of derisking regimes. This suggests that while Nordic states possess the institutional capacity to steer the green transition and shape transformative industrial policy, they tend to do so largely through financial markets, market-based mechanisms, and profit-orientation. By conducting a systematic comparative analysis, the paper seeks to illuminate the differences among Nordic derisking regimes.

Conclusions: These distinctions, it argues, offer important insights for designing more effective approaches to financing the green transition and for guiding future industrial policy.

In the crosshairs: how regulations, tariffs and industrial policy drive the sustainability transition of the vehicle industry in Europe and China

10. Nordic industrial policy for a just and effective green transition

Carl Dalhammar[1]
Lan Li[2]
[1] International Institure for Industrial Environmental Economics at Lund University
[2] Shanghai Yangtze Delta Sustainable Investment Consultancy

Introduction: The EU has introduced several laws to promote sustainability for vehicles, going further than other jurisdictions. The rules include producer responsibility obligations, and the 2035 internal combustion engine (ICE) phase-out, and requirment on recycled contents in new batteries and vehicles. Lately however, some rules have been renegotiated or delayed, and the European Commission is expected to release an 'automotive package' in December 2025 that may relax/remove some rules. The situation is complicated by the increasing use of tariff and quota systems in international trade, and new EU policies including the Steel and metal action plan and subsides for battery recycling. There is a general distrust among industries that agreed-upon EU laws will not actually enter into force, and this is impeding investments. Some manufacturers, who have invested in electrification, are worried about the recent developments. Potentially, EU's role as a green leader, and the momentum of the 'Brussels Effect', may be compromised.

Meanwhile, Chinese industry has taken the lead in vehicle electrification and battery development. The Chinese government's policy framework for the automotive sector is ambitious, aiming for global leadership in new energy vehicles (NEVs) and intelligent driving. However, this ambition clashes with immediate market realities, creating a significant policy tension. This contradiction primarily manifests in the struggle to transition the industry from volume-driven expansion to quality- and value-driven growth. Intense competition leads to low profit margins, undermining funds for future R&D. Another profound source of uncertainty for Chinese automakers is the extremely rapid pace of technological iteration.

This paper analyses the current policy and market landscape for the vehicle industry in Europe and China, and how industry is preparing for the future challenges, including via strategies such as lobbying and supply chain collaboration.

Methods: The main methods employed are literature reviews, legal analysis, policy analysis, and industry workshops. Two workshops with manufacturers and suppliers are already completed.

Results: Key results include: a) better understanding of how industries are dealing with current policies and market uncertainty; 2) key lessons for future policy design.

Conclusions: Expected conclusions include: key weaknesses of policy packages in EU/China, conclusions on need for long-term policy planning.

Industrial Policy and the Decarbonisation of Chemical Parks: A Comparative Governance Analysis of China and the EU

10. Nordic industrial policy for a just and effective green transition

Lixue Lin-Siedler[1]
Zhenxi Li[2], Clemens Schneider[1], Stefan Lechtenböhmer[1]
[1] Kassel Institute for Sustainability, University of Kassel
[2] School of Chemical, Materials and Biological Engineering, University of Sheffield

Introduction: Industrial policy has regained strategic importance as countries seek to reconcile competitiveness, decarbonisation, and geopolitical resilience. Nowhere is this tension more pronounced than in the chemical and petrochemical sectors, which are energy-intensive, infrastructure-dependent, and central to multiple value chains. China and the European Union (EU) both consider these sectors essential for their long-term green transition strategies, yet they operate within markedly different institutional architectures and governance models. Unlike individual firms or the broader chemical sector, chemical parks bundle shared utilities and planning authority, making them decisive leverage points for industrial transformation. This paper investigates how industrial policy shapes chemical park governance, long-term infrastructure planning, and upstream–downstream coordination in these two regions, capturing the institutional, infrastructural, and value-chain mechanisms that jointly determine how chemical production systems transform under green industrial policy.

Methods: The study employs a comparative qualitative design informed by Frank W. Geels's multi-level perspective (MLP) on socio-technical systems. Empirical material includes: (1) document analysis of industrial and climate-policy frameworks in China and the EU (data collection done); (2) semi-structured interviews with park operators, local officials, industry representatives, and infrastructure planners (EU interviews done); (3) comparative case studies of 4 selected chemical parks to examine governance arrangements and strategies for heat, power, hydrogen, and carbon-management infrastructures. (1 out of 4 cases done)

Results: China's industrial park model exhibits integration between local governments, park management committees, and utility providers, enabling coordinated long-term planning and active shaping of value-chain composition, while european chemical parks, embedded in regulatory and market frameworks, face fragmented mandates across operators, municipalities, and national authorities, complicating coordinated infrastructure planning. These differences have implications for the pace and organisation of the green transition.

Conclusions: The study is expected to clarify how different governance architectures shape transformation capacities in chemical parks as heavy industrial clusters. The contribution lies in demonstrating that institutional coordination at the chemical-park level plays a decisive role in enabling infrastructure-intensive decarbonisation. The analysis provides a comparative framework without prescribing convergence between Chinese and European models. The aim is to promote a better systemic understanding of the challenges involved in decarbonising petrochemical clusters.

Industrial Sustainability by Design: Social tipping dynamics for just industrial renewal in European heartlands

10. Nordic industrial policy for a just and effective green transition

Klaus Krumme[1, 2, 3, 4]
Jan-Hendrik Kamlage[3, 4, 5], Frederik Ahlemann[3, 6], Michael Henke[3, 7, 8], Francesco Pellicano[3, 9], Natalia Shyriaieva[3, 4]
[1] University of Duisburg-Essen (UDE), Centre for Logistics & Traffic (ZLV)/ Open Working Group "Sustainable Infrastructures, Networks & Systems" (SINS), Duisburg/ Germany
[2] Green Deal Data Space Association (GDDS), Düsseldorf/ Germany
[3] Industrial Sustainability Initiative Ruhr (ISI), University Alliance Ruhr (UA-Ruhr), Germany
[4] National Technical University (NTU)/ Kharkiv Polytechnic Institute, Department of Management, Kharkiv/ Ukraine
[5] Ruhr University Bochum (RUB), Center for the Engineering of Smart Product-Service Systems (ZESS), Research Group "Participation & Transfrmation", Bochum/ Germany
[6] University of Duisburg-Essen (UDE), Chair of Information Systems and Strategic IT Management (SITM), Essen/ Germany
[7] Technical University of Dortmund, Chair of Enterprise Logistics and Supply Chain Management (LFO), Dortmund/ Germany
[8] Fraunhofer Institute for Material Flow & Logistics (IML), Dortmund/ Germany
[9] University of Modena and Reggio Emilia (UNIMORE), Department of Engineering 'Enzo Ferrari', Modena/ Italy

Introduction: Europe's industrial system is caught in a deepening polycrisis. The weakening of the Green Deal, renewed carbon lock-ins and rising socio-ecological pressures make clear that incremental green industrial policy can no longer deliver the sustainability transformation that is urgently required. We argue for a **transformative industrial paradigm**, - treating planetary boundaries, democratic legitimacy and societal responsibility as non-negotiable design conditions. Building on the Industrial Sustainability Initiative Ruhr, we propose *Industrial Sustainability by Design*: a framework that conceptualises industrial heartlands - Ruhr region (Germany), Emilia–Romagna industrial districts (Italy), Kharkiv–Eastern Ukrainian industrial corridor (Ukraine), a war-affected industrial region facing profound reconstruction challenges - as socio-ecological-technological systems (SETS). Their industrial renewal must be governed through the coupling of **inside-out innovation capacities** (strategic corporate agency, technological and organisational capabilities) with **outside-in constraints** (planetary boundaries, social fairness and governance limits). *Shared Responsibility by Design* (SRbD) embeds responsibility metrics and conditionalities into industrial-policy architectures, positioning public support as a catalyst for just, circular and decarbonised industrial ecosystems.

Methods: The paper draws on (i) a conceptual synthesis of sustainability science, industrial-policy theory and SETS-based transition research; (ii) a prospective comparative analysis of the three industrial heartlands using structured document analysis/ web-based expert elicitation (industry, policy, research and civil society); and (iii) design-oriented governance work to develop SRbD-based

conditionalities (“public risk, public gain”) and responsibility indicators for guiding industrial-policy choices. Digital infrastructures are treated as enabling conditions rather than as the analytical focus.

Results: We expect to (1) articulate a coherent Industrial Sustainability by Design architecture positioning planetary boundaries and societal responsibility as structural constraints for industrial renewal; (2) generate initial insights into heartland-specific renewal trajectories; and (3) outline a preliminary typology of SRbD-inspired conditionalities and governance capacities needed to steer transformation in ways that are socially legitimate, ecologically safe and economically resilient. We further conceptualise industrial heartlands as **arenas of social tipping dynamics**, showing how targeted governance and corporate-policy alignment may trigger rapid shifts away from fossil and linear industrial trajectories.

Conclusions: We offer a stringent paradigm and actionable governance principles for structural industrial renewal that remain within a safe and just operating space and activate social tipping dynamics toward long-term sustainability.

Learning from the pre-neoliberal Swedish climate transformation

10. Nordic industrial policy for a just and effective green transition

Jens Ergon[1]
Rikard Warlenius[2]
[1] Climate Change Leadership, Department of Earth Sciences, Uppsala University
[2] School of Natural Science, Technology, and Environmental Studies, Södertörn University

Introduction: So far, no industrialized country has reduced emissions fast enough to be on track for meeting climate targets. At the heart of this failure lies a sustainable development dilemma: how can an ecologically sustainable model that is regarded as effective, legitimate, and just come about? In this paper, we assume that historical transformations can inform and inspire current policies. We will in particular scrutinize the significant reduction of carbon emissions of over 40 percent that occurred in Sweden during the 1970s and 80s, which is relatively unknown and understudied. Our aim is to describe major mechanisms and events that made this rapid decarbonization happen.

Methods: In the paper, Sweden's political economy during the 1970s and 80s is analyzed with a refined Polanyian framework, dividing the double movement of market forces and societal countermovements into a socio-economic and environmental dimension. Historical data are used to analyze the evolution of Sweden's welfare, financial, and environmental regimes, with an emphasis on carbon emissions. Available quantitative data are triangulated with secondary literature and public records to analyze and explain key mechanisms.

Results: Sweden's decarbonization is often explained by the shift in energy generation from oil to nuclear power. However, other policies and developments arguably had an influence too. We focus on parts of Sweden's environmental regime, such as oil substitution and energy conservation, but also the role of Sweden's pre-neoliberal financial and welfare regimes. Although we acknowledge the importance of the nuclear roll out, the question remains what made this and other policies as rapid and penetrating compared with other energy transitions.

Conclusions: We present a full paper where we expect to relate Sweden's 'unknown climate transformation' to the unique form of embedded liberalism that characterized Sweden in the 1970s, including pre-neoliberal financial arrangements, welfare state expansion and a more interventionist state, but also the rising importance of environmental issues in the 1980s, when the "Swedish model" was gradually challenged and substituted by neoliberal globalization. The results highlight the importance of broadening current discussions from climate policy to financial, industrial and welfare policies. Finally, we elaborate on how the lessons can be translated into a contemporary context.

Mission-Based Industrial Policies, Green Reindustrialization and Its Discontents: the Uneven Distribution of Risks and Rewards in Regional Development

10. Nordic industrial policy for a just and effective green transition

Viktor Skyrman[1]
[1] Uppsala University

Introduction: Mission-Based Industrial Policies, Green Reindustrialization and Its Discontents: the Uneven Distribution of Risks and Rewards in Regional Development
Green industrialization requires financial capacity and involve many types of risks for municipalities investing in infrastructure, housing, and welfare services accompanying planned production sites. Meanwhile, many governments have withdrawn economic support to municipalities amid austerity and secular stagnation. In Sweden, this raises questions about how much financial and institutional resources the state is prepared to mobilize to maintain green transformation leadership.

Notably, derisking has been an explicit objective to reallocate risk and reward between the public and private sectors since the 2008 financial crisis, but it is crucial to further "distinguish […] between types or indeed levels of derisking. Some types, perhaps, are more acceptable than others. Not all derisking is the same" (Christophers, 2022:1540). The unfolding crisis facing battery maker Northvolt, recently hailed as a key to European green-tech self-sufficiency, sharply reveals the vulnerability for municipalities hosting green industrial projects and the discrepancy between official claims about just green transitions and actual distribution of risks.

Comparing three municipalities (Skellefteå, home to Northvolt; and Boden and Luleå, which host two of Europe's largest projected "green steel" plants), this article investigates public investments for green industrialization and the political allocation of risks and rewards between municipalities, firms and the central government (Ward et al., 2024). Analyzing policy documents, descriptive statistics and interviews, we ask how government derisking strategies combine with local financial capacity to distribute risks across scales, and to what extent these strategies enable or constrain local/municipal statecraft within the larger configuration of mission-led place-based industrial policies.

Methods: -
Results: -
Conclusions: -

Picking Sectors for Industrial Policy: IPCEIs and Europe's Emerging State Capacity for Strategic Identification

10. Nordic industrial policy for a just and effective green transition

Tobias Wuttke[1]
[1] University of Gothenburg

Introduction: A defining feature of contemporary industrial policy is governments' increasing willingness to direct economic activity into "strategic" sectors. However, identifying which sectors or technologies are actually "strategic" and thus warrant selective support remains poorly understood. This study introduces the concept of state capacity for strategic identification (SCSI): the ability to assess which sectors contribute to public goals and to coordinate private actors around these goals. We distinguish internal SCSI (gathering and validating information) from external SCSI (building consensus and coordination). We examine SCSI development in the EU through a case study of Important Projects of Common European Interest (IPCEIs), where – since 2014 – the EU has had to identify which sectors/technologies to support under this vertical industrial policy instrument.

Methods: This qualitative case study combines primary document analysis (meeting minutes, internal reports, official communications) with 17 original semi-structured interviews with EU and member state officials and private sector representatives, conducted in 2024-2025. We trace SCSI evolution from ad-hoc processes (2014) through the Strategic Forum (2018-2020) to the Joint European Forum (JEF-IPCEI, 2023-present), employing process tracing methodology to analyze how policy failures and learning shaped the institutional development of SCSI.

Results: Our analysis documents gradual SCSI institutionalization through policy learning. Early IPCEI identification (2014-2018) suffered from opacity, limited coordination, and industry capture. The Strategic Forum (2018-2020) formalized procedures but exhibited critical shortcomings: industry overrepresentation in voting, limited internal Commission coordination, and eventual discontinuation. The JEF-IPCEI (2023-present) addresses many failures through institutionalized member state coordination, reduced direct industry influence in decisions, and improved inter-DG cooperation within the Commission.

Conclusions: The JEF-IPCEI represents substantial external SCSI progress through institutionalized coordination and maintaining industry connections while avoiding capture. Internal SCSI, however, remains limited due to insufficient systematic integration of technical expertise during identification. Our findings illuminate how supranational entities build capacity for market-directing industrial policy and highlight ongoing challenges of balancing embeddedness and autonomy in strategic identification, contributing to understanding the political economy of how industrial policy prioritization decisions are made in practice in the EU.

The role of policy in market formation for small modular nuclear reactors: A comparative case study of Sweden, Canada, and the United States

10. Nordic industrial policy for a just and effective green transition

Charles Giordano[1]
Johnn Andersson[2], Björn Sandén[1]
[1] Chalmers University of Technology, Department of Technology Management and Economics, Division of Environmental Systems Analysis, Gothenburg, Sweden
[2] RISE Research Institutes of Sweden, Division Built Environment, Department System Transition, Gothenburg, Sweden

Introduction: The projected electricity demand increase associated with green transitions has generated renewed interest in nuclear energy. However, today's nuclear reactors are associated with safety concerns, exorbitant costs and long lead times. Modular in design, of lower capacity, and possessing advanced safety features, small modular reactors (SMRs) are portrayed as a potential solution by some policymakers in Europe and North America. While no single SMR has yet begun construction in either continent, numerous designs envisioned as filling different needs have been generated. Industrial policy that actively promotes market formation is likely required for the diffusion of SMRs. As shown by experiences from, e.g., the development of current nuclear reactors, policy can significantly influence characteristics of emerging markets and thereby shape the directionality of technological innovation. This makes the design of policy interventions crucial for determining social, environmental and economic outcomes of innovation. The purpose of this study is therefore to explore the role of policy in SMR market formation.

Methods: Through a case study of Sweden, Canada, and the United States, the research aims to characterise and compare the role of policy and policymakers in SMR market formation. The focus is on how policy interventions in the three geographical contexts influence the selection environment associated with emerging markets and how this in turn shapes technical designs, actor networks, and social institutions. Empirical data is collected from semi-structured interviews with 20 members from industry, research and government, as well as via desktop review of publicly accessible material.

Results: This study expects to find differences in how political authorities support market formation for SMRs in differing geographic contexts. Effects of different policy interventions to nurture growing markets are expected to affect the components making up each respective system including designs, actor networks and institutions.

Conclusions: Findings are expected to reaffirm the importance of effective industrial policy in order to support market formation for innovative technologies in the context of SMRs. Furthermore, that decisions by policymakers can directly influence the directionality of market formation in an emerging sociotechnical system and therefore impact the potential of a focal technology itself.

The Role of the Government in Green Technology Experimentation and Up-scaling: Lessons from Previous Research Evaluations

10. Nordic industrial policy for a just and effective green transition

Åsa Löfgren[1]
Patrik Söderholm[2]
[1] Department of Economics, Gothenburg University, Gothenburg, Sweden
[2] Economics Unit, Luleå University of Technology, Luleå, Sweden

Introduction: Experimental activities in pilot and demonstration plants often play key roles in technological development, not least in the transition to zero-carbon technologies in industry and the energy sector. Such activities make it possible to scale, optimize and improve the performance of novel technologies, and reduce technical, economic, political and institutional risks. The objective of the paper is to synthesize and discuss previous research that has evaluated the implementation as well as the impacts of government support to pilot and demonstration plants. Conceptually, the paper outlines various categories of plants, reviews the market failures that could motivate government support, e.g., coordination failures and financial barriers, and discusses the challenges involved in implementing this type of support.

Methods: Our review of existing research focuses on: (a) process evaluations, i.e., studies examining how various support programs have been designed and implemented; (b) impact evaluations, i.e., research that assesses the causal effects of government support programs on specific outcome variables; and (c) outcome evaluations, i.e., studies examining why some government-supported plants have been built and operated as planned while others have not been taken into operation or mothballed prematurely. The studies reviewed focus on gpilot and demonstration plants that support the climate transition.

Results: The review shows that most of the impact evaluations indicate positive effects of government support programs. Most of these evaluations have had a focus on commercial adoption, an outcome variable that is primarily relevant for close-to-commercial technologies developed in large-scale demonstration plants. One weakness of many impact evaluations is that little attention is devoted to the design and implementation of government support programs, in turn making it difficult to draw relevant lessons for policy. The process evaluations derive criteria for how support programs should be designed and implemented and evaluate the extent to which the different empirical cases fulfill these criteria. Most process evaluations focus on less mature technologies.

Conclusions: The paper concludes that government programs supporting pilot and demonstration plants must grapple with several challenges, e.g., the need for private capital, launching a portfolio strategy that support various types of learning processes, encouraging knowledge dissemination, and recognizing interactions with other policies.

The role(s) of the state in post-carbon capitalism: the case of the Finnish battery and extractive industries

10. Nordic industrial policy for a just and effective green transition

Sanni Sipinen[1]
Matti Kojo[1]
[1] LUT University

Introduction: This study investigates the evolving role of the state in governing the green transition, with a particular focus on policy activities related to the developing battery industry and extractive industry in Finland. We focus on these industries of green transition due to the rapidly changing geopolitical situation, EU's desire to become more autonomous in the critical raw materials sector and the growing demand for energy storage solutions. State–market relationships in Finland are shifting as the state expands its role in the markets' realm and high hopes for economic growth are placed on investments in these sectors. We align this study with critical, interpretive policy studies that emphasize the social construction of policy issues and challenge the assumption of policy-making as an objective and rational process.

Methods: We employ framing analysis to uncover how these issues are portrayed and how these frames are utilized in policy language to legitimize policy decisions. Framing is a widely used concept in critical policy studies utilized to scrutinize meaning-making: what is the perceived problem, what are recognized as the causes and what is the proposed solution. When framing policy issues, some aspects are brought to the forefront at the expense of others. Through the analysis of governmental strategies (e.g. Finland's new National Mineral Strategy), statements left on policy proposals, policy documents, and parliamentary debates related to the battery and extractive industries, this study examines how the state's interventions are framed and justified.

Results: The research questions are: (1) How are political decisions about green industrial investments framed in policy language, for example, through technology-centered, economic, or inevitability-based arguments? (2) Who are the key actors that have contributed to the policy agenda? The analysis aims to investigate how the role of the state is construed in the data by recognizing framing mechanisms of state interventions.

Conclusions: By examining the framing mechanisms that normalize state-market alliances in Finland's green transition agenda, this study contributes to broader debates on the political economy of green transitions and the role of the state in post-carbon capitalism, as well as to the field of critical policy studies.

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Nature-based solutions (NbS) are increasingly promoted as essential responses to biodiversity loss and increasing human wellbeing while addressing societal challenges such as climate adaptation, and sustainable urban development. Yet, their successful implementation hinges not only on knowledge, but also on inclusive processes that bring stakeholders together. This workshop addresses the challenges and opportunities of co-creation in NbS: how to design and govern participatory processes that deliver both legitimacy and effective outcomes.

The workshop links directly to the conference theme, focusing on two gaps: between research and policymaking, and between rapid decision-making and inclusive participation. We will critically examine cases of co-creation to identify when and how participatory processes strengthen NbS implementation – and when they risk becoming ineffective and/or causing dissatisfaction, and which barriers and enablers they meet.

Core questions include:

- How can we balance time consuming participatory processes with urgent climate and biodiversity action?
- What constitutes successful participation, and when might top-down governance be a better option?
- How can we ensure meaningful involvement of politicians and decision-makers in co-creation processes?
- Which barriers to NbS implementation can be mitigated through collaborative approaches?

We invite fully drafted manuscripts that draw on empirical cases of implementing environmental/nature policies, theoretical reflections on participation and governance, and methodological contributions. These may come from different disciplines and geographical contexts.

Our aim is to advance a comparative understanding of what makes NbS co-creation successful, under which conditions it fails, and how these insights can bridge the gap between research, policy, and practice. The workshop will be highly interactive, giving space for discussion of papers, reflections across cases, and joint identification of pathways for future research and policy design.

Convenors
Jóna Ólavsdóttir, Centre for Nature-based Solutions, Aarhus University, Denmark
Anders Branth Pedersen, Department of Environmental Science, Aarhus University, Denmark
Jens Christian Svabo Justinussen, Faculty of History and Social Science, University of the Faroe Islands, Faroe Islands

Assessing the Multilevel Governance of Transboundary Nature-Based Solutions across the Amazon Basin

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Martha Isabel Robles Ustariz[1]
Liliana Lizarazo-Rodríguez[1], Afnan Agramont Akiyama[2]
[1] Biodiversa+ Defendbio project, funded by the FWO (Brussels School of Governance, Vrije Universiteit Brussel)
[2] Department of Water and Climate, Vrije Universiteit Brussel.

Introduction: As the IUCN shows, it remains unclear whether NBS labelled projects are genuinely community-driven (bottom-up) or mainly developed from a top-down approach. In transboundary ecosystems, these challenges are amplified by multiple governance layers, fragmented jurisdictions, and multiple actors and sciences. This paper examines the Amazon River Basin Project (the Project) which includes seventeen interventions, some labelled as NBS and others, with similar characteristics, classified differently.

Methods: The paper combines methods: first, an interdisciplinary conceptual analysis of NBS connecting environmental science with law and policy developments. Second, a law and policy analysis of the governance layers of the Project, to explain how national constitutional and regional law and policy frameworks enable (or not) the implementation of NBS in an inclusive participatory manner. Third, a legal analysis of regional courts decisions to examine how they address community engagement and advance "non-conventional" NBS through protected areas or by granting biocultural rights to communities or to the Amazon. Then we will outline the interdisciplinary scope of the NBS concept and apply it to the interventions of the Project, whether labelled as NBS or not. We will discuss whether these interventions have the potential to guarantee community participation and inclusive governance as a way to materialise environmental justice. Finally, we will assess whether the "non-conventional" NBS proposed by the courts are in practice an effective institutional design for implementing the NBS of the Project in a participatory manner.

Results: We expect to provide i. a regional conceptualisation of NBS, framed by law, policy and environmental science; ii. unveil NBS typologies (labelled or not as such) by the Project with insights on the potential gaps between the discourse and their implementation, specifically regarding community participation and transboundary governance; iii. an analysis on how non-conventional NBS may enable or hinder the implementation of the conventional NBS proposed by the regional organisation, and which are the governance gaps for these projects when they have a transboundary character.

Conclusions: The conclusions will shed light on the conceptual analysis to the project intervention, while also connecting interdisciplinary understandings of NBS with case law decisions on the protection of the Amazon.

Co-creating Nature Based Governance

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Tatiana KLuvankova[1, 2]
Simo Sarkii[3], Martin Spacek[2], Juha Hiedanpää[4], Oriana Mosca[5], Ferdinando Fornana[5], Kia Andel[6]
[1] SlovakGlobe, IFE Slovak Academy of Sciences Bratislava, Slovak Republic
[2] CETIP Network , Czech Republic
[3] University of Oulu, Finland
[4] Natural Resources Institute Finland (Luke), Finland
[5] University of Cagliari, Italy
[6] City of Turku, Finland

Introduction: Nature-Based Governance (NBG), as an emerging concept embodied in the co-creation of Nature-Based Solutions, offers a holistic paradigm that recognises the intrinsic and relational values of nature and seeks to overcome human domination over the nature for planetary wellbeing . How can governance transform to recognise nature not only as an object of change but as an active agency in shaping our sustainable futures? We assume that transformation to NBG emerges through coevolution, equity, and multispecies care within **multispecies action arenas**—conceptualised as dynamic spaces linking institutional, physical, and biophysical dimensions, where humans and other Earth beings interact and co-create novel practices that enhance ecological resilience, inclusiveness, and care.

Methods: A methodological mix strengthens both the internal and external validity across the diverse settings typical of **transdisciplinary studies**. In our approach role board playing is suggested to overcome this challenge. Evolving from agent-based modelling a computational method used to simulate individual and collective behavior in natural and social sciences and from common-pool resource experiments examining the **social dilemmas** of resource management it faces social and ecological disturbances. Building on this development, we transferred the traditional social dilemma into a semi-digital decision model. ECOPOLY features a multispecies arena, where multispecies agencies, including vulnerable are confronted with changes in socio-ecological systems while facing uncertainty. Novel is also the role of Nature as governance agency to alter resource use or rules.

Results: ECOPOLY, has been applied to support **NBS co-creation** in several experimental cases in Europe within the Horizon Europe project COEVOLVERS. Findings indicate the importance of habits, biophysical dynamics, self-governance, and multispecies democracy. These aspects emerge as key variables in the reconfiguration towards transformative change for a sustainable future. Interactions among the players taking on different roles in the game setting trigger behavioral change, leading participants to recognise the positions of others and ultimately the significance of multispecies rights and needs. Social learning enhanced in collective gaming situations results in adapting novel practices and co-creating niches for coexistence and sustainability.

Conclusions: Our approach aims to facilitate deliberation and community inter-generational and inter-cultural learning aimed at transformative change to sustainability.

Co-creation Framings and Biodiversity Evidence in Nature-based Solutions: Re-examining the Implementation Gap

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Leonard Sandin[1]
[1] Norwegian Institute for Nature Reseach, Oslo, Norway

Introduction: Nature-based Solutions (NbS) are increasingly promoted to address interconnected climate and biodiversity challenges, yet many initiatives struggle to deliver meaningful ecological outcomes. A central reason is the varied and often unclear role of co-creation in NbS design and governance. Co-creation processes range from consultation to transformative partnership, with direct implications for how biodiversity objectives are defined, interpreted and used. At the same time, urgency in decision-making can exacerbate fragmentation, narrowing the space for ecological evidence and limiting the influence of participatory processes. These dynamics contribute to persistent implementation challenges, where NbS are deployed without the biodiversity foundations, shared learning structures or governance arrangements needed to support long-term effectiveness and legitimacy.

Methods: This paper applies a streamlined, IPBES-informed evidence synthesis to analyse how published NbS cases conceptualise co-creation framings and generate biodiversity-relevant evidence. Following a predefined protocol, searches will be conducted using the Open Alex database, which is an open, global index of research outputs and related metadata that aggregate peer-reviewed and gery literature across languages, publishers and research domains. The review will use explicit search strings and documented inclusion criteria. A structured extraction matrix will capture: (1) co-creation framings; (2) how biodiversity evidence is produced, interpreted and mobilised; and (3) reported barriers and drivers shaping implementation outcomes. Snowballing will identify additional frequently cited studies. The synthesis will map recurring patterns and divergences with direct relevance to understanding and closing the NbS implementation gap.

Results: Findings are expected to clarify how different co-creation framings shape the production and use of biodiversity evidence, and how these dynamics affect fragmentation and efforts to close the NbS implementation gap. Barriers such as unclear mandates, fragmented responsibilities and siloed knowledge practices are anticipated across framings, while key drivers include early ecological alignment and the collective interpretation and mobilisation of evidence.

Conclusions: The paper will argue that closing the NbS implementation gap requires aligning co-creation framings with governance arrangements that support shared evidence, ecological learning and adaptive decision-making. Strengthening biodiversity evidence practices across institutional boundaries may reduce fragmentation and enable NbS processes that are more robust, equitable and accountable.

Community forests as important commons in urban climate policy in Poland – conditions and perspectives

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Agnieszka Sobol[1]
[1] The Institute of Environmental Protection – National Research Institute (IEP-NRI)

Introduction: Cities and their inhabitants are, on one hand, the main contributors to climate change, but on the other hand, it is precisely within cities that we should seek both mitigation and adaptation solutions. Forests located within and around cities can play a crucial role in urban climate policy. However, the protection of existing forests and the development of new ones are under strong urbanization and market pressures. Most forests in Poland are managed by the State Forests - a dedicated public entity responsible for forest management. This management is often criticized for not being sustainable. At the same time, numerous social groups undertake grassroots initiatives aimed at forest protection, particularly in urban areas. Additionally, since 2024, the Ministry of Climate and Environment has launched a project to develop community forests. Poland is also home to numerous land communities – dating back to the Middle Ages - many of which continue to practice communal forest stewardship.

Methods: The research focuses on the development of community forests in cities as commons and their potential contribution to urban climate policy. It includes both historical commons (land communities) and contemporary commons (community forests in cities). The study is primarily qualitative, complemented by quantitative and geographical methods. It involves survey research, in-depth interviews, and participant observation.

Results: The results will contribute to the theoretical understanding of urban commons in the context of climate change challenges and provide valuable recommendations for shaping urban climate policy across all levels of governance.

Conclusions: Research shows that local authorities and public administration do not always sufficiently protect the ecosystem functions of forests, with economic functions often taking precedence. At the same time, local communities increasingly express the need to protect forests, emphasizing not only their recreational value but also their hydrological functions - protecting against droughts and floods - as well as their potential to mitigate the urban heat island effect. This trend reflects a growing civic awareness - manifesting the right to the city, expanding direct democracy through participatory governance in local development - as well as increasing ecological awareness: knowledge and competencies concerning the complex relationships between humans and the environment.

Design of an innovation-driven toolkit for scaling Nature-based Solutions. A Comparative Study between the Global North and South

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

María Isabela Villamizar Ariza[1]
Malgorzata Blicharska[2], Michael Jones[3]
[1] Department of Earth Sciences, Uppsala University, Uppsala, Sweden
[2] Natural Resources and Sustainable Development, Department of Earth Sciences, Uppsala University, Uppsala, Sweden
[3] SLU Centre for Biodiversity, Swedish University of Agricultural Sciences, Uppsala, Sweden

Introduction: Nature-based Solutions (NbS) are increasingly recognized as essential for addressing climate and biodiversity challenges, yet their large-scale implementation remains uneven across regions. This study aimed at designing and validating an innovation-driven toolkit to support the scaling of NbS, using a comparative study between the Global North and South, with a particular focus on Europe and Colombia.

Methods: Through a systematic literature review, case study analysis, and semi-structured interviews with different stakeholders, the research identifies key barriers, enablers, and regional dynamics influencing NbS adoption. The study also examines how participatory innovation methodologies, such as Human-Centered Design, can be tailored to scale NbS solutions. A central component of the research involves understanding stakeholder perceptions of NbS success and integrating these insights into a co-produced, user-oriented toolkit.

Results: This research provides a comparative understanding of the key enablers and barriers shaping NbS development across the Global North and South. Based on these insights, it delivers an innovation-driven toolkit with practical tools tailored to regional needs. The outcomes support more equitable, effective, and scalable NbS strategies by enabling practitioners to navigate context-specific challenges and apply innovation principles to strengthen implementation and long-term impact.

Conclusions: By comparing lessons from the Global North and South, the study contributes to improving NbS design, implementation, and communication, ultimately strengthening future scaling efforts globally.

Engaging Stakeholders for Co-creating Wetland Restoration Projects: Comparative Insights from Sweden

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Shivangi Shreya[1]
Nandita Singh[1], Lina Suleiman[2], Mona Petersson[1], Kari Lehtilä[1]
[1] Natural Sciences, Technology and Environmental Studies, Södertörn University, Huddinge, Sweden
[2] School of Architecture and the Built Environment, KTH, Royal Institute of Technology, Sweden

Introduction: Wetland restoration projects are increasingly promoted as nature-based solutions to address ecological degradation, nutrient runoff and climate change. In Sweden, despite strong policy support and funding mechanisms, wetland restoration projects face challenges in being initiated and implemented. These projects often involve diverse stakeholders who may have conflicting interests. Conversely, stakeholders may also bring diverse knowledges and expertise in initiating, planning and implementing these projects. Thus, engagement of all the stakeholders in such a way that fosters co-creation can lead to wetland restoration projects that are more effective in achieving policy objectives. Therefore, this paper examines whether and how stakeholder engagement can facilitate co-creation in wetland restoration projects and what enablers and barriers can affect the process.

Methods: The study draws upon four wetland restoration projects in Stockholm County, funded by the European Union Rural Development Programme. Two of these were 'implemented' and other two were planned but did not receive funding, hence becoming 'non-implemented'. Data for the case studies was first obtained from the official project records, followed by semi-structured interviews with the different stakeholders. The analytical framework combines the Huntjens' Natural Social Contract theory and Talley et al.'s Five Feature Framework to assess stakeholder engagement dynamics.

Results: Findings reveal that projects involving landowners supported by consultants, conservation agencies, and neighboring landowners were successfully co-created and implemented. Conversely, projects initiated solely by landowners lacked collaborative capacity and stalled at the planning stage. Local stakeholders observed ecological benefits such as improved biodiversity and soil moisture, and expressed willingness to remain engaged in monitoring and maintenance. Stakeholder Engagement proved critical for co-creation when trust, representation, and institutional support were prioritized. Co-creation fostered mutual trust and adaptive collaboration, enabling stakeholders to overcome administrative and technical hurdles. Institutional support and bridging actors emerged as key facilitators, while fragmented networks and low trust hindered progress.

Conclusions: These findings underscore that wetland restoration projects require coherent governance framework that fosters co-creation through shared responsibility and adaptive governance to bridge the gap between policy and practice.

From consultation to transformation: An analysis of stakeholder engagement in peatland governance

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Marte Lange Vik[1]
Ingrid Knutsdotter Koren[1]
[1] Department of Civil Engineering and Environmental Sciences, Western Norway University of Applied Sciences

Introduction: Wetlands are critical in bridging the gap between current climate and nature crises and future nature-based solutions. In northern European countries, political and public recognition of the role of peatlands as carbon sinks, as well as for water management and biodiversity preservation is steadily increasing. Concurrently, several countries are implementing radical and transformational policy changes, aimed at advancing conservation and restoration of these ecosystems. Recently, Norwegian national authorities took a top-down approach, proposing a bill to ban all developments on peatland. The public consultation process of this bill yielded nearly 300 responses, from a broad range of actors across local authorities, planning practitioners, civil society representatives and academic knowledge communities. Successful transformational changes in policy and practice require that diverse values and knowledge systems are integrated into environmental management through inclusive processes. However, we have limited knowledge and understanding of how the variety of understandings by different actor groups support or oppose radical policy changes.

Methods: This article aims to carry out a critical discourse analysis of the consultation process, identifying underlying values and discursive affiliation within the environmental arguments in the consultation inputs. Drawing on this analysis, we will discuss how transformative peatland governance can be advanced in spatial planning based on a top-down policy approach. Analytically, this study aims to contribute to existing knowledge by combining established environmental discourses with recent theorizations on nature values, aiming to understand leverage points for transformative change.

Results: We expect that the findings will reveal a diverse array of polarised values and discourses regarding peatland governance, highlighting significant implications for future management strategies and emphasizing the importance of meaningful stakeholder involvement in policymaking.

Conclusions: Currently, we are in the conceptualisation phase of the study. Data collection is complete, with detailed analysis planned for winter 2026.

Making room for water: boundary objects and institutional bricolage in nature-based flood risk management

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Jens Portinson Hylander[1]
Marianne Karlsson[2], Gunnel Göransson[1]
[1] VTI, National Road and Transport Research Institute
[2] SGI, Swedish Geotechnical Institute

Introduction: Nature-based solutions (NbS) and allowing room for water as means of managing flood risk have grown increasingly popular in academic as well as policy circles over the last two decades but implementation is lagging behind. This study explores the possibilities and barriers for making room for water along River Nissan as a collaborative flood risk management strategy. We analyze policy discourse and praxis to explore the potential for collaboration to make room for water through the theoretical lenses of boundary objects and institutional bricolage.

Methods: This qualitative study draws on analyses of planning documents, participatory observations and semi-structured interviews. Interviews have been conducted with 23 informants with connections to management of the Nissan watershed, from local and regional planners, to corporations and interest groups with a stake in the watershed. All documents and transcribed interviews have been analyzed using NVivo, by combining empirically grounded and theoretically derived coding categories.

Results: We find a clear preference for NbS in planning strategies and guidelines, but in practice waterfront development remains a political priority. We identify boundary objects working at multiple scales: first at the river level, and second at the level of NbS as a policy tool, both with the potential to inspire cross-border collaboration. Different actors approach and understand the river differently, depending on location, usage of the river, and existing and expected issues with water. Secondly, the planning for and implementation of NBS is embedded in and blended with existing institutional practices and norms, promoting attractive river-adjacent developments and hindering catchment-wide collaboration on NbS and flood risk management.

Conclusions: Our study contributes theoretically by approaching NbS implementation and collaboration through the twin lenses of boundary objects and institutional bricolage. The paper highlights how cross-border collaboration and participation can be facilitated by boundary objects and the expansion of existing norms and institutional practices. Empirically, we also identify pockets of opportunities for driving change and creating room for water along the river basin through the emergent praxis of planning for NbS. Existing niched forums such as water councils hold potential to expand their focus to place-based and spatial flood risk management.

Multi-species justice and nature-based solutions: Advancing justice for humans and beyond through land use planning

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Clare Cannon[1]
[1] University of California, Davis

Introduction: Research has begun to identify the ingredients necessary for nature-based solutions to succeed, including trust in local government, co-creation of actions with communities, co-governance, and a spirit of experimentation. At the same, multispecies justice research has sought to expand notions of environmental justice beyond human, social, and environmental dimensions to include beyond human species. Doing so seeks to not only de-center humans within justice frameworks but also to consider side-by-side impacts of human systems on conservation and other species. In this study, we bring into conversation research into nature-based solutions with multispecies justice scholarship. To highlight the insights into not only participatory but also distributive and recognitional forms of justice such an approach brings, we offer a case study of how nature-based solutions are implemented in land use planning across California. Doing so enables us to shed light on both the processes of nature-based solutions as well as their effects for humans and other species alike.

Methods: In this paper, plans from state agencies, such as the Natural Working Lands Strategy released by the California Natural Resources Agency, and local general plans, including open space and conservation elements when available, developed by local jurisdictions in California (n ~ 10) will be analyzed. Plans will be inductively and then deductively coded for relevant themes related to nature-based solutions and multispecies justice.

Results: We anticipate that California's investment in natural working lands and nature-based solutions in their conservation planning efforts (e.g., 30 x 30) will highlight innovative practices for implementing nature-based solutions. We anticipate these findings will have mixed results for multispecies justice but can help to provide examples of where more can be done.

Conclusions: Potential conclusions may include the importance of considering normative frameworks such as multispecies justice when developing and implementing nature-based solutions to optimize positive effect on climate change impacts, biodiversity conservation, and community wellbeing.

Participatory mechanisms in wetland restoration governance in Denmark and how they affect environmental outcomes

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Cathrine Højrup Gustafsson[1]
[1] Aarhus University

Introduction: The rewetting and restoration of former wetland areas support a wide range of ecosystem functions such as biodiversity, carbon storage, water purification and flood regulation (Mitsch et al. 2015). When the restoration is planned to be implemented on land areas that are privately owned and cultivated, such land use changes are in most jurisdictions dependent on voluntary participation of the landowner. This makes these restorations a critical case study of how participatory governance mechanisms in a NbS-related land use change work and under which conditions they are successful. Since the landowner involvement is juridically necessitated, the intended environmental outcome is conditional on landowner involvement and therefore the following research question can be addressed: *Through which mechanisms and under which conditions does participatory governance mitigate landowner resistance and enable collaboration and compliance with environmental outcome? And when does it not?*

Methods: The paper is empirically grounded in interview data and ethnographic field observations of wetland restoration projects in the Northern part of Denmark, where wetland restorations is high on the policy agenda and measures are critical. The main theoretical lens is the middle-range framework by (Newig et al. 2018) of causal mechanisms for participatory governance to trace the restoration processes and outcomes to identify factors that affect the successful delivery of an environmental outcome.

Results: The paper begins with a processual map of the governance design and the interaction modes between stakeholders, to visualize the data. The analysis consists of coded results of the five clusters of participatory mechanisms from Newig et al. Mechanisms are traced per cluster, to evaluate positive and negative pathways.

Conclusions: The paper suggests that an increased focus on the landowner role and specific trust dynamics of the agricultural policy subsystem need further investigation to improve research on co-creation in this context.

Understanding translocal dynamics through translocal tree growers in Tanzania's Southern Highlands

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Ubaldus Tumaini[1]
Aristarik Maro[2], Irmeli Mustalahti[3]
[1] College of Business Education / University of Eastern Finland
[2] The Law School of Tanzania
[3] University of Eastern Finland

Introduction: The translocality concept concerns the dynamic of socio-spatial interconnectedness that is related, for example, to mobility and migration dynamics. Our study applied the translocality theory to explore the challenges, experiences, interdependencies and dynamics between urban and rural localities in the Tanzanian context. Translocal tree growers – often urban investors – are a globally growing group of forest owners who invest in tree plantations in rural areas. This study also contributes to broader discussions on translocality by exploring translocality in tree plantation investments while suggestion nature based-solutions for interaction between translocal tree growers and local communities.

Methods: This study, conducted between 2018 and 2024, draws on data from two phases of participatory data collection and two workshop sessions. We applied key informant interviews and the co-design as a research method (One of the author's auto-ethnographical experience both as a co-researcher and as an urban-based translocal tree grower in a local community in Tanzania's Southern Highlands) to collect data from a total of 56 participants. Field observation was also employed to understand the lived reality and the meanings they construct within their specific context.

Results: The co-researcher shares his auto-ethnography experiences on the dynamics of translocality and the translocal tree growers' challenges, which are encountered by similar players in Tanzania's Southern Highlands. We argue that this co-design research and auto-ethnography approach enable the research process to develop "living knowledge" that is valid for the people with whom we carry out the learning process. Our findings reveal that translocality fosters connectivity and enables economic activities — particularly tree growing in this case — through knowledge and resource exchange, which benefits both urban and rural actors.

Conclusions: Translocality has both positive and negative socio-economic impact on the forest sector as well as communities where translocal forest owners are investing. However, translocal investors can generate conflicts, especially when unethical actors exploit information and power asymmetries for personal gain, undermining investment efforts and local communities' access to their land. To enhance the understanding of impacts of translocality — particularly in forestry and rural livelihoods — further applied research is needed to optimize translocality as a mechanism for urban-to-rural investment.

Whose Knowledge for Co-Creation and How? Lessons from Community-Created Wetlands in the Great Indian Desert

11. Co-creating nature-based solutions: Bridging policy, practice, and participation

Nandita Singh[1]
O.P. Singh[2]
[1] Södertörn University, Stockholm
[2] MWS,Stockholm

Introduction: Knowledge is fundamental to co-creation. For nature-based solutions (NBS), it must be co-produced through inclusive processes that integrate diverse expertise, skills, and perspectives, enabling innovative solutions tailored to environmental, social, economic, and cultural contexts. This raises key questions: Who contributes what knowledge? What roles should different actors play in knowledge production and implementation? How should local communities be involved? This paper addresses these questions through an empirical study in the Great Indian Desert, where water scarcity persists, yet communities have successfully created wetlands using traditional ecological knowledge (TEK).

Methods: The study explores TEK related to a manmade pond in the Great Indian Desert. Data were collected using visual anthropological techniques, unstructured and semi-structured interviews, participant and quasi-participant observation, and focus group discussions. Secondary sources, including policies and programs, were consulted as relevant.

Results: The case examines Biprasar, a historical NBS created about 350 years ago by adjoining village communities. Initially designed for rainwater harvesting to support winter crops, it was later converted into a drinking water source, with shallow wells dug in its base. These shallow dugwells provide drinking water throughout dry seasons, even after consecutive droughts. Over the last 5-6 decades, Biprasar was nearly abandoned following the introduction of government-installed piped water systems, which proved unsustainable, offering intermittent supply and drying up in summer. This led the community to revive the pond under the leadership of a local water steward possessing deep TEK. Today, Biprasar is a reliable water source and a habitat for nearly 200 bird species, including migratory ones. Despite its potential for sustainable water supply, biodiversity enhancement, and drought mitigation, this NBS and its underlying TEK remain overlooked by state authorities, which continue to favor conventional grey infrastructure with poor sustainability outcomes.

Conclusions: The case of Biprasar demonstrates that local communities have great potential to contribute deep traditional ecological knowledge (TEK) essential for designing and maintaining resilient water systems. Scientists and policymakers can contribute by providing technical validation, adaptive planning, and supportive governance. To ensure long-term sustainability, communities must be engaged as co-creators and custodians, with formal institutions facilitating resources and policy frameworks that integrate TEK into climate-proofing strategies.

12. Societal discord and harmony caused by environmental policies

Under what conditions do environmental policies cause societal discord and polarization between groups? How can conflicts over environmental protection initiatives be resolved? Is there a trade-off between policies' effectiveness and the level of discord and resistance generated? And how do social identity and mobilization on environmental issues correlate?

We ask these questions realizing that several deep transitions need to happen to mitigate climate change and stop biodiversity loss. As new policies are implemented and will affect people's lives more directly, the potential for public protest, political mobilization, and polarization between groups will increase.

This is a problem both from an instrumental and a substantive perspective. If a majority of the public opposes a measure to reduce emissions or nature loss, it lacks democratic legitimacy, and the political cost of implementation will be high. In substantive terms, introducing new policies could cause societal polarization and conflict, particularly if the support or opposition towards a policy relates to group affiliations and social identity.

Existing literature already possesses a fairly good theoretical understanding of the psychological and social mechanisms influencing how people react to climate policy measures. However, we still need more knowledge of how these mechanisms play out in response to more restrictive policies, including individuals' choices as consumers. There is also a need to bring together insights on policy effectiveness and feasibility. For example, is it true that policies with strong effects must produce societal discord? Do potentials for mitigation and polarization necessarily correlate?

This panel invites fully drafted manuscripts on topics such as:

- Identifying the polarizing potential of different environmental policy measures
- Analyzing reasons for opposition and polarization between groups as an effect of environmental policies
- Comparisons of policy effectiveness and counter-mobilization
- Environmental policies and social identity.

Convenors

Endre Tvinnereim, Department of Government, University of Bergen, Norway
Patrik Michaelsen, Department of Political Science, University of Gothenburg, Sweden
Ingvild Fjellså, Climate, Environment, Sustainability group, NORCE Norwegian Research Centre, Norway

Indigenous Rights or Renewable Energy? Examining Attitudes Toward the Trade-off in Norw

12. Societal discord and harmony caused by environmental policies

Marte S. Skogen[1]
[1] Department of Comparative Politics, University of Bergen

Introduction: The expansion of renewable energy infrastructure often conflicts with Indigenous rights, exemplifying a critical trade-off in climate policy. This paper examines how citizens prioritise between building renewable infrastructures to mitigate climate change and protecting Indigenous rights.

Methods: Using representative data from the Norwegian Citizen Panel and OLS regression analyses, I analyse how ideology and geography shape these preferences.

Results: Attitudes toward renewable energy are often tied to pro-environmental values typically found on the political left. Previous research also suggests that support for minority and Indigenous rights is more prevalent among left-leaning individuals. Conversely, individuals on the political right are generally less supportive of climate policies and more business-oriented. I hypothesise that individuals further to the right will prioritise infrastructure development over Indigenous rights, while those further to the left will do the opposite. I also expect rural citizens to prioritise Indigenous rights over infrastructure expansion due to closer ties to affected communities and land-use concerns. The results confirm these expectations and reveal a starker left–right divide than anticipated. Rurality also matters, but plays a more limited role.

Conclusions: These results highlight how ideology continues to structure climate politics, even when climate goals and Indigenous rights collide.

A mixed method study of affective polarization in climate policy support

12. Societal discord and harmony caused by environmental policies

Thea Gregersen[1]
Ida Vikøren Andersen[1], Ingvild Firman Fjellså[1], Gisle Andersen[1], Endre Tvinnereim[1, 2]
[1] NORCE, Norway
[2] University of Bergen, Department of Government, Norway

Introduction: Over the last decades, the issue of climate change has become increasingly politicized. People disagree both about the severity of the threat, and the policies that should be implemented to mitigate or adapt to it. While opinion polarization is natural in a democratic society, affective polarization (the tendency to dislike or distrust those with opposing views) can stifle policy compromises and collaboration for beneficial goods and impair interactions with family, friends, and strangers. So far, the concept has first and foremost been used in the context of political partisanship. The current study investigates issue-based affective polarization, specifically related to opinions towards climate policy.

Methods: We use a mixed-methods approach: a representative survey of the Norwegian public (*N* = 2699) is combined with semi-structured interviews with 26 informants recruited based on their survey responses.

Results: The results indicate some tendencies of affective polarization related to climate change and climate policy. In the quantitative analyses, we find people's policy opinions (strong support or strong opposition) and their level of worry about climate change (high or low) to be key predictors of affective polarization. Affective polarization was also greater among people with higher political self-confidence and those who reported stronger anger over political inaction. The interviews help nuance the quantitative results and provide insight into who people imagine their adversaries to be: hysterical activists, conceited moralists, stupid deniers, and selfish over-consumers. Importantly, although informants can conjure such stereotypes of their adversaries, they are well aware that these represent quite "extreme" caricatures that seldom represents people they know or engage with in their everyday life.

Conclusions: Overall, our study underscores the importance of investigating and monitoring the development of affective polarization related to climate policy using both quantitative and qualitative methods. As of now, potential dislike or distrust tend to be based on stereotypical images of adversaries (often elites), and are often linked to broader differences in worldviews, values, or ideologies.

Painting a greener Swedish forestry: Discord and convergence in Sweden's green transition discourse

12. Societal discord and harmony caused by environmental policies

Tatiana Proisy-Lesnik[1]
[1] Linköping University, TEMA M Environmental Change, Sweden

Introduction: Swedish forest policy has for long been a contested arena in which conflicting visions, interests and discourses meet. With the adoption of the European Green Deal (EGD) and the updated EU LULUCF regulation, these conflicts are intensifying. Since the EGD was launched in December 2019 political struggles over the very meaning of a green and just transition have occurred in Swedish public discourse and brought competing visions of Swedish forestry forward.

Methods: In this article, I am exploring how the greening of Swedish forestry is (re)imagined and (re)articulated in view of the EU Green Deal, what storylines dominate the competition over meaning and what resistances and unexpected coalitions take form. Drawing upon Maarten Hajer's argumentative discourse analysis, discourse coalitions and storylines as methodologies, this article reviews the Swedish forest policy debate in light of the launching of the EGD in 2019. The study is based on an analysis of debate articles published in Swedish news media in 2019-2025. The articles are systematically identified on databases such as Retriever using search terms such as 'climate policy', 'forestry', 'green transition', and 'EU Green Deal'. Discourses and their evolution are analysed to identify the formation of coalitions as well as sources and birth of discord and disagreement.

Results: I expect to contribute with an in-depth and EGD-updated mapping of the discourses taking part and influencing the Swedish forest debate: louder and more established coalitions of discourses are identified as well as other voices, less audible and even silenced. Through these coalitions and discord, the enactment of the forest itself is traced.

Conclusions: The paper concludes that multiple forest images are produced as different coalitions paint their vision of a greener Swedish forest futures.

The performativity of 'Favourable Conservation Status' in Saimaa ringed seal conservation

12. Societal discord and harmony caused by environmental policies

Matias Sivonen[1, 2, 3]
[1] University of Eastern Finland
[2] Department of Geographical and Historical Studies
[3] Finland

Introduction: This study focuses on the performativity of Favourable Conservation Status (FCS) in the context of wildlife species conservation, and its conflictual dynamics in the science-policy interface. Favourable conservation status is the overarching goal of the European Union Habitats and Birds Directives. Despite FCS being widely adopted in biodiversity conservation, it continues to cause considerable confusion. FCS has also become a subject to controversy and conflict especially in situations where quantitative population goals get entangled with other sociocultural and political implications. This dynamic appears also in the protection of Saimaa ringed seal in Finland. When calculations, such as FCS population goals, are used to legitimize policies such as fishing restrictions in Saimaa seal protection, actors that do not support these policies will oppose them which has become known as the politics of environmental knowledge. In this article, I utilize environmental performativity framework to understand how calculative, material, and semiotic forces interact in environmental governance contexts.

Methods: The research data consists of 20 semi-structured interviews conducted in the spring of 2025. All interviewees are members of Saimaa ringed seal protection strategy workgroup which operates under the mandate of the Finnish Ministry of the Environment. The analysis draws on the interpretive policy analysis approach.

Results: Scientific artefacts can employ context specific roles which affect conservation policy but also contribute to shaping the material reality of nature. I will identify different roles for FCS in the context of Saimaa seal protection. These roles can be alternate and conflicting but also exist side by side and support each other. For instance, some actors see FCS as an avenue for scientific exploration but others as misconception and a tool for controlling local people and their ways of life.

Conclusions: By zooming in on a specific biodiversity conservation–and governance–tool, I'm able to shed light on how scientific artefacts can hold capacity for both increasing polarization between key stakeholders but also building (epistemic) bridges and thus providing basis for more nuanced cooperation. My aim is to contribute to the future outlooks of conflict resolution in the context of science-intense human-wildlife conflicts but also to the applicability of the EU Habitats directive.

The potential of intergenerational learning to prevent generational discord and to bridge generations for strengthened sense of belongingness

12. Societal discord and harmony caused by environmental policies

Tiina Jääskeläinen[1]
Irmeli Mustalahti[1]
[1] University of Eastern Finland (UEF), Finland

Introduction: In this paper we reflect on the methodological potential of intergenerational learning as a means to bridge generational divides and to strengthen both environmental and societal senses of belonging. Younger generations often possess up-to-date knowledge of environmental challenges such as climate change and biodiversity loss. They often also possess transformative visions about sustainable development, and they have been at the forefront demanding rapid policy decisions and actions to address climate change and biodiversity loss. Yet, research indicates that the younger generation´s environmental engagement is still insufficiently recognised in environmental politics. This condition of misrecognition can hinder knowledge and skills transfer between generations and reproduce generational discord. Furthermore, generational segregation risks intersecting with other social divides, such as environmental polarization and ethnic divides.

Methods: We therefore engage in actional intergenerational research asking: How can action-oriented methods that foster intergenerational learning prevent generational discord and enable a sense of environmental and societal belonging? The reflections are based on the first stages of knowledge co-creation and co-research process in the UNESCO North Karelia biosphere reserve in Finland.

Results: The preliminary results suggest that action-oriented intergenerational methods can reduce distance between the researchers, interaction partners and the co-researchers and enable sense of environmental and societal belongingness if certain methodological principles are met. First, the process should involve partners with distinct complementary competences. Second, each stage of the research process should involve communication, reflexivity, and, willingness to solve conflicts and adjust the process based on those. Third, there should be a design principle through which the research team identifies, respects, recognises and prioritises existing competences and future aspirations of the collaborating young people throughout the process. Adults' empathetic engagement and willingness to learn from the younger generations is crucial for creating trust, reciprocity, and shared commitment.

Conclusions: These preliminary results encourage researchers to study how different forms of societal segregation – generational, environmental and ethnic – may reinforce one another and to engage in actional research seeking to prevent intersectional polarization. The paper is part of VIZAZI research project that co-creates a model to foster young people´s inclusion in collaborative environmental governance via intergenerational learning.

Who talks about climate when policy divides? Everyday conversations, dissatisfaction and engagement in Norway

12. Societal discord and harmony caused by environmental policies

Ingvild Firman Fjellså[1]
Gisle Andersen[1]
[1] NORCE, Norway

Introduction: Environmental policies can both enable climate action and cause societal discord. Interpersonal conversations are increasingly recognised as a key factor in climate engagement, yet most existing survey research—from the US and Canada—finds that everyday climate talk is infrequent and constrained by a "climate of silence". This paper examines how often people in Norway discuss climate change with friends and family, who is likely to do so, and how such conversations are shaped by dissatisfaction with national climate policies and political engagement.

Methods: We use a mixed-methods design combining a population-based survey of Norwegian adults (N ≈ 2,700) with 26 strategically sampled qualitative interviews. The survey measures the frequency of climate talk, climate-related worry, felt personal responsibility, political efficacy, climate engagement and evaluations of national climate policy. Survey and interview data were collected in 2025 and are being analysed to explore how people experience, manage, and sometimes avoid climate conversations.

Results: Preliminary analyses show that climate talk in Norway is more common than in the US: about two-thirds of respondents report discussing climate change at least monthly. Socio-demographic differences are modest once attitudes are controlled for, while climate concern, personal responsibility, efficacy, and engagement are all strongly associated with frequent discussion. A U-shaped relationship emerges between evaluations of national climate policy and climate talk: respondents who view current policy as far too weak or far too strict are more likely to talk than those who see it as "about right". Qualitative findings indicate that climate conversations are experienced as politically charged and risky, with participants describing efforts to avoid "bad atmospheres" and navigate norms against overt politicisation in everyday settings.

Conclusions: These preliminary findings suggest that climate conversations in Norway can be understood as part of a wider repertoire of engagement. Strong dissatisfaction—whether due to insufficient or excessively intrusive climate measures— appear to lead to more frequent talks. Our qualitative data also point to a potential 'spiral of silence'. The results speak to debates about the polarising potential of environmental policies, emphasising how public discontent and mobilisation regarding climate actions are shaped – and potentially silenced - through everyday life and norms.

13. On time and justice: Recognising diverse temporal competences for timely action

A key concern for environmental governance is how action is framed temporally, and timed. Ill-timed actions – from issuing a flood warning to maintaining infrastructures – can have disastrous consequences. Timing practices can be characterised as a particular form of knowledge or competence for governance, which is contextual and plural across social worlds; contrast the time-work of project managers to phenologists, or politicians for example. Temporal competences are broad and variously embody an ability to sychronise activities to multiple temporal processes and rhythms (human and environmental), coordinate with timings of other social groups, control sequencing and tempo, structure the temporal narrative (from rhetorics of emergency to slow violence), and read the politically expedient moment to act for instance. This workshop is concerned with processes that mobilise temporal competences and bridge them to environmental action and policy, with specific attention to justice and including timings of overlooked and marginalised groups.

Arguably, most timing decisions for environmental governance are made by groups of experts, coordinated to the clock and calendar according to scientific and budgetary time-frames. Yet, decisions on timing are paradigmatic examples for transdisciplinarity. Ensuring timeliness is complex, uncertain and highly political. It demands consideration for a multitude of temporalities, woven into complex patterns across scales, which are in flux. And it means weighing the values and norms of different groups, and negotiating whose time matters as part of democratic processes; perspectives on temporalities are always partial, determined by individuals' standpoints. This workshop is therefore equally concerned with describing how temporal practices influence environmental governance, and examples of normative efforts to make multiple temporal competences salient for action. It asks which temporal competences are best fitted to which decisions? And, are there temporal competences that should be nurtured, or others that should be limited?

The workshop welcomes fully drafted manuscripts that take up topics of temporal competence, justice and cross-scalar dynamics (spatial and temporal) in the context of environmental decision-making.

Convenors

Scott Bremer, Centre for the Study of the Sciences and the Humanities, University of Bergen, Norway
Miriam Holst Jensen, Department of Culture and Learning, Aalborg University, Denmark
Keri Facer, School of Education, University of Bristol, UK

Learning from past apocalypses to live in the Anthropocene? Decolonizing time and place in Anthropocene Therapy

13. On time and justice: Recognising diverse temporal competences for timely action

Sachiko Ishihara[1]
[1] Anthropocene Laboratory, Royal Swedish Academy of Sciences

Introduction: Climate anxiety, worry, and other eco-emotions can be factors for ill-wellbeing or disengagement, while it could also be sources of motivation for action. Different coping mechanisms can be key, and these are interconnected with how sustainability researchers and experts communicate what challenges we are collectively facing (an "unprecedented crisis"?), which actions are needed and how ("urgently" with "sacrifice" by who?). My postdoc project, called Anthropocene Therapy, explores approaches of increasing psychological resilience and capacities, individually and collectively, in the context where humanity will increasingly be facing climate and other environmental impacts. From an interdisciplinary perspective, we develop approaches to psychologically deal and cope with challenges *yet to happen* (e.g. climate anxiety). Our unique angle is to do this through learning from how people in diverse contexts, historically and geographically, have been coping and healing following *ongoing* challenges or challenges that have *already happened* (e.g. forced relocation, genocide, terrorism). This paper aims to lift up underlying assumptions of *time* and *place* in this project, critically reflecting on predominant conceptualizations of time and place that may risk reproducing colonial and other existing power structures.

Methods: This will be a conceptual paper, while potentially drawing on some interview or focus group quotes collected in a workshop with an interdisciplinary group of scholars and practitioners. Drawing on scholars such as Keri Facer, Michelle Bastian, Miriam Jensen, Tim Ingold, Doreen Massey, among others, I draw on approaches that see time and place as subjective, relational, and dynamic.

Results: One point of departure follows arguments put forward by Kyle Whyte: that the hardships many nonindigenous people dreads of the climate crisis are ones that Indigenous peoples have already endured already due to colonialism; and that narratives of "crisis" as unprecedented tend to ignore colonial histories and their repercussions.

Conclusions: Building further from my PhD dissertation, I aim to tease out the importance of thinking about time and place together in sustainability. Consequently, I would like to engage in alternative conceptions not only of *time and temporalities* asked for in the Workshop Call, but also of *place*, that ultimately guide our actions/inactions in environmental governance in a wider sense.

Syncopating rhythms : Seasons as temporal frameworks to co-ordinated action

13. On time and justice: Recognising diverse temporal competences for timely action

Kerstie van Zandvoort[1]
[1] Massey University, School of People, Environment and Planning, New Zealand

Introduction: With seasons providing important temporal references to ongoing processes of social-environmental change the world over, this research considers local experiences of seasonality as a basis to effecting adaptive responses to changing climates within resilient communities of place. Here, adaptation is construed as a practical attunement to the shifting temporal patterns of places, involving dynamic intersections of rhythmic human-environment relations across scales. Bringing geographies of time-space alongside critical institutional-organisational theories, the research tenders enhanced understandings of the local conditions under which seasonal adaptations (and associated social-ecological resilience) are implicated in the wider transitions of politicised social-ecological systems.

Methods: Focusing on coastal conservation networks operating on the Coromandel's Kūaotunu Peninsula, in Aotearoa – New Zealand, the qualitative ethnographic inquiry probes the dynamic relations of organised groups with place by engaging phenomenological methods alongside rhythmanalysis to reveal a strong seasonality to Kūaotunu's contemporary rural lifestyles.

Results: Manifest in unique forms of contemporary stewardship, including that of indigenous Māori, the findings suggest that the familiarity bred through a practical rhythmic engagement with local beach environments – according to a shared seasonal framework – is associated with unique competencies for navigating social-environmental shifts. Not least in their practical accommodation of coastal restoration initiatives around the fluxes of seasonal tourism on the Kūaotunu Peninsula, the organised activities of resident voluntary conservation groups are seen to adjust to incrementally changing conditions, from one year to the next, through ongoing processes of seasonal acclimatisation. Alongside an intrinsic fostering of social resilience, the inherently adaptive processes of acclimatisation observed in organised conservation practices at Kūaotunu are contrasted with the formulaic interventions of district-wide strategic adaptation pathways being developed for its coastal communities by the local Municipality.

Conclusions: With grassroot conservation initiatives already responding practically to ongoing change from within their means, one bay and one season at a time, they are vitally contributing temporal wisdoms and innovations to their own uncertain futures. Yet the cumulative benefits of local expertise are frequently marginalized under the dominant political agendas and relative timings of strategic government frameworks for adaptation. An attunement with the multiple temporalities of place is alternatively seen as formative to democratic processes of adaptation planning.

Temporal Dissonances in Microbial Innovations: a case study of 'felt time' in Sweden

13. On time and justice: Recognising diverse temporal competences for timely action

Maya Hey[1, 2]
[1] Centre for the Social Study of Microbes, University of Helsinki
[2] KTH Royal Technical Institute

Introduction: This paper examines the temporal mismatches between microbial life cycles and the innovations that use these organisms for sustainable development. Microbes are tiny species, whose metabolisms have been recently manipulated into novel biotechnologies. These microbes are increasingly called upon to mitigate environmental crises, with laboratories aiming for innovations like bioengineered biofuels, cellular agriculture, and recirculation of wastestreams. Such examples exemplify multiple temporal processes, including that of: *enduring infrastructures* (like institutional clock time, the timings of government initiatives, timeframes for funding schemes, lifespan of lab equipment); *dis/continuities of decision-making bodies* (changing human values, localised narratives, dominant imaginaries of control, geopolitical and spatial variation across calls to action); and, *microbial temporalities* (their metabolic tempos, or lab sequences and protocols to sustain their lives).

Methods: This study identifies the (a)synchronicities between different human, nonhuman, and institutional actors by comparing two data sets. The first is a discourse analysis that focuses on ‘texts’ about microbial innovations from three concentric contexts: papers published from microbiology labs at a technical university in Stockholm, grey literature from the government offices of Sweden, and popular media in the Nordics—all have been read for implicit/explicit mobilisations of time. Secondary data comes from a lab-ethnography combining the temporal sensitivities of Lefebvre’s rhythmanalysis (which follows how biological, social, and environmental rhythms structure everyday life) with attention to the construction of microbial ‘facts’ and ‘imaginaries’ borrowed from the discipline of science and technology studies.

Results: The results explain temporal dissonances in detail using the three axes above, emphasising dissonances across human/nonhuman actors, between narratives/practices, and with differing rates of lived/perceived time. The paper proposes the notion of ‘felt time’ to bridge this dissonance, to account for multiple (microbial) temporalities for future governance and guidance on imminent technologies. This paper contributes to ongoing critical debates on the urgency and timeliness of microbial solutions by arguing for a temporal competence with nonhumans in general (microbes in particular). It also situates microbial research, both in place-based specificity and within nested regional contexts, to complicate the oft-universalised claims about environmental justice.

Conclusions: Manuscript status: discourse analysis currently near completion, ethnography ethics currently under review for April start.

Title: A doomed failure?: On the relation between time scale of climate change and responsibility for adaptation in central Stockholm

13. On time and justice: Recognising diverse temporal competences for timely action

Atsushi Nozawa[1]
[1] Tokyo Keizai University

Introduction: Contemporary environmental issues with disastrous consequences in the future are always of paramount importance but not urgent politics routinely on electoral cycle. This presentation focuses on the redevelopment project in central Stockholm, “New Slussen”, and discusses the temporal gap between the time scale of climate change on a planetary level and that of democratic climate adaptation policy on a local level. Is the New Slussen destined to become a failure in 2050, not to mention 2100?

Methods: This research is grounded in the field of environmental sociology, with a specific focus on the shift of the role of tackling environmental issues: from government to governance. The analysis employs newspaper materials and interview data from members of a citizen group that expressed criticism and proposed an alternative solution. It then discusses the transformation in the logic of citizens’ opposition discourse to the project.

Results: Adaptation to climate change had not been given priority at the inception of the redevelopment project in the late 1980s. Moreover, the citizen movement expressed its opposition to the plan, primarily on the grounds of cultural and aestical value of Slussen. In the mid-2010s, the plan began to be criticized by citizens from the perspective of its adaptability to climate change with regard to increasing water levels from Mälaren side and rising seawater levels from Saltsjön side. However, construction had already begun by that time and was partially concluded partly in 2025. As the predictions regarding sea level rise become increasingly pessimistic, the validity for criticism continues to increase. Conversely, New Slussen becomes more vulnerable in the future.

Conclusions: Who should be held responsible for the doomed failure? Is it solely a problem for Stockholm city, which holds the responsibility in terms of “planning monopoly”? From the standpoint of local self-government grounded in the principle of autonomous municipalities in Sweden, that may indeed be the solution. However, from the standpoint of environmental sociology, however it becomes imperative to critically examine the implications of the term “responsibility" in relation to issues that transcend spatial and temporal boundaries, such as municipal borders and the timing of political decision-making.

Understanding Environmental Governance Through Rhythm: Temporal Competences at the Science–Policy Interface

13. On time and justice: Recognising diverse temporal competences for timely action

Mark Hirons[1]
Pete Barbrook-Johnson[1, 2], Jennifer Dodsworth[1], John Lynch[1], Rachel Hayman[1], Nathalie Seddon[1]
[1] University of Oxford
[2] University College London (UCL)

Introduction: Growing urgency around climate change, biodiversity loss, and widening social inequalities has intensified calls to strengthen the contribution of science to environmental policy-making. Efforts to accelerate policy-oriented research, however, unfold within universities already grappling with concerns about the accelerating pace of academic life. As interest in the temporalities of science–policy relations grows, it is increasingly clear that questions of *speed* alone are insufficient and risk exacerbating injusties. Temporal dynamics at the research–policy interface are more complex: they span scientific, bureaucratic, political, and lived rhythms, and are often examined in disciplinary silos rather than through the interactions that transdisciplinary environmental governance demands. This paper responds to these gaps by foregrounding *rhythm* as a framework for understanding temporalities in environmental decision-making.
Methods: The study analyses 15 "sprint" projects (6–12 months; £400k–£1m) within the Agile Initiative at the University of Oxford, designed for rapid, interdisciplinary, policy-engaged research. We draw on survey data (n≈100), interviews with researchers, research managers, and policymakers (n≈40), focus groups (n≈5), and programme documentation. Using a hybrid inductive–deductive coding approach, we apply the lens of rhythm to trace how actors synchronise, negotiate, or resist temporal pressures across institutional, policy, ecological, and biographical time-scales.
Results: We find that temporal pluralities are structural to environmental decision-making, demonstrating why acceleration alone is insufficient to guide the innovations at the science–policy interface.

1. Improvisation and temporal negotiation as central yet undervalued competences shaping collaborative research and governance.
2. Entrainment efforts - attempts to align scientific, bureaucratic, political, and ecological tempos—reveal power relations and temporal injustices, particularly around whose time is recognised or marginalised.
3. Results illustrated through concrete examples of how rapid research teams grappled with incorporating overlooked or slower temporalities (e.g., care responsibilities, long-term ecological processes, trust-building rhythms of co-production).

Conclusions: The paper argues that environmental governance that is suited to addressing contemporary crises requires cultivating key temporal competences - recognising poly-rhythmic interactions, negotiating temporal justices, and designing institutions that support synchronisation across diverse temporal worlds. We outline implications for researchers, funders, and policymakers seeking more equitable and temporally attuned science–policy interfaces.

Unstable timings: deep-time governance and the temporal politics of construction grounds

13. On time and justice: Recognising diverse temporal competences for timely action

Delphine Rumo[1]
[1] Aalto University, Department of Design, Finland

Introduction: In Finland, surplus soils and rocks excavated from construction sites are increasingly framed through circular economy narratives that evoke long-term care and cyclical time. These narratives promise efficiency and sustainability, yet the timing practices underpinning them remain deeply anthropocentric. Governance is shaped by short-term deadlines, regulatory cycles, and techno-managerial tempos that render the movement of earthly materials logistical rather than political. Drawing on scholarship on time, deep-time governance, and soil agency, this paper examines how the accelerated rhythms of industrialised construction marginalise the slow, resistant, and inhuman temporalities of soils and rocks. It asks how temporal competences, including reading material rhythms and recognising temporal dissonance, might challenge dominant governance and enable more just temporal arrangements.

Methods: The analysis draws on a completed qualitative study combining an ethnographic field approach with archival research. Ethnographic engagements (2021–2022) included construction site visits, walking interviews, and conversations with engineers, municipal officials, and workers involved in excavation, transport, and circular soil initiatives. These engagements followed displaced earth across sites, stockpiles, and reuse locations. Archival research drew on environmental permits, landfill histories, geological surveys, and circular-economy documentation. Together, these methods reveal how earthly materials travel through infrastructures, regulatory frameworks, and temporal regimes, and how their movements entangle deep geological rhythms with accelerated construction tempos.

Results: Findings show that soil and rock governance is dominated by ‘shallow-time governance’: a mode of managing matter within compressed temporal horizons. Such governance obscures the temporal agencies of earthly materials, their slow formation, sedimentation, and long-term chemical transformations, and marginalises the geologies and ecologies entangled with these rhythms. The cases illustrate ‘arrhythmia’, where deep geological tempos collide with accelerated construction, producing temporal injustices that burden peripheral landscapes while privileging urban centres.

Conclusions: The paper proposes deep-time literacy as an alternative temporal competence for environmental governance: the capacity to recognise deep-time interactions, remain accountable to matter whose tempos exceed planning cycles, and negotiate responsibilities across uneven temporal scales. Rather than fitting soils and rocks into existing sustainability timelines, deep-time literacy invites governance that learns from the ground’s resistant rhythms, pluralising the tempos that matter for environmental decision-making.

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Following the Russian invasion of Ukraine, the hopes for coordinated climate action on the international agenda have crumbled. Previous ambitious-sounding statements from business and politicians has receded. Coupled with the successes of far right and authoritarian parties, climate change denial in its most extreme form has reappeared, not just at the fringes of the debate but at the highest political level. Linear understandings of rhetorical strategies, exemplified in the description of climate obstruction as moving "from denial to delay", have failed to explain such developments. All in all, the efforts to understand the lack of climate action as a "cultural" problem, i.e. in terms of knowledge and information deficits or distortion, have been criticised within the social sciences for not offering convincing explanations of the state of the world today or pathways forward. Alternative approaches focusing on the material conditions of climate obstruction, such as economic structures, social and political power, have been argued to provide better tools to navigate our current situation.

Building on the provocation that societies and researchers need to stop obsessing over climate dis- and misinformation, this workshop will explore the gaps, the intersections and the interplay between what could be described as cultural and materialist explanations and understandings of climate obstruction. We welcome both empirical and theoretical fully drafted manuscripts that engage with and problematise these different approaches and explanations. We are interested in a broad variety of research contexts (in the Nordics or elsewhere), subjects and case studies, as well as range of actors (from the far right to businesses, experts and scientists, and more), through which the problem of different perspectives, and the state of climate obstruction (and its mainstreaming), can be fruitfully explored. Contributions may come from the fields such as social movement research, political theory and political economy, communication studies, environmental sociology, political ecology, gender studies and more.

Convenors

Tero Toivanen, BIOS Research Unit, Helsinki / Economic and Social History, University of Helsinki, Finland
Kjell Vowles, Department of Sociology and Work Science, University of Gothenburg, Sweden
Johan Söderberg, Linguistics and Theory of Science, University of Gothenburg, Sweden
Victoria Vallstrom, Department of Sociology and Work Science, University of Gothenburg, Sweden

A Genealogy of Environmental Realism: Business Community, Environmentalism and Obstructionism in Finland, 1970–2000

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Risto-Matti Matero[1]
Tero Toivanen[1]
[1] University of Helsinki

Introduction: In the face of recent backlash against meaningful efforts to curb climate change, some scholars have labelled the situation as a breakthrough for "climate realism". This master narrative of climate obstruction asserts that there are "realistic constraints" to a rapid transition away from fossil fuel-based systems (Snellman & Säynäjoki 2025). However, the meaning of climate realism remains poorly defined and disconnected from the longer history of environmental politics.

Methods: In our paper, we investigate the strategies and discourses used by Finnish business interest associations (BIAs) to obstruct environmental action from the 1970s to the turn of the millennium, providing historical context and empirical substance to the concept of environmental realism. Based on archival research and conceptual analysis of key Finnish BIAs, we demonstrate that the forms of realism present in contemporary climate discussions emerged already in the 1970s as a response to increasing growth criticism and radical environmentalism. Later, these forms were adapted to the context of climate politics.

Results: Our preliminary empirical research yields four categories that illuminate different but interconnected sides of environmental realism. The necessity of economic growth; the dichotomy between “industrial reason” and “environmentalist emotions”; the prioritisation of national economic competitiveness; and the material lock-in of energy, investments, and technology were all discussed in terms of environmental realism. These categories were constructed not only in the battle of ideas, but also through the BIAs' actions in which they mobilised research, anti-regulation lobbying, and local campaigns, which served to hardwire environmental realism into the national “common sense”. This form of obstructionism was conceptually legitimised by proactive market-based environmental measures such as voluntary eco-efficiency programmes that the BIAs engaged in.

Conclusions: Through the vocabulary of realism, the BIAs developed strategies to support incremental and acceptable environmental measures, while also increasing their public and “behind the scenes” influence in the corporatist welfare state order. Furthermore, their measures were strategically designed to thwart more radical environmental ideas, ranging from growth criticism to increased regulation.

Automated Identifying Climate Obstructionism in Finnish Parliamentary Discussions

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Erkki Mervaala[1]
Anni Toiviainen[1]
[1] Finnish Environment Institute

Introduction: A key promise of the recent large language model (LLM) revolution for the social sciences has been the possibility of overcoming the traditional limits of human-based text analysis by scaling annotation tasks with automated models. However, concerns regarding reliability, opacity, and the tendency of LLMs to produce system-level fabrications have limited their serious use in research. Recent studies nevertheless suggest that these risks could be mitigated through careful research design and model use. For research focusing on smaller languages such as Finnish, additional challenges arise from the fact that most state-of-the-art (SOTA) models are trained predominantly on English data; for example, 93% of GPT-3's training corpus was in English, with Finnish representing only a marginal share of the remaining 7%. Even Finnish-oriented models such as Poro 2 are built upon English-heavy base models (e.g., Meta's Llama 3.1). As the proportion of synthetic training data increases in newer models, the quality of outputs for low-resource languages has further declined. Consequently, the choice of model must explicitly consider language-specific performance.

Methods: Building on best practices for automated text classification, our study emphasizes the role of human annotators in validating model outputs. We draw on an existing manually coded dataset from prior research on Finnish parliamentary speeches focusing on climate-forestry narratives. Based on this dataset, we design detailed instructions for an LLM to identify strategies of climate obstructionism communication following the framework used in previous human-coded studies. The list of strategies, accompanied by examples, derives from an internationally generalizable research framework adapted to the Finnish parliamentary climate discourse. Optimizing the model includes fine-tuning an LLM using the human-coded data, enabling the model to learn which speeches a human coder assigns to each category – and which remain unclassified.

Results: We expect to develop an LLM-based classifier capable of reliably identifying climate obstruction strategies in Finnish-language parliamentary speech, achieving performance comparable to human annotators after validation.

Conclusions: The study aims to demonstrate that, despite challenges in low-resource language settings, carefully designed fine-tuning and validation processes can yield a specialized, trustworthy LLM tool – potentially scaling qualitative climate communication research to corpora far exceeding the feasible limits of human coding.

Corralling Environmental Anxiety into Enthusiasm for Corporate Projects: Climate obstruction through branding the Circular Economy

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Hanna Hallin[1]
[1] Örebro University, School of Humanities, Education and Social Sciences

Introduction: This paper investigates how elite actors can obstruct climate action by shaping public engagement through branding. Using the self-proclaimed NGO the Ellen MacArthur Foundation (EMF) as a case study, I investigate how industry-funded promotion of the circular economy can be understood as so-called secondary climate obstruction, where science is accepted, but meaningful action is delayed (Ekberg et al., 2023: 12).

Methods: Through a critical political economy analysis (cf. Hardy, 2024; Wasko, 2024) the paper maps out the foundation's production and circulation of promotional communication. The analysis is guided by theoretical perspectives connected to branding (e.g. Banet-Weiser, 2012) and climate obstruction, e.g. discourses of delay (Lamb et al. 2020), and secondary obstruction (Ekberg et al., 2023: 12). The paper is based on my monograph PhD project (disputation date in April 2026).

Results: The analysis details how EMF works with different branding techniques, such as creating platforms for interaction, branding commercials and branded content, to promote the circular economy and load it with specific meanings. It shows how EMF acknowledges the scientific facts, but promotes business-as-usual initiatives rather than systemic change as a solution. Through this, EMF creates a brand that speaks to people's climate anxiety and will to contribute to change. It further shows how EMF, through managing this brand, seeks to steer how this will to contribute is exercised.

Conclusions: The paper argues that branding the circular economy is of significance to understand the link between climate obstruction by elite actors (like the multinational corporations funding EMF) and cultures of ignorance since branding has been theorized as a form of governance (Lury, 2004). Brands enable and facilitate some subject positions while closing off others (Aronczyk & Powers, 2010: 7f). Through encompassing different in-system solutions, the circular economy brand turns people's will to contribute to avoiding climate and environmental disaster into enthusiasm for corporate 'circular' projects and products. This is a form of climate obstruction that is important to understand in order to grapple with how an increasing awareness of accelerating climate and environmental crisis fails to translate into transformative action.

Distrusting Publics or distrusting publics?

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Laila Mendy[1]
[1] Uppsala University

Introduction: Epistemic climate scepticism is connected with the public's trust and distrust judgements of researchers. Climate scepticism is thus often framed as a matter of public trust deficits or belief in disinformation about untrustworthy researchers. I argue, however, that anticipation of distrust from the public should also be considered a form of distrust; that climate scepticism comprises not only of a public distrusting of researchers, but also of researchers distrusting their publics.

Methods: Using characteristics of trustworthiness, including competence, shared norms and values, and perceived openness, this paper explores counter-directional assessments of trustworthiness in publics through an interview study with 30 researchers in Sweden. It pulls together the different forms of trust and reliance relationships to explore how researchers rely upon their publics to accept, understand, and implement their scientific findings. An untrustworthy public, therefore, is considered to be less likely to reach these commitments.

Results: Researchers assess an untrustworthy public as one lacking competence to understand scientific complexity, whose norms and values are seen as problematic, and those who are closed to researchers. How researchers accordingly anticipate these publics will be elaborated upon in the paper.

Conclusions: The insights generated from this study offer a reflexive opportunity for researchers working with sceptical publics. I argue that when trying to rebuild trust towards themselves and their science, particularly through participatory communication and knowledge production practices, researchers should also address their distrust towards their publics. The findings suggest that trust-building is a mutual process or risk proliferating a climate of distrust.

Environmental Malthusian legacies in Swedish secondary education: A discourse analysis of school textbooks and their climate change content

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Lisa Broberg[1]
[1] School of Humanities, Education and Social Sciences, Örebro University, Sweden

Introduction: During the last two decades, theorizations of population growth and environment linkages have regained popularity – a development observed in both policy circles and in scientific conversations. Discourses connecting population growth to environmental degradation and resource scarcity have been described as "a neo-Malthusian reflex" in the climate change debate (Schultz 2021, *Australian Feminist Studies*). However, the environmental Malthusian logic of deducing the climate crisis to high fertility levels in the global South has been criticized for providing a simplistic notion of contemporary environmental challenges that uphold continuous climate inaction and that depoliticizes the climate crisis. Moreover, studies have shown that this populationist framing calls for gendered and racialized 'climate' interventions that rest upon increased contraceptive provision and the instrumentalization of female bodies.

Theories of population and environment linkages is a theme which is also covered in Swedish secondary education. In a geography school textbook from 2010, population growth is presented as one of five challenges which threaten sustainable development, and where "the future of humanity largely depends on innovations, and about finding technical and economic solutions to critical problems" (Östman 2010, *Geografi: människan, resurerna, miljön hållbar utveckling 1 och 2*). Following Nightingale et al. (2020, *Climate and Development*), who urges us to ask "how climate problems are framed and by whom, and how they are adopted as authoritative", the following study explores how Swedish secondary education depicts climate change.

Methods: Drawing on critical feminist inquiry on environmental Malthusianism, science and technology studies, and critical curriculum studies, the paper presents a discourse analysis of school textbooks published between 2010 and until today.

Results: The objective of the study is to capture the assumptions made about climate change, its cause and solution, and how human activity is understood as affecting the environment. More importantly, the analysis demonstrates how the textbook content, including the curriculum which the textbooks are building on, is intertextually linked with more general discourses on human-nature relations, including environmental Malthusian notions of population-induced climate change.

Conclusions: Lastly, by identifying how the textbook content relates to dominant climate change framings, it problemitizes the educational system and their role in delaying climate action.

From global cooling to sanctions as climate injustice: Obstructing adaptation to climate change in Russian media, 2019–2025

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Mika Perkiömäki[1]
[1] Tampere University

Introduction: Academic interest in climate obstruction in authoritarian and non-democratic societies is growing, partly driven by the success of authoritarian parties in democratic countries during the 2020s. Studying obstruction in non-democratic contexts helps anticipate practices authoritarian actors may adopt elsewhere. Russia offers a crucial case: climate denialism there is rooted in political and economic systems materially reliant on fossil fuel extraction and export, with the energy transition perceived as an existential threat to the regime. Cultural drivers also matter, as public demand for climate information is minimal. This paper examines climate obstruction in Russian pro-state media (2019–2025), focusing on how adaptation to climate change is framed, and how Russia's ratification of the Paris Agreement in 2019 and its full-scale invasion of Ukraine in 2022 shaped understandings of adaptation. The emphasis on adaptation reflects two factors: its rising prominence in global climate debates, and the lack of prior scholarship on adaptation in Russian media.

Methods: The material consists of climate-related stories from several Russian online news outlets that are state-owned or pro-state. As shown in prior studies, mainstream media in Russia closely follows state climate policy, making these sources central to political discourse. They are also more influential on public opinion than opposition media now in exile. In the first phase, a content analysis categorizes obstruction in two ways: to primary, secondary, and tertiary obstruction, following Ekberg et al. (2023), and to phenomenon, action, and source obstruction, as outlined by Fortin et al. (2025). The second phase applies thematic analysis to identify obstructionist features within these categories.

Results: Results demonstrate how understandings of adaptation and related obstructionist features have evolved in Russian state-owned and pro-state media. A pilot study of one commercial media, *Kommersant*, suggests adaptation is often framed as adjusting to other countries' climate politics rather than to material environmental changes. Western sanctions can also be depicted as obstructing Russia's ability to adapt to changes in its climate.

Conclusions: Conclusions discuss the cultural and material drivers of climate obstruction in Russia and highlight how evidence from Russian media can inform understanding of obstructionist discourses likely to be employed by authoritarian actors in democratic contexts.

How does climate obstruction become mainstream? The response of the mainstream parties to the far-right climate backlash in Finland

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Sonja Pietiläinen[1]
Tero Toivanen[1, 2]
[1] University of Helsinki
[2] BIOS Research Unit, Helsinki

Introduction: The agenda for urgent climate action has faced significant opposition in recent years. This backlash is often attributed to the political influence of the far right, which has become one of the most vocal opponents of climate action (see Malm et al., 2025). While it is undeniable that far-right parties have played a significant role in shaping current climate debates in Europe and beyond, this perspective risks portraying their influence as a linear, one-directional process. The far right's ability to mainstream climate obstruction does not occur in isolation; rather, mainstream parties and politicians play a pivotal role in shaping public discourse and defining what is considered the norm and "common sense" (Brown, Mondon, and Winter, 2023).

Methods: This paper studies the mainstreaming of climate obstruction by focusing on the interaction between the far-right climate agenda and mainstream parties in Finland. Drawing on approximately 20 interviews with parliamentary members from eight traditional mainstream parties, we focus on three aspects of the mainstreaming process: the role given to the far right in developing national climate politics, the forms of far-right obstruction adopted and rejected, and the capacity to respond to far-right obstruction.

Results: We expect this paper to shed new light on two aspects that have been neglected in previous studies of far-right climate obstruction. Firstly, the research shifts focus from analysing far-right climate discourses to examining the interactions and coalition formation between the far right and other political actors. Secondly, by comparing how different parties respond to the challenge posed by the far right, we hope to shed light on the ideological flexibility of party ideologies, which are currently undergoing significant transformation.

Conclusions: Climate obstruction threatens to become mainstream, with the far right clearly playing an important role in this process. However, the process of mainstreaming remains poorly understood in the context of climate change. This paper helps us to understand the role of mainstream parties in responding to and adapting to the far-right's climate agenda.

Mapping obstruction through coalitions: Discursive alignments and evidence practices in Australian energy debates

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Carly Lubicz-Zaorski[1]
[1] Queensland University of Technology

Introduction: Climate obstruction research often centres on identifying and countering misinformation. While important, this is just one element within a larger, interconnected system, including how knowledge claims are connected socially, economically, and politically. This paper proposes an alternative approach examining climate obstruction through discourse coalitions, shifting the gaze from determining what is 'true' or 'false' to understanding *with whom* actors align when making claims and mobilising evidence. The Australian nuclear energy debate provides a compelling case: while nuclear is framed globally as clean energy, Australia – with abundant solar and wind resources and existing renewable commitments – represents a context where nuclear pursuits could delay decarbonisation.

Methods: This study deploys novel approach 'LLM-assisted discourse analysis' to 858 public submissions to an Australian Parliamentary nuclear energy inquiry (2024-25). Using iteratively developed coding frameworks and two-mode network analysis, I map: actors and actor types (think tanks, business associations, advocacy groups, politicians, etc); their stances toward nuclear, renewables, fossil fuels, and climate action; the claims they make; and the evidence sources they mobilise. Rather than evaluating claims for accuracy, this approach reveals coalitional structures: who aligns with whom, what claims circulate within coalitions, and what knowledge sources are legitimised, or delegitimised.

Results: Preliminary analysis reveals polarised coalitional structures reflecting Australia's energy partisanship. Distinct evidence practices are emerging: actors claiming "nuclear is cheaper than renewables" dismiss authoritative government reports, instead citing consultant sources and conservative think tank studies. Those sharing the storyline "renewables harm the environment" include pro-nuclear academics and others aligned with obstructive conservative think tanks. Some of these actors connect to an environmental group advocating for a renewable energy moratorium, which has further links to nuclear business interests and partisan media. Through mapping these discursive alignments and evidence use, actors associated with obstructive networks become visible – not through fact-checking, but understanding their shared positions, storylines, and sources, and then exploring the social, economic, and political interconnections.

Conclusions: This relational approach understands climate obstruction as alliance-formation sustained by shared discursive and evidentiary practices, rather than simply information distortion requiring correction. Understanding the 'with whom' of obstruction offers insights into both information integrity and the political-economic conditions that enable delay.

Opinions of delay: Comparing political elites with the wider public

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Sofia Axelsson[1]
Björn Rönnerstrand[2], Kjell Vowles[3]
[1] Department of Political Science, University of Gothenburg
[2] SOM Institute, University of Gothenburg
[3] Department of Sociology and Work Science, University of Gothenburg

Introduction: Despite climate change being a matter of concern at the highest political level for more than three decades, the emission curve has still not started to decline. This failure is partly due to a consorted effort from the fossil fuel industry to spread doubt about climate change science. Recent literature on obstruction to climate change policies has emphasised the prevalence of discourses of climate delay (Lamb et al. 2020). These are discourses where the science is superficially accepted, but where the need for emissions reduction is downplayed or denied. Indeed, these arguments displace climate mitigation in time and space, by arguing that it is enough to act in the future, or that someone or somebody else needs to act on some other part of the planet. While discourses of delay have been increasingly noticed in the climate obstruction discourse literature, few studies have examined how the public perceive these arguments (cf. Kulin 2024).

Methods: In this study, we focus on perceptions of climate change delay discourses in Sweden, and whether they differ between politicians and the broader public. Using high-quality survey data from the SOM-institute's National SOM-survey and Panel of Politicians collected in the autumn of 2025, we examine what support different discourses of delay have among the Swedish public and among Swedish politicians respectively. We examine how the perceptions of citizens and politicians compare to each other, and how they correlate with demographic and political factors such as gender, age, ideology and party affiliation.

Results: We expect our results to largely align with previous (mostly qualitative) findings, particularly in terms of factors determining discourses of delay. Given the relatively high polarization of climate politics amongst Swedish politicians (Axelsson et al. 2025), we expect a starker difference in perceptions of delay discourses amongst politicians, compared to the broader public.

Conclusions: The study provides thorough quantitative measurements for studying discourses of delay, and contributes with unique empirical evidence on public versus elite opinion in an area of climate politics that has hitherto been under-studied.

Security as an ideological fix – against obstructive logics of resourcification

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Teemu Vaarakallio[1]
[1] Swedish Defence University, Political Science, Sweden

Introduction: The hyperbolic proliferation of security continues to obstruct praxis for alternative ecological futures. The paradigm of Green Transition serves as a case in point, being advocated at once as paramount to sustainability and security, despite insurmountable evidence of ecological destructiveness of security and military apparatuses. In opposition to idealist and linguistic definitions of security, this paper attempts to decipher the material logic of security and in so doing, challenge privileged resourcifications in its name.

Methods: The proposed paper theorizes security as a materially embedded ideology, drawing, among others, from the works of Louis Althusser, Göran Therborn and Stuart Hall. As a material formation, security as an ideology must attend to the reproduction of its material basis while simultaneously ensuring its intended political, economic and cultural effects. The paper suggests that this logic can be deciphered via concept of resourcification, according to which some affordances of nature are turned into resources while others are neglected. While the so-called anti-security tradition has made significant contributions in historizing security and its material consequences and, in doing so, challenged voluntarist hopes of making better security, it is yet to ground these empirical observations theoretically. The present theorizing attempts to connect contemporary work on ecological security with the notion of ideology that would provide theoretical consistency to the empirical work already undertaken.

Results: In the current conjuncture, security-ideology emerges as an ideological fix in managing the ecological contradiction of surplus accumulation by forging bio-political and geo-political into one dominant principle of organizing social formation. Partly, it achieves this task by mobilizing the future in present as a double. On one hand, it is a future that is certain in terms of ecological degradation; on the other, it is future that is geopolitically uncertain and thus subject to technologies of security for arresting it. Here, both certainty and uncertainty feed into the machinations of security that will be granted a primacy in the ideological resourcifications for securing the future.

Conclusions: The paper highlights resourcifications in the name of security as a crucial technique of climate obstruction, and followingly, as a site of struggle for alternative ecological futures.

Speaking for the Smoke: Political Elites and the Amplification of Climate Misinformation

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Anton Törnberg[1]
Victoria Vallström[1]
[1] University of Gothenburg

Introduction: A recent IPIE report underscores a critical shift: climate disinformation is no longer confined to the digital fringes but increasingly originates from within the political mainstream. Political elites –especially in fossil-fuel aligned, populist, or authoritarian regimes – play a central role in amplifying and legitimizing misleading climate narratives. This paper investigates how such elites across diverse political systems contribute to the global circulation of climate misinformation. While prior research has focused on either grassroots dissemination through social media users, influencers, or lobbying networks, systematic attention to the communicative role of elected officials remains limited.

Methods: Drawing on a global dataset of approximately 32 million tweets posted over five years by politicians from all major parties in 26 countries, the study explores which types of political actors spread climate misinformation, and how this varies across regime types, regions, and ideological orientations. It further examines what kinds of narratives elites deploy to delay climate action – ranging from outright denial and strategic disruption to culture war framings and economic fear-mongering. Combining computational text analysis with qualitative human coding, the paper develops a comparative framework mapping patterns of elite misinformation across democratic, hybrid, and authoritarian contexts, and traces temporal surges around key political and environmental events such as COP meetings, IPCC report releases, and extreme weather crises.

Results: By bridging political communication and environmental sociology, the study conceptualizes elite misinformation as both symbolic power and policy obstruction.

Conclusions: The findings reveal how climate disinformation functions as a tool of political legitimation – and where international governance and platform interventions might most effectively curb its spread.

The long history of deceived publics: From false class consciousness to climate denialism

14. Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research

Johan Söderberg[1]
[1] Göteborg university, Department of Philosophy. Linguistics and Theory of Science, Sweden

Introduction: Research about ignorance production, astroturfed anti-environmental movements, and corporate doubt mongering is ultimately about the question, how the public opinion is being misled by economic elites for the sake of maintaining status quo. That is essentially the same problematic dealt with in the tradition of ideology critique. The two fields have developed in different academic silos, with few cross-references in-between them. The first point with the paper is to put them into dialogue. Many insights can be derived from the long tradition of ideology critique, while the case of climate denialism/obstruction throws new empirical light on this old theoretical tome. The second point of the paper is analytical. It argues that reluctance in academia to accept the core tenet of ignorance studies, i.e. that the public is susceptible to deception, harks back to internal rivalries within the post-1968 Left. Opponents of Marxism, and, along with it, of concepts such as "ideology" and "false class consciousness", sought to counter its influence by introducing a flat ontology where all knowledge claims counted equally. The critique was ostensibly aimed at scientism, and sometimes, the natural science tout court, but a secondary target was the Marxist party intellecutal. This is how the notion that the public can have a deficit in its understanding of science became so controversial.

Methods: Reading books in ignorance studies and the ideology critique tradition.

Results: 1) The two fields should be put in contact.
2) The academic critique of the "deficit model of knowledge" is concurrently an attack on the Marxist concepts of ideology and false class consciousness.

Conclusions: We need to rehabilitate ideology critique approaches.

15. From anti-environmental conservatism to eco-nationalism

Historically, conservationist and environmental movements were often embedded in conservative or nationalist worldviews, emphasizing the value of nature as integral to cultural heritage, national identity, and the well-being of communities. These traditions were often infused with nostalgic imaginaries of landscapes, rurality, and stewardship. However, in contemporary debate on environmental dilemmas, conservative and nationalistic parties are often opposing transformative policies. There are different explanations for a shift toward an anti-environmental stance within conservatism, such as free-market and growth priorities, identity-polarisation, anti-establishment sentiments, social dominance orientation, and geography of discontent. In a shifting political landscape, however, the understanding of environmental orientations within conservatism requires further exploration.

Moreover, recent literature suggests that environmental engagement may not always map neatly onto conventional political cleavages, and that constituencies concerned with nature and sustainability are found across the political spectrum. Arguments for environmental protection are occasionally motivated on conservative or nationalistic narratives, and some scholars suggest that there is an emerging expression of green conservatism and eco-nationalism. Concurrently, some are concerned over more extreme forms of eco-nationalism, which may oppose climate action while using protection of the environment to justify exclusion and violence.

This workshop seeks to revisit and critically interrogate the historical trajectories, contemporary manifestations, and political futures of both an anti-environmental and green conservatism. We ask how these orientations are shaped, and how they may influence policy, public opinion, and political mobilization in an era of climate polarization.

We invite scholars from across the social sciences to submit fully drafted manuscripts that address these questions from diverse disciplinary, theoretical, and methodological perspectives.

Comparative analyses, historical studies, discourse analyses, ethnographies, survey-based work, and political economy approaches are all welcome. We particularly encourage contributions that explore cross-national differences, trace continuities and ruptures in anti-environmental, green conservative or eco-nationalist traditions or investigate how such orientations intersect with broader struggles over democracy, identity, and climate politics.

Convenors
Frederik Pfeiffer, Department of Political Science, University of Gothenburg, Sweden
Daniel Lindvall, Climate Change Leadership, Department of Earth Sciences, Natural Resources and Sustainable Development, Uppsala University, Sweden
Kirsti M. Jylhä, Institute for Futures Studies, Sweden

Between technocracy and scepticism: Boris Johnson's environmentalism

15. From anti-environmental conservatism to eco-nationalism

Luis Harrison[1]
[1] University of Brighton

Introduction: This paper presents Boris Johnson's approach to climate change as Prime Minister as a unique case of right-wing climate populism. Much of the literature, especially within the ideational approach, correlates right-wing populism with opposition to climate action. I argue that the coalition formed around Johnson can be understood as right populist. It discursively othered migrants, was nationalistic, and articulated the concerns of those who felt left behind by elites in Brussels and Westminster. Johnson's environmentalism was not plain opportunism but reflected a shift in the discursive articulation of the people, something identifiable through the discursive approach but largely missed by the ideational one. Climate action was articulated as a chance for national revival and for Britain to lead globally after Brexit. This nationalistic environmentalism was also multilateral, presenting Britain as a leader despite ideational-approach assumptions that right populists shun climate governance. Johnson's climate populism marks a rupture within British conservatism and offers insight into how right-wing climate politics in Europe can be rearticulated around national revival rather than climate scepticism.

Methods: I use discourse analysis in the post-Marxist, Laclauian tradition to examine selected speeches and policy documents from the Johnson administration. The analysis identifies nodal points and chains of equivalence to understand how environmentalism, including support for multilateral climate action, was incorporated into an exclusionary and nationalistic vision of the people. I have already begun collating and analysing relevant materials.

Results: I expect to find that Johnson's leadership, especially after 2020, constituted a form of right-wing populism blended with internationalist environmentalism that is both unexpected and underexplored. I anticipate showing that Johnson articulated climate action as part of the equivalential chains forming the people by presenting multilateral climate leadership as a national duty and net zero as a green industrial revolution that invokes an imagined past to promise a brighter future.

Conclusions: I expect to conclude that this case challenges the assumption that right populism is rigidly sceptical or denialist. Johnson's environmentalism represents a rupture with both earlier and later Conservative positions and shows how right populism can discursively integrate climate action rather than reject it.

Conservatism and Climate Change

15. From anti-environmental conservatism to eco-nationalism

Olle Torpman[1]
[1] Institute for futures studies

Introduction: This paper examines, from a philosophical-ethical point of view, how conservatism understood as a value-pluralist and preservation-oriented political ideology, constrains and enables climate policy.

Methods: Unlike socialism and liberalism, which permit far-reaching reforms to promote equality or individual freedom, conservatism values stability, order and continuity of established ways of life. Conservatism moreover involves a perfectionist account of the good life, according to which well-being consists in human flourishing grounded in objective goods such as community, tradition and virtue. This is linked to a broadly communitarian view of persons as embedded in particular communities, generating special obligations to compatriots and other in-groups, and to an endorsement of social and natural orders and hierarchies. Based on these conservative ideas, the paper starts by using (i) the methods of normative ethics to construct a core conservative requirement on political action. It then uses (ii) the methods of applied ethics to determine which concrete climate policies are compatible with this requirement.

Results: In terms of theory, the results of the investigation show that conservatism's principled requirement is this: a climate policy is permissible only if it preserves the established orders, practices and traditions of the community. In terms of practice, the results of the application show that conservatism support a set of familiar secondary principles (such as precaution, subsidiarity, stewardship, and polluter pays). It also shows how these can structure conservative thinking about responsibility and justice, including the role of desert, ability and efficiency in allocating both emission rights and remedial duties. Although conservatism typically favour gradual and reversible change, it can justify more radical measures to avert greater disorder or to undo past, unjustified disruptions.

Conclusions: The main conclusion is that conservatism is more compatible with climate measures than general debates tend to indicate, and that conservatives therefore have principled reasons to support ambitious climate policies when (i) these are framed in terms of preserving natural and social orders, national security, economic resilience and public health; (ii) they proceed cautiously rather than abruptly; (iii) and they incorporate fair compensation and respect for local and national self-determination.

Conservatism in psychology: A narrative review of the current approaches and applications in environmental psychology

15. From anti-environmental conservatism to eco-nationalism

Kirsti Jylhä[1]
Edward Clarke[2], Olle Torpman[1]
[1] Institute for Futures Studies
[2] Philipps-Universität Marburg

Introduction: Conservatism has become a central concept in psychological research, including in environmental psychology where conservatism has been linked with various anti-environmental outcomes.
In this paper, we will introduce and discuss some common ways of conceptualizing, defining, and measuring conservatism. These include identification as a conservative, the liberal-conservative (or left-right) dimension, issue preferences in certain political or social issues, right-wing authoritarianism, social dominance orientation, system justification, and binding moral foundations. We also discuss some contemporary phenomena which are often discussed in terms of conservatism, such as the current success of right-wing populism and far-right movements.
The first aim of this paper is to reflect how empirical research can inform theoretical inquiries into the question of "What conservatism is". The second aim is to examine how conservatism is currently approached in psychological literature, and to consider ways of improving the existing theories and measurements (operationalizations). The third aim is to assess how contemporary theorization and operationalizations of conservatism may support or hinder understanding of anti-environmental sentiments.

Methods: A narrative review will be conducted to identify, summarize, and analyze the most important theoretical approaches to conservatism, particularly in the context of environmental psychology.

Results: We expect to find that some theoretical and empirical aspects of conservatism have not been incorporated in theorization and measurement, thereby limiting the prospects of psychology to explain and address ideological resistance to environmental protection. Literature has also been largely informed by anglophone countries and the contemporary manifestations of ideologies, while other cultural and temporal contexts have been less considered.

Conclusions: Our expected conclusion is that understandings of conservatism and ideological resistance to environmental protection is not incorrect, but is limited. We argue that one reason for this is that conservatism is often addressed particularly when explaining a certain problem, such as generalized prejudice or anti-environmentalism. Consequently, theoretical frameworks and empirical studies have not focused on manifestations of conservatism that are potentially more positive or neutral. Our expectation is that our paper will be able to provide recommendations for future research and practice on how to address the current shortcomings in psychological literature.

Explaining Right-Wing Support for Climate Policy

15. From anti-environmental conservatism to eco-nationalism

Frederik Pfeiffer[1]
[1] Göteborgs Universitet

Introduction: Climate politics is often described as a heavily polarised topic, similar in intensity to immigration. In most Western countries this polarisation is perceived to align with party lines and partisanship, both parties and voters on the right are much more sceptical. Or simply opposed to ambitious climate action. This also holds for Sweden wear the right-wing government quickly implemented policy changes after being elected in 2022, changing Sweden's ranking on climate performance indices. Nevertheless, there are people who identifies right wing and or vote for parties on the right who agree with many climate policies. Thus, while we can assume ideology or party leadership cues to be strong drivers of climate policy positions, there are other factors that can still influence attitudes.

Methods: With the help of three nationally representative surveys conducted in the last two years, I aim to explore which factors can explain support for climate policies and green attitudes on the right.

Results: If climate policies are supposed to be passed with the support of the population, we need to understand more about those parts of the population that so far resists more ambitious climate action.

Conclusions: With this paper, I thus hope to contribute to the literature on policy support for climate change, but also believed to turn the interactions between climate change and political ideology, shining a different light on the polarization of climate politics.

On Kebabs and McDonalds: diagnostic places of far-right environmentalism and the double replacement

15. From anti-environmental conservatism to eco-nationalism

Lise Benoist[1]
[1] Department of Human Geography, Uppsala University

Introduction: In contrast to a global anti-environmentalist far right known for opposing climate science and dismantling environmental regulations, some far-right actors take the ecological crisis seriously. This is the case of the groups studied in this paper, spanning the French extra-parliamentary far-right militant landscape, which have included environmentalism to their agenda. At the crossroad of the political geographies of far-right environmentalism and social movement studies, this article contributes to the uncovering of the articulations of exclusionary spatial imaginaries that are constructed, reproduced and mobilised in the ecological discourses and practices of far-right activism.

Methods: Based on a place-frame analysis of interviews with militants of these groups (n=30) as well as ethnographic observations, I examine the diagnostic places of far-right environmentalism. That is, I ask how particular places are diagnosed as withholding specific problems, allowing in turn to understand how and to whom/what blame is assigned for these identified problems.

Results: Three key entangled diagnostic places that crystalize the activists' environmental grievances are identified: the decadent city, the urbanized periphery, the ruined rural. This article argues that they constitute *places of replacements*, transversally testifying of a twofold *eco-cultural pollution*, that is, cultural pollution perceived as environmental pollution: an ethnic-racial one the one hand (epitomised by Kebabs), and an individualistic-consumerist one on the other (epitomised by McDonalds). I conceptualise these denounced pollutions as constitutive of a narrative of *double replacement*, whereby non-white people and progressive elites are blamed for their presence and representations in space, as they come to disrupt an (imaginary) racialised aesthetic-socio-spatial order that far-right environmental militants wish to restore.

Conclusions: This duality in turn highlights a joint root cause identified by far-right environmental militants: (neo)liberal global capitalism. I argue that paying attention to this often-overlooked rhetoric of far-right environmentalism is a precondition to fully grasp the racialised exclusionary spatial politics of far-right environmental militants, insofar as it appears as the master frame for racist and conservative rhetoric alike.

The Conservative Environment Network: Pushing the Tories Towards a Greener Agenda?

15. From anti-environmental conservatism to eco-nationalism

Julià Tudó-Cisquella[1]
[1] University of Bergen

Introduction: Conservative movements are often portrayed as obstructionists of climate and environmental policy. Challenging this convention, the Conservative Environment Network (CEN)—an environmentalist forum and parliamentary caucus linked to the British Conservative Party—was founded in 2013 to steer the party towards greener positions. This network illustrates how intra-party factionalism shapes climate politics in the United Kingdom, where the Conservative Party's changing stance has been a defining feature. Since 2006, the party has approached green issues in many ways, from appointing anti-renewable energy ministers to approving the 2050 net zero target in 2018. While external factors such as public salience and party competition dynamics may partly explain this inconsistency, it is mostly driven by internal dissensus among conservative ranks. To explore these dynamics, this article addresses the following questions: Why did CEN emerge? What are its main arguments? To what extent does CEN influence the Conservative Party's positioning on green issues?

Methods: To answer these questions, I employ a mixed-methods approach. First, I use Qualitative Content Analysis (QCA) and semi-structured interviews to members of the Conservative party, examining the main arguments advanced by CEN. Then, I use quantitative text-as-data analysis to assess whether CEN MPs promote a distinct parliamentary agenda compared to non-CEN Conservative MPs, mining all the debates held in the British Parliament between 2010 and 2025 using Hansard data.

Results: I anticipate that CEN will advance eco-modernist arguments, serving as a key actor in explaining the most ambitious green policies developed by the British Conservative Party. In this sense, I expect the network's MPs to have a distinct parliamentary agenda regarding green issues.

Conclusions: This study contributes to the literature on party factionalism in environmental politics and raises the importance of studying conservative environmentalist movements, which can play a key role in climate politics. Specifically, I expect to show that specific environmentalist conservative actors, in this case the Conservative Environment Network, can move center-right parties towards greener positions.

Why Vary on the Environment? Explaining Nationalist Parties' Engagement Patterns

15. From anti-environmental conservatism to eco-nationalism

Orsolya Svidró[1]
[1] Corvinus University of Budapest, Department of Political Science; Hungary

Introduction: While many scholars argue that nationalism-based environmentalism is largely a relic of the past, the contemporary landscape of nationalist parties reveals considerable variation in their stances toward environmental dilemmas, ranging from outright climate denialism to expressed concern. Consequently, the paper addresses the following research question: Which factors influence whether nationalist parties engage with the environment? Competing explanations attribute cross-party variation either to exogeneous factors – such as electoral rules – or to endogenous ones, like the perceived salience of environmental issues. Nevertheless, existing research on eco-nationalism is mostly confined to qualitative and comparative case studies, which calls for a more systematic analysis.

Methods: To get a more general understanding, this paper relies on a quantitative approach. The explanatory power of the above-mentioned variables is tested on a large dataset using Manifesto Project data to identify cross-country patterns. The paper hypothesizes that nationalist parties are more likely to open toward environmental issues in proportional electoral systems which are generally considered to be more competitive. Additionally, it is anticipated that nationalist parties engage with the environment for strategic reasons – for example, to gain electoral benefits.

Results: Preliminary findings indicate that nationalist parties do not gain electorally from emphasizing environmental issues and may even risk losing voters when doing so. Yet some nonetheless attempt to "ride the wave" by adjusting their positions in response to rising environmental salience: as green parties gain electoral strength, nationalist parties also tend to increase their emphasis on environmental themes. Moreover, initial results show that – quite counterintuitively – stronger emphasis on core nationalist issues, notably immigration, is associated with greater attention to environmental protection. This suggests an exclusionary "the boat is full" type of framing that incorporates environmental concern into nationalist narratives.

Conclusions: Accounting for these surprising patterns provides broader insights into nationalist parties' behavior and responses to environmental issues. In doing so, it opens up new avenues for future research into right-wing political actors' accommodative or adversarial stances toward contemporary ecological challenges.

16. Tech for nature: Bridging climate and biodiversity governance

Datafication—as the conversion of any aspects of existence into digital data—is typical of our digital age (van Dijck, 2014). In the context of the intertwined global climate and biodiversity crises, datafication, often coupled with advances in machine learning/AI, has emerged as a way of closing the gap between climate and biodiversity governance (Bakker & Ritts, 2018). At the core of these practices lie new means of collecting and analyzing digital data, enabling innovative ways to capture, measure, track, and act upon climate and biodiversity. These include promises of improved digital monitoring, reporting, and verification of carbon and biodiversity credits (UNDP, 2023), and new mechanisms for benefit-sharing that will purportedly enable traceable and accountable links between actors at different governance levels (Scholz et al. 2022).

Crucially, digital data—often powering algorithms—are deployed in the making of new objects of governance and are increasingly relied upon as a resource for governing the present and predicting the future (Egbert, 2024). However, despite drawing its authority from core principles such as openness, transparency, traceability, neutrality, universality, and resource optimization, its legitimacy is rooted in dynamics that often obscure the human and social dimensions shaping data-related decisions (Gabrys et al., 2022). In this regard, critical studies have been instrumental in deconstructing dominant imaginaries and discourses surrounding datafication, shedding light on their genealogies, rationales, and materializations (Crawford, 2021; Zuboff, 2019).

In this workshop, we invite contributions that advance the conceptualization of datafication and associated technologies in relation to climate and biodiversity governance and/or studies that engage with empirical material on the topic. We envision a broad array of analytical entry points, e.g., inspired by STS, governmentality, political ecology, and related critical lenses. Possible research questions include, but not are not limited to:

- How can the digital be conceptualized in environmental governance?
- How are innovative digital technologies deployed to jointly address climate and biodiversity issues, and with what tangible and intangible effects?
- Where and how can resistance to datafication be observed?

Convenors
Maria Jernnäs, Department of Thematic Studies, Environmental Change, Linköping University, Sweden
Juliana Porsani, Department of Thematic Studies, Environmental Change, Linköping University, Sweden

Conceptualizing digital waste as a social scientific waste research topic

16. Tech for nature: Bridging climate and biodiversity governance

Antti Kurko[1]
[1] Faculty of Information Technology and Communication Studies (ITC), Tampere University, Finland

Introduction: In the field of social sciences, waste has been used as a *lens* to explore society from different angles. Waste itself can be understood in diverse ways, and as human beings we cannot completely avoid it. It constantly disturbs and reminds us of its existence. We cannot avoid its haunting presence in digital world. Aim of this article is to immerse in the concept of *digital waste*, how it is understood in current research, and reflect how it can be used as a social scientific lens to observe datafication and data-driven infrastructures.

Methods: Digital waste is under-studied topic, and the existing research is scattered into different fields such as critical data sciences, information and communication sciences and in the field of computer sciences. This research uses integrative systematic literature review as a method to systematically summarize the existing research and generate new knowledge about the topic.

Results: This research aims to locate different understandings of the digital waste phenomena, and reveal current focus points and possible blind spots of the existing research.

Conclusions: Data-driven infrastructures are dependent on “unseen” media infrastructure, like underwater cables, satellites and other materialities such as energy, water, rare earth minerals and plastics. The digital waste condition therefore leans strongly into these materialities and thus it cannot be unattached from other forms of waste such as mining waste or e-waste. Instead of typical waste, that is always nature-made or artificially produced, digital artefacts are always technology-mediated objects. Digital waste is a complex issue that actively avoids dichotomic separations of material/immaterial and physical/virtual, which underlines its nature of hybrid object. Digital waste research casts critical insights into the dominant approaches towards data gathering and data economy. Instead of understanding data as valuable, eternal, and immaterial resource, the concept of digital waste highlights data through the questions of materiality, distraction, excess, uselessness and disorder.

Credible Credits: The Making of a Carbon Market

16. Tech for nature: Bridging climate and biodiversity governance

Maria Jernnäs[1, 2]
Eva Lövbrand[1, 2], Juliana Porsani[1, 2]
[1] Dept. of Thematic Studies - Environmental Change, Linköping University
[2] Centre for Climate Science and Policy Research (CSPR)

Introduction: The negotiations on the Paris Agreement's carbon markets concluded at COP29 in 2024; through establishment of rules, reporting and review processes, and expert advisory bodies, the international process has crafted the framework set to give birth to (the world's first?) high-integrity carbon credits. In Belém the next year, attention had instead turned towards operationalization. This paper starts from this inflection point; when the 'political' phase is succeeded by 'technical' deliberations and high-stakes negotiations give way to everyday bureaucratic labor. It does so by tracing how a 'high-integrity,' credible carbon credit is created under the collaborative mechanisms established by Article 6.2 and 6.4 in the Paris Agreement. In light of historic accusations of greenwashing and ineffective action (Christiansen, 2024; Trencher et al., 2024), the carbon market now crafted purportedly addresses and avoids problems of inadequate verification, double-counting, and injustice for indigenous peoples and local communities (Randalls, 2017). Through improved governance frameworks and digital infrastructures to keep track of credits, as well as the deployment of innovative digital technologies to monitor, transfer, quality-check, and access credits, actors mobilize to deliver credible credits that contribute towards climate mitigation, NDC implementation, and more equitable participation.

Methods: Drawing upon governmentality studies (Miller & Rose, 2008) and ethnographies of things (e.g., Mol, 2002), we examine the many practical ways through which a 'carbon credit' is rendered legible and calculable to emerge as a governable object. We are especially interested in what role digital technologies—ranging from mundane registries to spectacular remote sensing techniques—play in the pursuit of credibility (Lund Christiansen, 2024). Based on practice-oriented document analysis (Asdal & Reinertsen, 2022), event ethnography at COP30, and digital ethnography of the UNFCCC and self-proclaimed carbon market actors' websites, we examine the multiple spaces, actors, and techniques through which the carbon market takes form as a field of political intervention (Triantafillou, 2012).

Results: - Many roles of digital technologies
- Several conflict lines: supply/demand, scalability, standardization

Conclusions: The pursuit of credible credits is surrounded by a politics of readiness, where the preparation of potential credit 'hosts' (i.e., countries or indigenous peoples) becomes a sphere of common concern, populated with both public and private sector 'enablers'.

The logics of climate budgets: What counts in urban climate governance?

16. Tech for nature: Bridging climate and biodiversity governance

Kjersti Sollund[1]
[1] University of Bergen, Centre for Climate and Energy Transformation (CET), Norway

Introduction: What happens with climate action when metric governance becomes predominant in an increasingly diverse urban dimension of climate change? Cities worldwide are experimenting with climate budgeting to close the gap between policy aspiration and practice. Climate budgeting is a data-driven governance tool that is rapidly gaining acceptance as a means of supporting decision-making, and C40 Cities has initiated a programme to help cities adopt it. By operationalising and institutionalising what must be done and how, proponents argue that climate budgets can catalyse climate action in the "here and now". Yet, critics worry that data-driven urban agendas can obscure longer-term transition objectives in favour of short-term measurable outcomes. There is a need for a holistic understanding of climate budgeting and its implications for the deep transformation needed to meet climate targets.

Methods: This paper examines how climate budgets are designed and implemented across the Nordic capitals Oslo, Stockholm, Copenhagen, and Helsinki. I plan to conduct 40-50 interviews with policymakers, budget officials and politicians (30 within deadline), along with document analysis of climate budgets and procedures. I will draw on multiple theories of transformation to uncover assumptions and framings embedded in current practices.

Results: Preliminary findings from document analysis indicate that the design of climate budgets frames issues in ways that enable certain actions while constraining others. Some cities successfully integrate measures targeting structural change, consumption-based emissions, and long-term adaptation and biodiversity measures, indicating scope for transformative interventions despite emission-data uncertainties. Still, climate budgets tend to emphasise emission-reduction measures and fail to account for major investments that drive emissions upward, as well as underrepresenting potential reductions that lie in the absence of activity. These framings narrow conceptions of what constitutes climate action, thereby limiting the options presented to policymakers. Notably, some cities have adopted hybrid climate budgeting approaches that incorporate innovative elements for further development.

Conclusions: Climate budgets may seed transformative pathways when both the instrument and its surrounding processes are deliberately designed to surface systemic levers, address accounting blind spots and cross-scalar dynamics, and enable political deliberation throughout the budgeting process. Thereby expanding the notion of climate action that counts in urban climate governance.

The role of environmental data justice for the development of the voluntary carbon market

16. Tech for nature: Bridging climate and biodiversity governance

Silviya Serafimova[1]
[1] Bulgarian Academy of Sciences

Introduction: The major objective of this paper is to clarify how the ethical challenges triggered by the growing impact of Green AI on the carbon level and data flows (Pasek 2019) can be overcome by achieving environmental data justice (Vera et al. 2019) that can foster the development of the so-called resourceful voluntary carbon market (VCM). Consequently, my second objective is to prove that environmental data justice is not a self-sufficient phenomenon. Being a tool for reflecting on the data practices one needs to criticize (Vera et al. 2019), it is examined as closely tied with epistemic, participatory and procedural justice.

Methods: I adopt some methods from the fields of machine ethics, normative ethics (with special focus on different theories of justice), media and communication studies (these showing how the datification affects the social justice theories) and green economics.

Results: The potential results of my analysis concern the ways of clarifying why one cannot overcome the new digital inequalities provoked by the carbon market, unless one tackles how, in addition to creating new social and economic inequalities, they intensify the existing ones.

Conclusions: I conclude that environmental data justice contributes to revealing how those who experience disproportionate environmental impacts are also subjected to data extraction without consent. That is why achieving the justice in question is possible only by fostering intra- and intergenerational procedural and participatory justice. Assuming that populations suffering from the environmental impact of ICT are the ones that are at present time less likely to benefit from the digital revolution, I also conclude that the debates about the minimization of the carbon footprint can be enriched with these about the increasing role of the voluntary carbon market.

Translating Sustainability: Mobilizing AI-Supported Terminology Work for Democratic Participation and Social Movement Knowledge

16. Tech for nature: Bridging climate and biodiversity governance

Barbara Heinisch[1]
[1] Eurac Research, Institute for Applied Linguistics, Italy

Introduction: Democratic participation and social movement engagement in sustainability transitions depend on how well diverse actors can access, understand and mobilize knowledge. However, terminology, especially when marked by regional variation, often creates barriers for communities, activists and civil society organizations seeking to engage with policy debates or academic frameworks. At the same time, emerging large language models (LLMs) such as ChatGPT shape how knowledge is translated and circulated, raising questions about their role in inclusive communication. Using the example of German-language education terminology, the UniTermGPT project examines how LLM-supported translation can be leveraged to improve knowledge accessibility and support the co-production of transformative knowledge between researchers and practitioners.

Methods: A corpus of Austrian, German, Swiss and South Tyrolean university texts in German and English from at least 15 universities will be compiled to identify region-specific terminology relevant for navigating institutional and governance contexts. The terminology will be compared with existing resources and then used to design prompts for LLM-assisted translation experiments in German and English. These translations will be annotated by practitioners to assess accuracy and sensitivity to linguistic diversity. Qualitative analysis will explore how these outputs may support or hinder democratic knowledge practices and collaborative engagement with societal actors.

Results: Preliminary findings show that large language models tend to homogenize linguistic variation, potentially obscuring distinctions that matter for democratic participation and for communities interacting with institutional systems. In future steps, targeted prompt design and retrieval-augmented generation are likely to improve LLM-generated translations. While not direct outcomes, the results are anticipated to shed light on factors that may enable LLMs to facilitate knowledge co-production, improve communication across groups and support actors in navigating policy and governance arenas.

Conclusions: The project's recommendations for specialized translation and a policy brief (drawing on the results of the qualitative analysis) serve to illuminate the societal relevance of terminology in an era marked by expanding LLM use. The insights gained through UniTermGPT are informative for other contexts where region-specific terminology shapes communication and translation. The conclusions will outline potential implications and considerations for activists, policymakers and researchers integrating AI-assisted translation into strategies for more inclusive and just sustainability transitions.

Transnational Governance and Digital Technologies at the Climate-Biodiversity Frontier

16. Tech for nature: Bridging climate and biodiversity governance

Benedikte Raft[1]
Michele Betsill[1], Harriet Bulkeley[2], Stacy VanDeveer[3]
[1] University of Copenhagen
[2] Durham University/Utrecht University
[3] University of Massachusetts Boston

Introduction: Amdist growing evidence that climate change and biodiversity loss are so entwined that attempts to address one issue in isolation will be limited at best and possibly counter-productive, scientists and decision-makers call for transformative changes in governance to break down silos and address these problems more holistically. How such change can be realized remains unclear, raising difficult political questions: What should be transformed, for whom, by whom and towards what ends? Whose rights, knowledge and interests should be prioritized? How should trade-offs be managed? While states continue to address climate change and biodiversity loss through single-issue treaty regimes, many non-state and sub-national actors bring these issues together through global networks and partnerships advancing net-zero targets and nature-based solutions. In so doing, these initiatives are delinating, contesting and maintaining the climate-biodiversity frontier as a new governance arena. This paper will focus specifically on how and with what effects Nature Tech contributes to this process. According to Fransen and Bulkeley (2025: 1272), "Nature Tech is a broad term used to encompass 'smart tech' trained on nature, involving tools such as eDNA, machine learning algorithms, and other forms of tech-enabled measurement, observation and prediction." Many transnational climate-biodiversity initiatives deploy digital technologies on the ground in addition to financing and advancing their use for monitoring.

Methods: We compile a database drawing on qualitative website data on more than 250 transnational governance initiatives that recognize climate change and biodiversity loss as interconnected problems (to be completed in March 2026). The ClimBio Frontiers database includes a general description of each initiative, how it conceptualizes the climate-biodiversity link, and its governance approach (functions; instruments; targeted actors, geographies, sectors and biomes; and inclusion of justice).

Results: This paper presents a general overview of the transnational climate-biodiversity landscape, with a focus on which actors are behind NatureTech; how digital technologies are being used in relation to different governance functions (e.g. funding, monitoring, information sharing and capacity building); and the actors, geographies, sectors, and biomes targeted by these technologies.

Conclusions: We conclude by reflecting on how Nature Tech contributes to delineating, contesting, and sustaining the climate-biodiversity frontier as a new governance arena.

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Promises that digitisation will help solve environmental crises are currently increasing and abundant, particularly with recent hype surrounding AI. These promises of digitisation and datafication include seeing and knowing environmental problems better, creating more accountability, or improving environmental governance decisions (Kloppenburg et al., 2022). What is more, AI is suggested to advance knowledge production and environmental governance, for example through climate impact prediction, environmental monitoring enhancement, improved participation and engagement, and the optimisation of resource use and extraction.

Digitisation processes thus promise to close some "gaps" concerning the implementation, monitoring, or knowledge on environmental issues, which also includes making environmental governance more accessible to non-expert actors. But they are also said to open up many new issues, "gaps", or concerns, such as about knowledge politics and democratic decision-making (Machen & Nost, 2021), validity and credibility of widespread datafication (Ekström, 2022), understandings and imaginaries of the environment (Wickberg, 2023), or the social visibility and negotiability of environmental concerns (Haider & Rödl, 2023).

With both promises and pitfalls of digitisation and AI in mind, this workshop invites complete manuscripts dedicated to the role of digitisation and AI in environmental governance and policy-making processes. We welcome participants to deliberate questions including:

- How does digitisation and datafication impact knowledge practices and this knowledge's potential to contribute to environmental change?
- How do they shape imaginaries of, or practices in, environmental governance or policy?
- How do they bridge some "gaps" to reach or support implementation of environmental goals, but also open up others?
- How do digital infrastructures shape how environmental concerns are negotiated or negotiable?
- How does AI interact with environmental misinformation?

This workshop invites fully drafted manuscripts from fields such as science and technology studies, environmental communication, information studies, geography, law, environmental science, and others that investigates, problematises, discusses, and reflects on digitisation and the environment. To this end, the conveners and the conference will provide a platform for fruitful, critical, and change-oriented discussions on environmental governance and policy in times of AI hype.

References

Ekström, B. (2022). Thousands of examining eyes: Credibility, authority and validity in biodiversity citizen science data production. Aslib Journal of Information Management, 75(1), 149–170.

Haider, J., & Rödl, M. (2023). Google Search and the creation of ignorance: The case of the climate crisis. Big Data & Society, 10(1), 20539517231158997.

Kloppenburg, S. et al. (2022). Scrutinizing environmental governance in a digital age: New ways of seeing, participating, and intervening. One Earth, 5(3), 232–241.

Machen, R., & Nost, E. (2021). Thinking algorithmically: The making of hegemonic knowledge in climate governance. Transactions of the Institute of British Geographers, 46(3), 555–569.
Wickberg, A. (2023). Environing media and cultural techniques: From the history of agriculture to AI-driven smart farming. International Journal of Cultural Studies, 26(4), 392–409.

Convenors

Malte Rödl, Division of Environmental Communication, Swedish University of Agricultural Sciences, Sweden
Björn Ekström, Swedish School of Library and Information Sciences, University of Borås, Sweden
Malin Joy Nemeth, School of Social and Political Sciences, Erasmus University Rotterdam, The Netherlands
Amelia Mutter, Division of Environmental Communication, Swedish University of Agricultural Sciences, Sweden

What about the environmental crises in AI Policy? How AI is brought into being in international organisations' policy-relevant documents

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Malte Rödl[1]
Miron Moraitopoulos Arljung[1], Jutta Haider[2]
[1] Department of Urban and Rural Development, Swedish University of Agricultural Sciences
[2] Swedish School of Library and Information Science, University of Borås

Introduction: As the environmental crises continue, the AI hype unfolds in business and policy circles. Previous literature suggests that environmental concerns beyond material infrastructure are largely absent from AI policy, and the risk and harm typologies used therein. Because policy documents establish a discursive infrastructure that brings the inscribed objects and relationships into being, this paper interrogates how environmental concerns are (re)presented (or missing) in international AI policy documents.

Methods: Drawing on eleven reports or policy documents by international organisations, we apply "critical whataboutism" to reconstruct understandings of AI, associated risks, problematisations, outlined solutions, imaginaries, and the way the documents distribute power and agency.

Results: We find that beyond tokenistic referral to carbon emissions, only few policy documents consider wider environmental impacts; however, these documents still often hedge their own agency in order to conform to discourses of international competitiveness and to reap supposed efficiency gains associated with AI; in these cases, generalised and strategic ignorance as well as priorisation of societal goals appear to contribute to lacking consideration for the environment. Overall, maintaining (or reaching) competitiveness appears to be the main aim of the screened policy reports even for international organisations.

Conclusions: As in society at large, the position of the environmental crisis is unfortunately lost in the context of geopolitics, which all screened documents navigate. Our analysis provides opportunities to rethink "AI" and its relationship to environmental crises. It urges policy makers to write environmental crises "into being" so that they become part of the discursive infrastructure, also on AI.

Between the spectacular and the mundane – examining the transformative potential of digital technologies in climate and biodiversity governance

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Victoria Wibeck[1, 2]
Marie Francisco[1, 2], Lotte Van Der Jeugt[3], Maria Jernnäs[1, 2], Sirkku Juhola[3], Björn-Ola Linnér[1, 2], Tina-Simone Neset[1, 2], Juliana Porsani[1, 2]
[1] Department of Thematic Studies - Environmental Change, Linköping University
[2] Centre for Climate Science and Policy Research, Linköping University
[3] University of Helsinki

Introduction: Climate change and biodiversity loss constitute two deeply interconnected global crises. As international efforts to address these challenges intensify, digital technologies – such as artificial intelligence, machine learning, and digital twins – are increasingly seen as potentially transformative tools for governance, research, and public engagement. Yet, questions remain about their actual potential to enable effective, meaningful and inclusive action. To what extent can these technologies support biodiversity and climate action? How might they act as either catalysts or barriers to transformative change? And what becomes of the grand promises of the novel technologies when translated into practice?

This paper synthesises results from the research programme *Virtual Worlds – digital technologies in climate and biodiversity governance,* which critically examines how actors perceive and engage with emerging digital technologies. The paper situates views on digital technologies for climate and biodiversity governance within a broader comparative perspective by analysing how actors make sense of opportunities and risks in both the biodiversity and climate change arenas.

Methods: The paper draws on a) survey responses, observations and in-depth interviews conducted at UNFCCC and CBD COPs between 2023 and 2025, b) text analysis of the transparency frameworks of the two conventions, and c) interviews conducted with local and regional actors who develop and implement digital tools such as urban digital twins.

Results: By bringing together perspectives from global to local levels, this paper explores expectations in terms of opportunities, risks and potential future transformations across scales and how they materialise on the ground.

Conclusions: Based on results from our ongoing studies, the paper's conclusions will summarise informants' views on challenges and opportunities related to digital technologies. Thereby, we seek to contribute to a nuanced understanding of the transformative potential and limitations of digital technologies in global climate and biodiversity governance.

Data governance in smart grids: A critical review of the academic literature

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Paul Arteaga[1]
[1] LUT University

Introduction: Digitisation and artificial intelligence are increasingly presented as tools for improving environmental governance, including in the electricity sector, where smart grids and data exchanges support the green transition. However, while data governance research has expanded since the late 2000s, its role in smart grids remains underexplored. Existing literature tends to focus on technical and operational issues, while paying less attention to the political, economic, and epistemic implications of smart-grid data infrastructures. This study critically reviews academic literature to examine how data governance in smart grids is conceptualised and to identify persistent knowledge gaps.

Methods: The article adopts a critical literature review approach based on a two-layer strategy. The first layer draws on conceptual data governance literature, particularly work on decision rights, accountability, data quality, organisational control, and normative expansion. The second layer engages with smart-grid-specific literature on smart meters, interoperability, privacy, cybersecurity, data analytics, and energy data access. Informed by critical data studies and political economy, the analysis examines how the literature frames authority, value, control, and accountability in smart-grid data infrastructures. Rather than offering a purely descriptive mapping, the review assesses existing literature across six dimensions: authority, interoperability, access, privacy and cybersecurity, value capture, and infrastructural accountability.

Results: The review identifies several recurring themes in the literature: interoperability and standardisation, smart meter data privacy, data access and sharing, cybersecurity and trust, value creation, and accountability. Preliminary analysis suggests that data governance in smart grids is often approached through technical and operational concerns, while questions of commodification, infrastructural power, value capture, and public accountability remain comparatively underdeveloped.

Conclusions: The article argues that data governance in smart grids should not be reduced to data management, interoperability, cybersecurity, or organisational compliance. These dimensions are necessary, but insufficient. Smart grids are data-intensive infrastructures in which energy data are used to coordinate electricity flows, organise markets, enable new services, and redistribute control and value. It calls for a more critical and socially attuned research agenda that examines smart-grid data as a commodified asset, analyses digital infrastructures as sites of governance and power, and connects data governance to questions of legitimacy, accountability, public value, and the green transition.

Digital technology refusal in environmental governance

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Melissa Chapman[1]
[1] ETH Zurich

Introduction: As artificial intelligence and digital infrastructures have become increasingly embedded in environmental governance and decision making, there are also an increasing, albeit still selective, set of examples of refusal, contestation, or constrained adoption of these technologies. While scholarship has largely focused on the opportunities and risks of AI use in the environmental domain, less attention has been paid to why actors reject, or limit the power of, algorithmic tools and digitization in environmental governance. This paper examines the drivers, logics, and implications of AI and technology refusal in environmental decision making, drawing on insights from comparative cases and from insights derived from other (non environmental) sectors such as criminal justice, health, and labor management where algorithmic resistance and refusal has been widely documented.

The central question motivating this work is: When, why, and by whom are AI systems refused in environmental governance, and what does this reveal about trust, power, and legitimacy in an increasingly algorithmic era?

Methods: To address this question, this paper conducts a comparative case study, examining four governance levels (local, subnational, continental, and global) and four stages of the environmental data and decision processes (monitoring, planning and decision support, evaluation, and policing/compliance). For each intersection (scale by stage), I identify empirical examples of technology refusal (e.g., communities opting out of acoustic monitoring, subnational agencies declining decision-support tools, regional bodies resisting automated compliance systems). The proposed analysis synthesizes drivers of refusal such as data sovereignty concerns, algorithmic opacity, misalignment with local knowledge systems, and fears of political or economic displacement.

Results: Expected results include a typology of AI refusal practices, a mapping of the institutional and sociopolitical conditions under which AI refusal arises in the environmental domain, and identification of tensions between global standardization and localized governance needs and desires.

Conclusions: The analysis will surface patterns across governance scales and decision stages, revealing when digital technology refusal functions as a protective measure for communities, what makes refusal possible, and when it reflects misalignments between technical design and lived environmental management realities.

Governing forests with ML tech: valuing machine learning – learning machine values

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Ruth Machen[1]
[1] Newcastle University

Introduction: This paper examines how machine learning technologies (ML) shape the value orientations of forest management practices. Drawing from an STS understanding of technologies as far from neutral, the paper argues for understanding of value orientation as an important way in which algorithms produce effects of power. With widespread enthusiasm for integrating ML into forestry decision-making, the promise is that ML will speed-up and scale-up the creation of nature positive projects and improve the efficiency of environmental governance decisions.

Methods: Drawing from interview and documentary research the paper analyses how machine learning is being enrolled within forestry governance practices of NCX - a case study organisation in the USA. The paper examines how value orientations get produced, reproduced, enrolled/encoded, created or contested in the process of engaging machine learning technologies.

Results: By focusing on what is being valued and how, the paper develops a close reading of how machine learning is being valued in forestry management, and how - in the learning of machine values - market logics are becoming entwined with machine logics. Building on work at the interface of STS and political economy, this provides an account of how the specific technologies of machine learning are leading to the reproduction of market values and the extension and deepening of market-based logics within the sphere of environmental governance more widely.

Conclusions: Ultimately the paper asks - what is lost/gained in acting on managing forests in this way? In doing so it seeks to move beyond the hype of AI - both positive and negative - and attend to the ways in which valuing machine learning also involves learning both machine and market values.

Imagining desirable aquaculture futures through artificial intelligence

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Thomas Völker[1]
Gernot Rieder[1], Chloe Game[2], Kjetil Rommetveit[1]
[1] University of Bergen, Centre for the Study of the Sciences and the Humanities
[2] University of Bergen, Department of Informatics

Introduction: Norway aims to become an “aquaculture nation” (Nærings- og fiskeridepartement, 2021). To that end, Norwegian aquaculture is expected to grow even further, with value creation from farmed salmon projected to quintuple by 2050 (Reinertsen and Asdal, 2019). Given the severe impacts of salmon farming on the environment and on fish health, the question is how a growing demand for high-quality protein can be balanced with the need to shift towards more sustainable food systems? Artificial intelligence is envisioned as a response to this challenge. Current applications include novel approaches to increase the efficiency of feeding practices, monitor fish health, and ensure the integrity of farming nets. The deployment of AI in the aquaculture industry can be understood as a key site of collective imagination where artificial and environmental intelligence intersect (Felt, 2025; Leonelli, 2025).

Methods: Sociotechnical imaginaries have proven to be a useful approach for studying practices of collective imagination and contingencies in the development and governance of new and emerging technologies, drawing attention to the practices through which communities collectively imagine desirable futures (Jasanoff and Kim, 2015; 2009). We will contribute to these debates by looking at recent developments in Norwegian aquaculture and by asking how the green and the digital are articulated together. In this paper, we draw on data gathered from (i) document analysis of key materials, such as the Norwegian AI strategy and recent aquaculture white papers, (ii) semi-structured interviews with data scientists and industry actors, and (iii) public events, to analyse how precisely collectively held imaginations ‘travel’ (Czarniawska and Joerges, 2012) and are articulated across different sites.

Results: We show how environmental concerns are re-articulated within the wider framing of a national AI strategy and the concrete promises and expectations tied to digitalisation policies and innovations. They rehearse and stabilize broader imaginations of how technoscience can address contemporary challenges and bring about desirable futures.

Conclusions: In order to go beyond the "AI hype" and be able to address sustainability concerns in our food and feed systems, we need to unpack the collectively held imaginations that enable such hypes and are themselves continuously rehearsed by them.

Making 'Patchy Air': A Patchwork Ethnography of Co-Creating a Sensor Kit

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Malin J. Nemeth[1]
Paul A. Nemeth[2]
[1] Department of Sociology and Public Administration, Erasmus University Rotterdam, Netherlands
[2] Department of Marine Systems, Tallinn University of Technology, Estonia

Introduction: Air and infrastructures measuring air quality often seem intangible, invisible, and abstract (Calvillo, 2023). Thus, air often needs to be datafied in order to be visibilised and visualised. Moreover, such datafication of air is needed for engagement when it comes to living with air pollution; datafied air therefore is relevant for environmental governance, policy-making or environmental activism. Low-cost sensors nowadays shape how we understand and engage with air, for instance through citizen science projects. While Gabrys et al. (2016) argue for "good enough" citizen data to enable a more democratic engagement, Calvillo (2018) highlights different ways to engage with air pollution when its presence already has been determined. Either way, experts are needed for the data analysis and visualisation of air. This raises the question of how we can sense and know air in collaboration with sensors, despite or beyond expertise. The aim of this paper thus is to explore how encountering air through more-than-human collaboration with sensors influences our relationship to air.

Methods: To do so, I analyse field notes from co-creating our sensor kit, using patchwork ethnography conducted between January and December 2025 (Günel & Watanabe, 2024). While the field notes are written and analysed by the first author, making the sensor kit and co-creating knowledge throughout the process were shared collaboratively. Patchwork ethnography allows us to engage with creating a sensor kit by highlighting patchiness, relationality and sense-making.

Results: The findings showcase how boundaries and (expert) roles are constantly negotiated. Further, we considered the accessibility of (online) spaces and infrastructures. Overall, we focused on the collaboration between each other, and the sensors.

Conclusions: We present how engaging with infrastructure (sensor-building), making, and (more-than-human) collaborating reveals a possible way diverse actors can engage with air (pollution) in their sense-making.

Mundane governance of relations with nature: The case of automated species identification apps

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Björn Ekström[1]
René Van der Wal[2], Minh-Xuan Truong[2]
[1] Swedish School of Library and Information Science, University of Borås, Borås, Sweden
[2] Department of Ecology, Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden

Introduction: Automated species identification tools are available, popular and efficient; but how are they produced, and for what purposes? How do developers think about these tools, and how do they influence everyday understandings and identifications of species? With this contribution, we draw on the theoretical notion of mundane governance (Woolgar & Neyland, 2013) to explore how automated species identification tool developers anticipate and configure how video, sound and image recognition technology is embedded in citizen science programmes for species monitoring.

Methods: We do this by analysing 16 interviews with automated species identification professionals across Europe and North America through the theoretical lens of mundane governance.

Results: In recent research contributions of ours, we find citizen science programme coordinators to guide automated species identification development and implementation with utmost care and reflection. Programmes typically work from how they understand their user community and from post-launch user feedback, rather than involving actual (future) users when developing and embedding automated species identification apps in their programmes. A key consideration comprises to ensure that the ability of participants engaged with the field-based study of nature to identify species – arguably their most important skill and cultural dimension – is not compromised or taken over but digitally enhanced and future-proofed.

Conclusions: Working from that safe-guarding principle, programme managers hold rich perspectives on how this AI implementation could best work together with those inside as well as currently outside of citizen science communities and their relations to nature. We present how these might help programmes to develop and assist with safeguarding the great diversity of species out there.

Persuasive Imaginaries: establishing sustainable AI in words and deeds

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Kathrin Lutz[1]
[1] Johannes Gutenberg-Universität

Introduction: The role that AI can play in aligning society more closely with the guiding principle of sustainability in the future is a matter of debate. While AI has the potential to increase efficiency and help forecasting consequences of the climate change, it also is resource intensive and its application could have unintended side effects. The European Commission, among others, has nonetheless brought forward the notion of sustainable AI and is trying to convince states and the industry to follow along.

In this paper I offer a new perspective on the negotiation process around sustainability and its re-definition through its combination with digitalization and particular AI. I explore how national sociotechnical imaginaries of sustainable AI are translated into local contexts and thereby made more applicable. This “twin transition” is constructed in sociotechnical imaginaries of the future, and distributed through persuasion by states, among others.

Government research funding is a good example for this argument. It creates incentives for cooperations between business organizations and research institutions and at the same time enables the implementation of politically influenced trajectories of future developments. In this case it establishes and legitimizes the imagination of sustainable AI, to translate the theoretical notion into tangible applications.

Methods: Based on the qualitative analysis of national calls for research, interviews with employees of the funding organization and employees of funded projects

Results: The research funding organisation conceptualizes the imagination of sustainable AI in a way, that it is specific enough for other actors to understand them as actionable, but abstract enough to be applicable across societal sectors. The combination of sustainability and AI does not only operationalize the former but also helps to make the latter seem less threatening. This is legitimized by deterministic quantification and economization. AI is established not as a neutral instrument, as is often the case in discourse, but a risky one that nevertheless needs to be tamed in view of its enormous potential.

Conclusions: To understand how new visions not only take shape and get institutionalized but also are spread further into society, it is crucial to further analyse the lifespan of a sociotechnical imagination.

The digitisation of air quality and its effect on public attitudes towards air pollution

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Stefan Linde[1]
Anna Wikman[1]
[1] Mid Sweden University

Introduction: By creating a better understanding of the nature of environmental problems and a more transparent public policy process, the digitisation of environmental threats offers a promising approach for increasing public acceptance and support for environmental policy. However, the extent to which the distribution of environmental data is effective in transforming public sentiment is uncertain, and there are ample reasons suggesting that public attitudes are difficult to sway simply by providing more information.

To further understanding on these issues, this project will investigate how the digitisation of air quality monitoring in Östersund - including the use of monitoring stations and the digital platforms reporting this information - influences public perceptions of air pollution risks and support for policy solutions. For several years, air quality in Östersund has posed a persistent health and equity challenge, with particulate matter (PM_{10}) levels frequently exceeding EU limits. Municipal efforts to reduce car traffic and promote walking, cycling, and public transport have encountered public resistance, illustrating that policy success depends on citizen acceptance and perceived legitimacy. Ongoing debates about whether air quality is truly as poor as measured further complicate these efforts. Östersund thus offers an interesting case illustrating the challenges of employing environmental data.

Methods: Beginning in early 2026, the research team will conduct a series of citizen focus group to explore how residents perceive air quality, interpret environmental information they receive, and view municipal mitigation measures. In parallel, handheld air-quality meters will be deployed to map pollutant levels across the municipality, targeting both routinely monitored locations and high-risk areas with limited data, such as schools and playgrounds. By geocoding and integrating these data streams, the project will connect objective air quality data with public risk perceptions and policy attitudes.

Results: This approach aims to reveal how digital governance tools can shape citizen attitudes and support municipal efforts to legitimise environmental policies.

Conclusions: Ultimately, the findings will both inform Östersund's air quality strategy, but also contribute more broadly to debates on the digitisation of nature and its democratic implications.

The politics of data in timber traceability and trade: perspectives from Brazil and DRC

17. The environment in times of AI hype: Interrogating digitisation in and for environmental governance, policy, and its constitutive processes

Caroline SS Franca[1]
Alizée Ville[2], Martin Persson[1]
[1] Division of Physical Resource Theory, Department of Space, Earth and Environment, Chalmers University of Technology, Sweden.
[2] Department of Forest Science, University of Helsinki, Finland

Introduction: Reliable data is often considered a cornerstone of "good forest governance", particularly in efforts to curb tropical deforestation and forest degradation. Digitisation and datafication processes are frequently expected to enhance transparency, accountability, and the capacity of institutions to monitor and manage forest resources. However, substantial discrepancies persist in timber production and trade statistics, especially in tropical producing countries highlighting the complex relationship between data, politics, and governance. The making of data – their collection, representation, availability and interpretation – are not merely technical and apolitical procedures but are often related to interests within the policy processes they aim to inform.

Methods: This paper investigates how the presence or absence of timber-related data – including timber origin traceability in Brazil and timber export statistics in the Democratic Republic of Congo – reflect actors' aspirations or resistance within policy implementation processes. We assess how legal frameworks define data availability and transparency requirements and compare these mandates with the accessibility of official data sources. We complement this assessment with key informant interviews to further gather informed perspectives on underlying reasons. Findings contrast trajectories of digital governance improvement and backsliding that are discussed in light of shifting political arenas.

Results: By examining these cases through the lens of digitization and datafication – the making of data in a digital age – we explore how digital infrastructures shape knowledge practices, influence environmental governance, and mediate the negotiation of environmental concerns. Our findings highlight trajectories of both improvement and backsliding in forest data systems, discussing implications for future timber data systems (e.g. EUDR) illustrating the promises and pitfalls of relying on digitised information for environmental governance in politically complex contexts.

Conclusions: The making of data across timber supply chains is not merely an apolitical process. Perspectives on how this process is shaped should help inform policy making and implementation that is more context-aware.

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Within the environmental social sciences, there have been few gaps wider than that between scholars claiming environmental harms can be decoupled from economic growth, and scholars who say growth cannot be sustainable. The former are more optimistic about the potential for new policies and green technologies to address contemporary environmental problems. The latter argue, in contrast, that true sustainability will require more profound social transformations, such as the kinds of economic downscaling captured under the framework of "degrowth".

Can the gap between decoupling and degrowth be bridged? Our influence as scholars on policy and public debates is likely to be greater, if we can build more consensus. In this workshop, we therefore invite papers interrogating decoupling and degrowth, providing constructive new arguments or evidence in support of either view, and/or proposing some form of reconciliation. One promising direction for reconciliation could be the identification of specific conditions under which decoupling is—and is not—possible. Insofar as decoupling is achievable through effective policymaking, making it a political outcome, public attitudes and beliefs about the feasibility and desirability of decoupling versus degrowth become central. Given the substantial power they possess, the positions and preferences of polluting firms and industries may also be critical, and worth careful consideration from scholars of both decoupling and degrowth.

Fully drafted manuscripts that grapple with any of these issues and questions are welcome, including but not limited to:

- Quantitative or qualitative analyses of conditions under which decoupling of environmental harms (including but not only greenhouse gas emissions) has or has not been achieved, at spatial scales from the local to the global.
- Policies, institutions, or strategies that may be effective for decoupling, or that are not as effective or promising as scholars or advocates have suggested.
- Attitudinal research about public views of decoupling and degrowth, including people's beliefs about economy-environment relationships and the costs of environmental protection versus the costs of inaction.
- Analyses of the limits of what green technologies can do, given their own resource demands or other environmental impacts (e.g., material throughput).
- New syntheses of key literatures in decoupling and degrowth, and new theoretical or conceptual arguments about promising directions for future research.

Convenors
Malcolm Fairbrother, Department of Sociology, Uppsala University, Sweden
Katya Rhodes, Public Administration, University of Victoria, Canada
Aya Kachi, Faculty of Business and Economics, University of Basel, Switzerland

A middle-range theory of climate action: convergent constraints- divergent policies in renewable energy development in Chile and Morocco

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Carolina Londono- Escudero[1]
[1] Sociology Department, Uppsala University

Introduction: This paper examines why Chile and Morocco, both highly dependent on imported energy and with minimal fossil fuel reserves, have become regional leaders in climate action. The main argument is that persistent import dependence and repeated energy shocks created national concerns about the reliability and stability of energy supplies. Governments in both countries interpreted these disruptions as forms of energy insecurity. These concerns gained traction in policy debates and supported the early adoption of renewable energy strategies as a way to reduce exposure to external markets. However, the policy pathways that emerged in both countries diverged sharply, reflecting differences in each country's political economy and in the role assigned to the state in shaping energy transitions.

Methods: The analysis draws on historical energy data, policy documents, media sources, and interviews carried out in both countries. These materials show that long-term import dependence created fiscal pressures, exposed national economies to fluctuations in international prices, and heightened the risks associated with external supply disruptions. In Chile, the interruptions of gas imports from Argentina, together with periods of drought that reduced hydropower generation, revealed the limits of relying on external and climate-sensitive sources for electricity production. In Morocco, episodes of high oil prices and declining hydropower output placed stress on public finances and intensified discussions about the country's exposure to external energy markets.

Results: Although Chile and Morocco faced similar convergent pressures, they adopted different institutional responses. Chile relied on a liberal and enabling state that created regulatory frameworks and market incentives for private investment in renewable energy. Morocco followed an approach in which public authorities coordinated planning, financing, and project implementation in close collaboration with international organizations.

Conclusions: These contrasting pathways illustrate how the political economy and the state organization shape the translation of a structural vulnerability, i.e, lack of energy sources, into climate policy. Theoretically, I rely on varieties of capitalism to explain how contrasting political-economic institutions lead states to pursue different strategies for renewable energy development.

Climate Delay Discourses and Public Beliefs About the Economy–Environment Relationship in the United States

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Joakim Kulin[1]
Ingemar Sevä[1], Ekaterina Rhodes[2]
[1] Department of Sociology, Umeå University
[2] School of Public Administration, University of Victoria

Introduction: Public beliefs about the relationship between environmental protection and economic prosperity are central to how societies will confront the climate crisis. Whether people see economic prosperity as compatible with environmental protection or as something that must be curtailed to enable effective climate action shapes how they envision what kinds of climate policies are necessary or appropriate, thereby guiding judgments about whether climate solutions should prioritize technological innovation, market-based policy instruments that shape incentive structures, stricter regulation, economic restructuring, or reductions in consumption. Meanwhile, fossil fuel interests have long sought to sway public opinion away from climate action—initially through outright climate denial and, as overwhelming evidence accumulated, increasingly through climate delay discourses that acknowledge climate change while offering arguments for postponing or weakening mitigation efforts. Despite the growing prominence of climate delay discourses in public climate debates, little empirical work has examined how these narratives shape public beliefs about whether economic growth can be decoupled from environmental harm (decoupling) or whether curbing economic growth (degrowth) is necessary. This study addresses this gap by investigating how agreement with climate delay discourses relates to environment–economy beliefs in the United States.

Methods: We use U.S. public opinion data collected in 2024. Planned analyses include multivariate regression models estimating associations between agreement with different categories of climate delay arguments (latent variables) and beliefs about decoupling and degrowth, controlling for sociodemographic and political ideology.

Results: Drawing on theoretical expectations, we hypothesize that different types of climate delay discourses will relate distinctly to environment–economy beliefs. For instance, delay arguments that emphasize future innovation and technological fixes are expected to correspond with stronger decoupling beliefs, as they assume economic growth can continue through technological advancement. In contrast, delay arguments highlighting economic burdens, trade-offs, or constraints on collective action may relate more strongly to degrowth beliefs, given their emphasis on limits inherent to continued economic expansion.

Conclusions: We expect the study to clarify how distinct delay narratives map onto competing understandings of the economy–environment relationship, shedding light on how delay-aligned beliefs structure public support for competing visions of climate action.

Climate Policy versus Economic Growth: Opinions of Ecological and Environmental Economists

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Margherita Bellanca[1]
Jeroen van den Bergh[1]
[1] Institute of Environmental Science and Technology, Autonomous University of Barcelona

Introduction: Environmental Economics (EnvEc) and Ecological Economics (EcoEc) both study the relationship between the economy and the environment yet differ substantially in theoretical premises and policy orientations. EnvEc embeds environmental issues within mainstream economic analysis, emphasising efficiency, market failures, and the potential for green growth. EcoEc, by contrast, draws on ecological and thermodynamic principles, stressing biophysical limits, resilience, and strong sustainability. These differences are especially visible in the long-run debate on whether economic growth is compatible with environmental sustainability, often framed around the concepts of green growth, agrowth, and degrowth. While central to each field's identity, it remains unclear whether such theoretical positions translate into diverging climate and social policy preferences. This study examines whether disagreements about economic growth align with differences in climate-policy views among researchers in the two traditions, giving attention to preferences at the level of specific mainstream and heterodox instruments and strategies.

Methods: We conduct a survey targeting authors who have published in journals associated with EnvEc and EcoEc. The questionnaire has two parts. The first elicits preferences regarding climate policy instruments, including market-based tools, regulatory measures, technology-oriented policies, and distributional aspects of climate action. The second assesses beliefs about economic growth, distinguishing between items capturing perceived desirability (e.g., whether growth contributes to societal wellbeing) and perceived feasibility (e.g., whether decoupling is occurring or can occur at the required scale). The survey was launched on 18 November 2025 and sent to 9,779 email addresses. Data collection will conclude on 20 February 2026. Planned analyses include descriptive comparisons between fields, correlations between growth-related beliefs and policy preferences, and assessments of internal consensus or heterogeneity within each group.

Results: Given the theoretical differences, we expect clear contrasts between EnvEc and EcoEc respondents on growth-related questions. Whether these extend to concrete climate policy instruments remains an empirical question. The survey allows comparisons both across and within the two research communities.

Conclusions: The results are expected to identify policy areas where views converge across fields as well as areas where divergence persists. This can clarify the structure of disagreements within the broader community and indicate where further conceptual work or dialogue is useful.

Decoupling what counts: An augmented IPAT framework for beyond-GDP metrics

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Margherita Bellanca[1]
Lewis Carl King[1], Jeroen van den Bergh[1]
[1] Universitat Autònoma de Barcelona

Introduction: Debate persists over whether absolute decoupling can deliver green growth or economic downscaling is needed to stay within planetary boundaries. Empirical studies assess decoupling relative to GDP through the IPAT framework, translating into the Kaya identity in the context of climate change. However, beyond-GDP perspectives argue that wellbeing rather than GDP should be the societal goal motivating decoupling. GDP is at best a weak proxy for wellbeing, and this relationship has weakened over time, especially in high-income countries. To this end, we elaborate a wellbeing-centred approach to analyse decoupling trends.

Methods: We extend the traditional IPAT framework by disaggregating "affluence" into two components: "welfare" and GDP intensity of wellbeing. This yields a novel "IPWET" decomposition. Applying IPWET to climate change gives an augmented-Kaya identity to decompose the drivers of CO_2 emissions. We apply an additive Logarithmic Mean Divisia Index on a global panel of 150 countries (1990–2023), using national data on energy consumption, CO_2 emissions, GDP and population. We test our approach for distinct wellbeing indicators, namely the Social Progress Index, Life Satisfaction and Human Development Index.

Results: Preliminary findings indicate that while absolute decoupling of emissions from GDP is becoming more common, absolute decoupling from wellbeing remains rare. Technological improvements in energy and carbon intensity reduce emissions, but these are often offset by continued GDP growth. At the same time, wellbeing gains associated with economic activity have started to diminish over the past decade. As a result, more economic activity is required to generate a unit of wellbeing, which has started to increase upward pressure on emissions. Considerable heterogeneity in patterns of decoupling is expected to be shown in the results across regions and development levels.

Conclusions: Our paper distinguishes development pathways using a three-dimensional relationship between wellbeing, economic growth and emissions. Growth is "prosperous" when wellbeing increases and "detrimental" when it declines; and growth is "green" when emissions fall and "brown" when they rise. Periods of GDP decline can also be classified as prosperous/detrimental and green/brown. This provides a clear empirical basis for identifying where green-growth strategies are plausible and beneficial, and where arguments for economic downscaling gain support.

Growth vs. green: The role of economy-climate trade-offs in climate policy support in Chile and Mexico

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Katya Rhodes[1]
Chris Bell[1]
[1] University of Victoria

Introduction: Public support for climate action in Latin America is among the world's highest, with roughly 80–90% of citizens favoring stronger government measures to reduce greenhouse gas (GHG) emissions. Despite this, emissions in the region continue to rise as many governments expand fossil fuel production for economic growth reasons. This contradiction persists even as 70% of Latin Americans report direct economic or livelihood impacts from climate change, and more than half anticipate relocation due to its effects. This underscores a widening gap between public demand for climate action and lacking government leadership to introduce climate policy. We analyze Chile and Mexico as contrasting national cases to understand this gap. Since the 2015 Paris Agreement, both countries have struggled to decouple emissions from economic growth. Chile, however, has recently started to prioritize renewable energy and fossil fuel phase-outs, while Mexico continues to favor oil and gas expansion.

Methods: We collected nationally representative survey data from Chile (n=1,000) and Mexico (n=1,001) in 2023. Drawing from ecological economics theories of decoupling, agrowth, degrowth, and growth-at-all-costs, our framework explores how citizens perceive trade-offs between GDP growth and emissions reductions, and how this trade-off thinking influences support for different types of climate policies. We control for perceptions of government corruption, policy effectiveness, and socioeconomic factors.

Results: We find remarkably low opposition (2–18%) to both compulsory and voluntary climate policies, suggesting strong regional consensus for ambitious climate action. Chileans express higher overall support across all policies except business subsidies. The most resistance appears around compulsory policies like carbon taxes and fossil fuel bans. Decoupling emissions from growth is preferred by about 50% of respondents in both countries, followed by agrowth (24–27%), growth-at-all-costs (14–18%), and degrowth (8–10%). Support is strongest among those endorsing agrowth. Optimism regarding future national performance in cutting emissions and sustaining economic progress significantly predicts support for compulsory policies.

Conclusions: This study provides the first assessment of climate policy support framed through emissions-economy trade-offs in Latin America. Results indicate overwhelming public support for climate policy of all types. Presenting policies as economically protective—emphasizing health, employment, and resilience benefits—could enhance sustained support and push governments toward greater climate action.

Public beliefs about economic growth and emissions reduction: Ideological divides and their consequences for climate policy attitudes

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Ingemar Sevä[1]
Joakim Kulin[1]
[1] Department of Sociology, Umeå University

Introduction: Public support for ambitious climate policy remains polarized in many Western countries, with ideological divisions shaping how individuals evaluate both the severity of climate change and the feasibility of proposed solutions. While previous public opinion research has focused largely on normative trade-offs between economic growth and climate change mitigation, less is known about the role of *descriptive* beliefs, that is, how people perceive the nature of the growth-emissions relationship. This paper examines public beliefs about the growth-emissions relationship, contrasting views aligned with "degrowth". "decoupling" and "green growth" narratives. Specifically, we investigate (1) how descriptive beliefs about the growth-emissions relationship vary across the ideological spectrum, and (2) how the interaction of beliefs and ideological orientations shape attitudes toward climate policy as well as (3) the extent to which certain beliefs can account for ideological variation in policy support.

Methods: We use linear regression analysis as well as moderation and mediation analysis on recent survey data from Australia and the United Kingdom.

Results: The main results show that "degrowth" beliefs, contrary to expectations, are more common among individuals with economic right-wing orientations in both countries. Regarding how the interaction between beliefs and ideology shape climate policy attitudes, the results are somewhat mixed. In the UK, beliefs matter more for climate policy support among individuals with right-wing orientations, whereas among those with left-wing orientations, beliefs do not matter for support. The results of a mediation analysis indicate that the comparatively more widespread occurrence of "degrowth" beliefs among individuals with right-wing orientations can account only partly for their low levels of climate policy support.

Conclusions: The study contributes to previous research by demonstrating how descriptive beliefs about economic-emissions linkages vary across the ideological spectrum and shape climate policy attitudes in distinct ways. Based on the findings, we conclude that the interaction of beliefs and ideology affect climate policy support but that beliefs only partly account for ideological variation in policy support.

Smarter about Exponentials, Smarter about Growth? Numeracy, Techno-Optimism, and Green Growth Support

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Aitor Marcos[1, 2], Jenna Blyler[2, 3], Joseph Árvai[2, 3]
[1] Faculty of Economics and Business, University of the Basque Country UPV/EHU, Bilbao, Spain
[2] Wrigley Institute for Environment and Sustainability, University of Southern California, Los Angeles, CA, USA
[3] Department of Psychology, University of Southern California, Los Angeles, CA, USA

Introduction: From a techno-optimistic perspective, continued economic growth is compatible with environmental sustainability. While some evidence suggests relative decoupling (slower environmental impact growth than GDP growth) is possible, absolute decoupling at the speed required for achieving climate targets remains unproven. Despite this lack of evidence, the idea of "green growth" remains popular. This study proposes that if people better understood exponential trends, they might judge the feasibility of green growth differently. We tested whether (H1) exponential numeracy (ability to understand exponential trends) reduces support for green growth; (H2) exponential-trend information is more effective among individuals with high exponential numeracy; and (H3) techno-optimism moderates the relationship between exponential numeracy and views on green growth.
Methods: We assigned 2,039 U.S. participants randomly to one control group and four information conditions about exponential trends in: (i) global GDP, (ii) GDP and carbon footprint, (iii) GDP and material footprint, and (iv) GDP, carbon footprint and material footprint. The dependent variable was measured with the 5-item "Growth-vs-Environment" scale. Techno-optimism was measured with a 3-item scale, and exponential numeracy with three problems requiring understanding of exponential growth.
Results: Tentative results suggest that higher exponential numeracy is associated with lower support for green growth (H1 supported). However, exposure to exponential-trend information did not interact with exponential numeracy to reduce growth prioritization (H2 rejected). Instead, there was a significant interaction between exponential numeracy and techno-optimism. This offers only partial support for H3 because part of the interaction was unexpected: among techno-optimists, higher exponential numeracy predicted greater support for green growth, whereas among techno-pessimists, higher exponential numeracy predicted lower growth prioritization. These tentative results remained robust when controlling for biospheric values, anthropocentrism, ideology, education, and other demographics.
Conclusions: Tentatively, the data support the notion that understanding exponential growth is generally linked to deprioritizing economic growth. However, merely providing exponential-trend information does not shift highly numerate individuals toward degrowth. Instead, these tentative findings indicate that exponential numeracy may polarize attitudes depending on prior techno-optimism: it seems to amplify growth-friendly orientations among techno-optimists while reinforcing growth skepticism among techno-pessimists, complicating the assumption that improved understanding of exponential growth will straightforwardly undermine faith in green growth.

The Political Feasibility of Degrowth versus Green Growth

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Filippa Werner Sellbjer[1]
[1] University of Gothenburg, Department of Philosophy, Linguistics and Theory of Science, Sweden.

Introduction: In my paper, I examine the political feasibility of degrowth and green growth approaches to addressing climate change. Previous discussions on the feasibility of these approaches have primarily focused on thermodynamic constraints and historical evidence. My contribution extends this literature by assessing the political conditions for realizing either paradigm within capitalist liberal democracies. Although scholars within the degrowth perspective tend to argue for alternative models of democracy to enable degrowth, others are open to the possibility of representative capitalist democracies restructuring toward a degrowth trajectory.

Methods: Drawing on interview data (n=17, 14 conducted) with Swedish politicians at the national, regional, and municipal levels, as well as observational data (n=8) from interactions between climate advisory bodies and politicians, I argue that the prospects for politically advancing degrowth within representative democracies are limited in the short to medium term.

Results: Rather than conflicting with climate action, politicians tend to understand growth as a precondition for advancing mitigating policies. To enable a global impact, the respondents believe that Sweden needs to show less prosperous but high-emitting countries how economic growth and climate benefits can be combined to make climate action appealing. In addition, transitioning is perceived to generate growth by default through the stimulus from labor-intensive measures and large-scale investments. Importantly, across the political spectrum, the respondents perceive it as impossible to win elections with climate policy that is funded by cuts in other goods and services. The results suggest that pursuing degrowth requires alternative avenues of political influence that go beyond mainstream political parties or representative democratic institutions tout court.

Conclusions: However, dismissing these institutions in turn raises questions about how to address climate change within the necessary timeframe. I conclude by discussing the strategic considerations involved in pursuing degrowth compared to green growth in climate politics.

Towards green growth or degrowth? A comparison of forest and energy sectors in Finland

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Sami Mustikkamaa[1]
Ari Nieminen[2]
[1] University of Turku, Finland
[2] Diaconia University of Applied Sciences, Helsinki

Introduction: Tackling climate change and biodiversity loss require broad societal responses. Some argue that these responses can be combined with economic growth, whereas other call for degrowth and/or a re-thinking of the entire capitalist economic system. Yet empirical examinations on the possibilities of degrowth are lacking, and claims of green growth or decoupling are also argued to be overtly optimistic.

Methods: We approach the growth-degrowth debate by comparing two important sectors of the economy. The forest and energy sectors together constitute a substantial part of the Finnish national economy, and both have large climate and biodiversity impacts. Yet their economic logic and the politics behind them differ significantly. Our comparison of these sectors illuminates the diverse factors that affect responses these sectors give to ecological challenges. Our analytical framework includes the following factors: interest groups and their objectives, policy programmes and legislation, technology, economic development, ecological impacts, and other factors. Our study covers the years 1990-2025 and is based on policy documents, statistics and previous studies, which we will analyze by January-February 2026.

Results: Our main expectation is that responses of the Finnish forest and energy industries diverge considerably from each other due to their differing technologies, usage of natural resources, role in the national economy, and in terms of environmental impacts. These differences lead to diverging implications to the green growth-degrowth debate. We hypothesize that the energy sector is able to profit from new innovations in area of sustainable energy production, and therefore supports green growth. On the contrary, actors in the forest sector have perceived the demands of diminished loggings and increased biodiversity protection as economic threats to the sector, and has therefore been hostile to ideals of both green growth and degrowth.

Conclusions: Our results illuminate the developments in Finnish forest and energy sectors and how they relate to economic growth and the current ecological challenges. The results also indicate how the actions of important political and business actors relate to degrowth visions or green growth targets. We conclude with a discussion on the opportunities and obstacles for decoupling and/or degrowth in both sectors.

Unlearning the Emissions Trap: Why Climate Strategy Must Fit Diverse Political Economy

18. Bridging growth and sustainability? The possibilities and/or limits of decoupling

Aya Kachi[1]
[1] University of Basel

Introduction: Conventional climate policy debates often assume that emissions and economic growth are inevitably linked. This study challenges that view with empirical evidence from 132 countries.

Methods: First, I show that recent emissions reductions are not dictated by a country's income level, regime type, geography, or fossil fuel dependence. Then, using latent profile analysis (LPA), I identify five distinct political-economic profiles of countries, two of which are characterized by significant reductions in emissions intensity.

Results: One reducer profile comprises high-income, resource-scarce Western democracies that rely more on formal climate law. The other consists of fossil fuel–rich countries with initially high emissions intensity that have achieved reductions seemingly using alternative governance strategies, despite having fewer codified climate policies.

Conclusions: These results demonstrate that emissions reduction is not the exclusive domain of any one governance type or economic structure. The persistent belief in the emissions-growth link has not only fueled domestic fears that climate policy may harm economic performance but also deepened international political rifts between visible climate front-runners and fossil fuel producers, where emissions sources remain tied to national income. To overcome the gridlock in the current multilateral effort, future research should develop new theories and empirical frameworks to identify decarbonization strategies that build on the diverse political-economic foundations and governance capabilities of different country contexts.

19. Climate transition from below: Collective civic action for a fair climate transition

Climate policies perceived as unfair might trigger resistance, leading to polarization, conflict, or democratic backlash (Patterson 2023, Lindgren et al. 2023). Lindvall (2023) found that inclusive decision-making and local compensation can help shape acceptance of wind power establishments. Nilsson et al. (2024) identified four pillars constituting social sustainability: equity, wellbeing, participation and influence, and social capital. Hence, both distributional and procedural justice are important for achieving a socially sustainable climate transition perceived to be legitimate. Citizen-led climate initiatives and civil society engagement aiming for a fair transition can create spaces for active participation and deliberation, considering both procedural and distributional justice.

Within the research programme FAIRTRANS (fairtrans.nu), the conceptualization of Community Climate Commons (CCCs) - community-based commons that form the basis for mobilization and collective action against ongoing climate change - illustrates how local mobilization and collective resources can promote fair climate transition (Colding et al. 2022, Nässén et al. 2025). These bottom-up based initiatives complement today's more top-down strategies (macro policies and technology) for climate mitigation and adaptation. Such citizen-led initiatives are based on a social-ecological perspective, emphasizing both social and ecological sustainability.

Energy communities (ECs) are examples of this, owned and managed collectively. In the EU ca. 9,000 energy ECs involve 2 million residents. Since 2024 ECs are part of the EU Energy Efficiency Directive (EU 2023, points 117, 118). Motives include advancing energy efficiency, fighting energy poverty, and offering consumers a stake in producing, consuming or sharing energy (EU 2019/944).

The aim of this workshop is to focus on what role citizen-led climate initiatives and collective civil society action can play in promoting a fair climate transition.

Overarching questions are:

- What role does local collective civic action play in an effective and fair climate transition?
- How do initiatives such as ECs shape discourse in the transition to renewable energy?

We welcome fully drafted papers that explore bottom-up and locally grounded initiatives and collective action for fair climate transition.

Convenors
Stefan Sjöberg, Social Work, University of Gävle, Sweden
Stephan Barthel, Environmental Science, University of Gävle, Sweden
Nessica Nässén, Social Work, University of Gävle, Sweden

Between citizens and government–Can citizen-led climate intermediaries steer discourse to prevent climate policy stall?

19. Climate transition from below: Collective civic action for a fair climate transition

Alexander Nordt[1]
[1] Stockholm University, Department of Political Science

Introduction: In post-Paris Agreement climate governance, new forms of participatory governance have emerged to mobilise citizen participation in climate policy process. Yet organisations representing citizen coalitions in multilevel climate policy–defined in this paper as citizen-led climate intermediaries–have received limited attention in climate governance scholarship. Hence this paper addresses recent calls for conceptual foregrounding of intermediary organisations in climate governance literature. Here the function of policy advocacy by citizen-led climate intermediaries at national and subnational levels deserves further scrutiny–especially in a context of geopolitical turbulence, marked by heightened climate scepticism and policy backlash, that can fragment multilateral climate cooperation and rollback national commitments to climate policy.

Methods: Case analysis comprising grey literature and interviews examines the influence of bottom-up policy advocacy by GermanZero, a citizen-led climate intermediary, on formal climate policy in Germany.

Results: Drawing on the discourse coalitions framework from policy studies to guide case analysis reveals a citizen coalition, represented by GermanZero, competing at national and subnational levels for discursive influence and the institutionalisation of a new discourse on climate policy.

Conclusions: In doing so, this paper offers novel empirical insight into the advocacy function of citizen-led climate intermediaries that can address justice and legitimacy concerns in multilevel climate policy process.

Deliberating Collective Energy Solutions in Multi-Owned Apartment Buildings

19. Climate transition from below: Collective civic action for a fair climate transition

Eva Richter[1]
Nicol Staňková[1]
[1] Charles University, Faculty of Arts

Introduction: While academic and policy discourse often emphasizes energy communities grounded in shared values or voluntary association, energy sharing within homeowners' associations (HOAs) remains an understudied and underestimated collective energy action. HOAs are already existing, compulsory collectivities in which residents must jointly decide on investments in their shared built environment - including adoption of photovoltaic (PV) systems and thus effectively the creation of an energy community. This study investigates how deliberation occurs (or fails to occur) during decision-making on photovoltaic adoption and energy sharing in multi-owned apartment buildings in the Czech Republic, offering insights into how everyday, non-voluntary collectivities can contribute to fair and effective climate transitions.

Methods: Using a multi-site case study of ten small to medium-sized apartment buildings (up to 35 units), we combine observational data from HOA meetings with semi-structured interviews and surveys to examine HOAs as platforms for grassroots deliberation and to test a deliberation-support framework consisting of informational materials on PV options and facilitation guidance for chairs. In order to compare the individual meetings, we construct deliberation profiles based on observer's evaluation of good deliberation criteria derived from deliberative democracy literature.

Results: Preliminary findings suggest that three ideal-typical discussion models appear salient: (1) a *deliberative* model marked by inclusive reasoning and mutual recognition; (2) an *impositional* model, where chairs or dominant actors push predetermined solutions; and (3) a *breakdown* model, where discussion collapses due to conflict, disengagement, or unclear procedures. Beyond the presence or absence of deliberation, we assess deliberative quality and outcomes in terms of owner satisfaction, perceived fairness, consensus formation, attitude change, and informed decision-making. Findings indicate that external deliberative frameworks are only adopted when they align with existing discussion practices within owners' associations, highlighting the significance of existing deliberation skills and capacities within the community.

Conclusions: Our analysis highlights the central role of HOA leadership styles in shaping deliberative quality and decision legitimacy. Recognizing HOAs as a widespread yet neglected locus of collective energy governance broadens the understanding of bottom-up climate initiatives. Supporting chairs' facilitation capacities and structuring HOA meetings as deliberative spaces can significantly enhance local collective action for a fair climate transition.

Doing Environmental Justice through Climate Assemblies? Lessons learned from two case studies in Austria and Italy

19. Climate transition from below: Collective civic action for a fair climate transition

Francesca Rosignoli[1]
[1] Eurac Research

Introduction: This article explores the potential of climate assemblies as instruments for advancing environmental justice, focusing on two case studies in Austria and Italy: the Consiglio dei cittadini per il Clima/ Klimabürgerrat in South Tyrol (Italy) and the Bürgerrat Klima-Zukunft in Vorarlberg (Austria).

Methods: Drawing on qualitative data from 23 semi-structured interviews and policy documents, the study examines how these assemblies address issues of inclusion, equity, and democratic legitimacy in climate governance. More specifically, the article examines whether the internal and external dimensions of the selected climate assemblies align with procedural environmental justice.

Results: The main findings suggest that, although citizens' assemblies are widely regarded as promising tools for fostering democratic participation and civic engagement in climate governance, they still face challenges in adequately representing the communities most affected by environmental issues and in ensuring the practical impact of their policy proposals. To strengthen their contribution to environmental justice, it may be useful to investigate alternative selection methods – especially to address the issue of self-selection – and to develop more robust strategies for translating assembly recommendations into actionable policies.

Conclusions: The analysis of the strengths and weaknesses of these initiatives may help policymakers optimize the use of this innovative participatory tool for pursuing environmental justice-oriented policies.

Ecosocial Community Work Promoting Community Climate Commons

19. Climate transition from below: Collective civic action for a fair climate transition

Stefan Sjöberg[1]
Elvi Chang[1], Nessica Nässén[1]
[1] Department of social work, criminology and public health, University of Gävle

Introduction: The article addresses two intertwined global crises: ecological climate change and increasing social inequality. It introduces Ecosocial Community Work (ECW) as a framework combining ecological and community-based approaches within social work to promote Community Climate Commons (CCCs)— community-based commons that serve as basis for mobilization and collective action against ongoing climate change. Community work, a pillar of social work internationally, involves mobilizing local actors through dialogue, trust-building, and collaborative networks. It encompasses three main forms: social planning (top-down), local development (collaborative), and social mobilization (bottom-up).

Methods: The empirical data includes a systematic literature review as well as semi-structured interviews and focus group discussions with members of CCCs as well as social workers and other professionals.

Results: The results show that ECW enhances these practices by embedding environmental perspectives, emphasizing place-based efforts, and promoting collective empowerment. CCCs then represent bottom-up initiatives complementing formal top-down climate policies. They operate through informal structures grounded in trust and shared norms, offering platforms for knowledge exchange, participatory governance, and resilience building. Examples include energy cooperatives, urban green commons, and climate assemblies. CCCs are particularly vital for marginalized communities disproportionately affected by climate impacts. Success depends on internal factors—democratic organization, small group sizes, and flexible, collectively agreed rules—and external support aligned with local values.

Conclusions: Community workers play a key role as mediators, ensuring respectful collaboration between CCCs and formal institutions. Ultimately, ECW and CCCs challenge predominant economic paradigms by offering community-based solutions as alternative to private and state sectors, prioritizing collectivism over individualism, fostering social inclusion, ecological stewardship, and democratic engagement. Together, they offer a holistic, participatory approach to addressing climate and social crises, advancing socially just and ecologically sustainable development.

ENERGY JUSTICE IN PRACTICE: HOW ENERGY COACHES MEDIATE DATA AND PUBLIC VALUES

19. Climate transition from below: Collective civic action for a fair climate transition

Kyra De Korte[1, 2], Berber Pas[2, 3], Bernard van Gastel[4], Sietske Veenman[1], Arnoud Lagendijk[1], Maria Kaufmann[1]

[1] Department of Geography, Planning and Environment, Institute for Management Research

[2] Interdisciplinary Hub for Digitalization and Society, Radboud University, Nijmegen, the Netherlands

[3] Institute for Management Research, School of Management, Radboud University, Nijmegen, the Netherlands

[4] Institute for Computing and Information Sciences Radboud University Nijmegen, the Netherlands

Introduction: Since the 2015 Paris Agreement, energy justice has gained traction globally, with courts increasingly recognizing human rights in energy-related cases (Heffron, 2022). While energy justice is addressed in legal and global frameworks, its local operationalization remains underexplored. In the Netherlands, energy coaches (ECs) support households in making sustainable choices, acting as intermediaries between policy and practice. Yet their contribution to energy justice, particularly regarding affordability, autonomy, and sustainability, lacks structured empirical assessment (Kivimaa et al., 2019; Radtke, 2025).

Methods: This study draws on 20 in-depth interviews with Dutch ECs conducted in summer 2025. The interviews explored their everyday practices, value orientations, and experiences with data-driven energy technologies (DDET) in household contexts. DDET, such as smart meters and digital platforms, embed normative assumptions that shape energy production, distribution, and consumption (Lobaccaro et al., 2016; Lund et al., 2017), while introducing concerns around cybersecurity, control, and fairness (Niet et al., 2022). Acceptance depends on users' trust, perceived risks and benefits, and contextual factors (Boudet, 2019; Emmerich et al., 2020).

Results: ECs differ in their approach to fairness and engagement with technology. Some focus on procedural justice, providing impartial information to all households and leaving technology use largely up to residents, often after a single visit. Others prioritize supporting lower-income households, guiding them to adjust energy use to save money, actively teaching technology use and returning for multiple visits. These approaches reflect different balances between fairness, inclusion, and practical outcomes. From these patterns, four archetypes emerge: the Ecological Optimizer, the Welfare Facilitator, the Autonomous Usage Trainer, and the Technical Risk Manager. Each archetype foregrounds distinct public values that shape how and why ECs use DDET and where they locate solutions within the energy transition.

Conclusions: Preliminary findings suggest that energy coaches make different trade-offs based on the public values they pursue. These choices affect how DDET are implemented and how households are supported in the energy transition. There is no "preferred" archetype, but it is important to be aware of these differences. Municipalities can use this insight to consider where support or guidance is needed, ensuring interventions align with local priorities and household needs.

Fostering Democracy and Participation in Energy Communities: Pathways and Challenges in the European Energy Transition

19. Climate transition from below: Collective civic action for a fair climate transition

Jana Plöchl[1]
Marina Frolova[2], Nona Galvany Gómez[3], Michael Klingler[1], Joana Mundó Olivé[3], Juan Carlos Osorio-Aravena[2], Belen Pérez-Pérez[4], Priscila Rivera[3], Alessandro Sciullo[5], Patrick Scherhaufer[1]
[1] BOKU University, Department of Economics and Social Sciences, Austria
[2] University of Granada, Department of Regional Geographic Analysis and Physical Geography, Spain
[3] Ecoserveis, Spain
[4] University of Granada, Department of Human Geography, Spain
[5] University of Turin, Department of Cultures, Politics and Society, Italy

Introduction: This article explores how energy communities across Europe are fostering democratic participation and citizen engagement in the energy transition. Studying three community energy projects in Austria, Italy and Spain, we analyze the key strategies and challenges shaping local involvement in sustainable energy initiatives. Our findings emphasize the critical role of bottom-up initiatives, institutional support by local governments, and diverse narratives around the benefits of community energy to ensure broad participation.

Methods: The study is based on the theoretical framework of the Multi-Level Perspective and conceptualizes energy communities as niche initiatives attempting to influence the regime-level shift to a more sustainable and democratic energy system. The empirical research was undertaken from fall 2024 to summer 2025 and encompassed triangulation via several social-science methods: Qualitative, semi-structured interviews with members of the energy communities and other key stakeholders (5-9 per case study), textual analysis of relevant documents based on institutional ethnography, and a participatory stakeholder analysis and social network mapping.

Results: The empirical findings reveal that successful energy communities often strive to actively include a wide range of participants, such as rural residents and marginalized groups, highlighting how collective action can break down barriers to participation in the energy transition. In addition, pre-existing social networks and supportive local governance emerge as central enabling conditions for successful initiatives. Furthermore, the research demonstrates that community energy initiatives can have a broad range of benefits and effects that contribute to the sustainable energy transition, far beyond a simple expansion of renewable energy production. Energy communities can strengthen social cohesion and empower disadvantaged groups by providing financial benefits, increasing energy literacy and building citizens' democratic capacities.

Conclusions: These insights provide actionable guidance for policymakers, practitioners, and researchers seeking to build more inclusive, democratic, and sustainable energy systems.

From Commitment to Capacity: Social Work, Civil Society, and the Conditions for Fair Climate Transition in Sweden and Germany

19. Climate transition from below: Collective civic action for a fair climate transition

Angelika Kaffrell-Lindahl[1]
Barbara Schramkowski[2]
[1] Mid Sweden University, Dep. Of Pedagogics, Psychology and Social Work, Sweden
[2] Hochschule Baden-Württemberg, Fakultät Sozialwesen (Faculty of Social Work), Germany

Introduction: The climate crisis is a crisis of social inequality, disproportionately affecting vulnerable groups. While focus on social injustice highlights emotions such as climate anxiety, it is important to identify both structural barriers hindering ecosocial transformation and examples of successful change that encourage professionals to follow these pathways. In Sweden and Germany, welfare regimes and social legislation shape how social workers and civil society actors can engage in climate-related collective action. Germany's pluralised welfare landscape embeds civil society organisations as co-producers of welfare; their contributions are essential for achieving climate neutrality, particularly in energy, mobility, and catering. In contrast, Sweden's statist and increasingly managerialised municipal services restrict professional autonomy and weaken spaces for structural, community-oriented practice and ecosocial initiatives. These differences are crucial for understanding how bottom-up climate transition processes can emerge and be sustained.

Methods: The German study is based on qualitative interviews with sixteen managers from nine child and youth welfare institutions recommended as exemplary in environmental sustainability. The Swedish study draws on qualitative interviews with twelve municipal social workers employed in a climate-certified municipality.

Results: The German study shows that social work organisations ground their climate engagement in their mission to promote social justice. It highlights multiple benefits of ecological transformation for human and planetary health and underscores the importance of a transformative managerial attitude. Findings reveal how small initial steps—such as a sustainability competition—can trigger substantial organisational change. The Swedish study demonstrates how global ecosocial imperatives confront a fragmented, individualised practice field. Social workers express strong personal commitment to climate justice but lack organisational mandates, reflexive spaces, and support for community-based engagement. Their capacity to participate in or facilitate Community Climate Commons is limited not by motivation but by welfare-state design, NPM-driven constraints, and the erosion of community work.

Conclusions: Together, the studies illuminate how differing welfare-state structures shape the potential for citizen-led initiatives in Sweden and Germany. The conclusions emphasise both the value of successful institutional examples in strengthening local collective action and the need for reforms enabeling municipalities to collaborate with civil society and create reflexive spaces where ecosocial responsibility can be translated into professional action.

Justice and Finance in Community Energy Transitions in Canada

19. Climate transition from below: Collective civic action for a fair climate transition

Pavel Soriano-Hernandez[1, 2, 3]
Basma Majerbi[2, 3, 4], Samantha Treacy[2, 3]
[1] Department of Geography, University of Victoria
[2] Accelerating Community Energy Transformation, University of Victoria
[3] Impact Investing Hub, University of Victoria
[4] Gustavson School of Business, University of Victoria

Introduction: Community energy initiatives (CEIs) play an essential role in advancing sustainable energy transitions, particularly in remote, rural and Indigenous communities. These communities not only host renewable energy infrastructure but often lead project development, positioning them as key actors in promoting inclusive economic development and a just transition. CEIs take diverse forms, including Indigenous enterprises, cooperatives, community-based entities and municipal partnerships, yet they face financial and regulatory barriers that constrain their aims. This study examines how such initiatives in Canada are funded and financed and how financial and institutional factors shape distributional and procedural justice outcomes.

Methods: This study employs Qualitative Comparative Analysis (QCA) to identify cross-case patterns while preserving the contextual richness of individual CEIs. The analysis examines how financial mechanisms, ownership models and governance arrangements interact to shape financial benefit distribution and community participation in decision-making. The dataset is being developed from a national survey documenting different attributes across multiple provinces and territories. We have compiled thirty cases for initial analysis, and a second data collection round next year aims to expand the dataset to fifty cases. Each case will be coded using predefined conditions for fuzzy-set analysis of justice outcomes.

Results: The analysis is expected to identify configurations of finance, governance and ownership that distinguish initiatives achieving deeper forms of distributional and procedural justice from those with limited or symbolic participation. Findings will clarify the financial and institutional conditions under which CEIs become an effective mechanism for supporting a fair and inclusive energy transition. By revealing how the specific conditions shape justice outcomes, the study will highlight combinations that enable meaningful participation and equitable benefit distribution.

Conclusions: While all cases meet the baseline criteria, the analysis is expected to show how different configurations of financial, governance and ownership conditions shape the degree and forms of distributional and procedural justice. This may indicate that CEIs are not inherently equitable; rather, equity depends on institutional and financial arrangements that enable meaningful participation and fair benefit distribution. Ultimately, findings will clarify the conditions required for such initiatives to reflect local priorities, leadership and agency, and contribute to a just energy transition nationally and globally.

Local Energy Communities: A Bottom-Up Approach to Resilience? A multi-disciplinary analysis of drivers in EU energy policies and academic research.

19. Climate transition from below: Collective civic action for a fair climate transition

Tilla Gwendolin Kuch[1]
Nicholas Etherden[1], Daniel Lindvall[2], Stephan Barthel[1, 3]
[1] University of Gävle, Department of Building Engineering, Energy Systems and Sustainability Science, Sweden
[2] Uppsala University, Department of Earth Sciences, Sweden
[3] Stockholm University, Stockholm Resilience Centre, Sweden

Introduction: A fundamental governance shift is underway in Europe from centralised energy systems to decentralised models with distributed generation and more active users. This shift marks a change in the energy system to engage people in transition. Energy Communities (ECs) are one concept within this movement. ECs were initially promoted in EU policy for their contribution to accelerating the energy transition, enhancing flexibility and affordability, and empowering and involving local communities. In recent years, scientific scholars have increasingly highlighted the benefits of Local Energy Systems (LES), for enhancing energy-system resilience. This paper is about exploring the links between Energy Communities (ECs), energy security and resilience.

Methods: An extended energy trilemma is presented, adding a locality dimension (centralised–decentralised) to the three dimensions of reliability, sustainability, and affordability. The paper adopts a mixed method approach, centring on systematic literature review with documentary and quantification analyses of LES and ECs and their relation to resilience within policy contexts. Through a multi-disciplinary study, the paper includes studies from social sciences as well as from the technical engineering field to assess energy resilience.

Results: Results indicate that case studies highlight three primary contexts in the literature for ECs implementation: strengthening of energy security; addressing environmental disasters; response to geopolitical influences, including a growing share of renewable energy. In the scientific literature, a security-driven role associated with Local Energy Systems is more evident than in EU policy. Stronger energy-system resilience can be achieved through a bottom-up, ecological approach that integrated the concept of ECs. This paper considers the technical as well as social and organisational mechanisms that enhances resilience. Thus, ECs have the potential to enhance resilience not only on the local level but also on system level and to broader geographical scales.

Conclusions: The paper argues that current EU energy policy associate local energy initiatives - such as ECs - primarily with affordability and sustainability, overlooking the potential to enhance resilience. This paper suggests a more strongly integration of ECs into EU policy frameworks recognising also their value for resilience.

Sense of community as a driver for circular just transition

19. Climate transition from below: Collective civic action for a fair climate transition

Hege Hofstad[1]
Gavin McCrory[1], Arild Ohren[2]
[1] NIBR, OsloMet
[2] NTNU

Introduction: Just transition has received strong attention in sustainability research and practice in general but have not yet received as sustainability's less mature policy: circular economy. A circular economy is an ideal seeking to create a cyclical, closed-loop, regenerative system in which resource input and waste, emissions and energy leakage are minimised, and redesign and reuse of the same products are prioritised (Cramer, 2022). The social aspect of this endeavour is generally lacking in the literature (Friant et al., 2020:6). Inspired by this knowledge gap, this paper explores socially just circular transition in theory and practice.

Methods: We build a theoretical framework based on Friant et al's (2020) notion of a 'circular society' where wealth, knowledge, technology and power are redistributed throughout society. Identified key aspects of a circular society are empirically explored in four local settings in the Netherlands and Norway. The empirical material consists of 74 interviews with stakeholders from civil society, local government and the business community involved in circular economy projects and circular place-based development in Utrecht, Trondheim, Asker and Oslo.

Results: When studying these concrete circular initiatives, we find that the development of a sense of community materializing as mutual social arenas and activities that help build new relations between local actors is key for developing new circular imaginaries and practices.

Conclusions: We argue that applying a just transition lens at the circular economy field contributes new knowledge, not only to the circular economy literature per se but also more broadly to the research agenda of just transition. Circular economy's deep-seated materiality renders visible that engaging people in transitions require something to assemble around. Circular economy in its deepest sense is about finding new (or former) solutions to very concrete problems. This is in essence a social process. Our empirical material shows that this combination of economic and social activities is at the heart of creating just transition pathways to a circular society.

When the Lights Go Out: Social Capital and Grid Resilience in Times of Energy Disruption

19. Climate transition from below: Collective civic action for a fair climate transition

Elena Poli[1]
Salvatore Ruggiero[1]
[1] LUT University

Introduction: In April 2025, a massive power outage left millions of people in Spain and Portugal without electricity. Beyond technical failures, the Iberian blackout revealed critical gaps in energy system design and stark differences in the resilience capabilities of local populations. This paper explores how social capital—bonding, bridging, and linking—shapes community responses when infrastructure fails. The analysis is guided by the following research questions: Who bears the burdens of sudden energy disruptions? Why are some groups less resilient than others? What mechanisms of informal support emerge, and how can they be sustained?

Methods: We address these questions by examining the role of energy communities as strategic actors for resilience and justice. These communities can move beyond self-consumption to operate as nodes for distributed storage, demand management, and cooperative energy services, embedding both equity and flexibility into the grid. We use qualitative research approach, focusing on in-depth interviews with key stakeholders, including members of CERs and collectives affected during the blackout.

Results: Preliminary evidence shows that when technological systems failed, remarkable cooperation and solidarity emerged, with networks of trust and reciprocity acting as an invisible infrastructure to enable collective action and adaptive responses. Informal support systems—sharing food, water, and care—helped communities navigate disruption, demonstrating that resilience is not only technical but deeply social and that investing in networks of trust may be a key strategy for future crises, as much important as building more robust infrastructures.

Conclusions: The Iberian blackout case underscores the need for a paradigm shift: resilience must become a core innovation principle, integrating technical adaptability with social infrastructures of trust and collective action.

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Extinction of species and degradation of ecosystems, caused by human activity, continue at an alarming rate. To address these challenges, several major processes are underway at global, European and national levels, including the implementation of the Global Biodiversity Framework (GBF) and Nature Restoration Regulation.

How can social sciences play a more crucial role here? By providing critique and analysis of the causes behind biodiversity loss; identifying, presenting and developing new alternatives and pathways?

This session will explore how different social science perspectives on biodiversity contribute and relate to transformative change of societies and their practices. And how these perspectives will be useful for policymakers and practitioners and, bridge the gap between research, policymaking and action.

We focus on what social sciences reveal about biodiversity related problems and which societal conditions ultimately drive loss of biodiversity. Examples of questions to discuss are: What is urgent to tackle and, how in terms of power, structures and practices? Which are the key actors in policy- and decision making? How do we as social scientists look upon our own researcher position in the transformation, and how do different theoretical approaches handle questions of normativity, reflexivity, legitimacy and intervention? We will also explore how research on biodiversity can spur change in research, policy and practice.

We therefore welcome fully drafted manuscripts concerning societal causes and mechanisms behind threats to biodiversity, as well as contributions concerning solutions and alternatives – on both local, regional, national and global levels. Different empirical cases as well as theoretical orientations are most welcome. You can choose whether you want to include one or several of the themes and research questions suggested above.

Since the input of social sciences has repeatedly been pronounced as underrepresented but important for strengthening biodiversity and transformation, here we present an opportunity to engage social scientists from various empirical fields and theoretical standpoints to engage via written papers, joint discussions and a concluding research panel.

Convenors

Mari Kågström, Political Science and Natural Resource Governance, Department of Urban and Rural Development, Swedish University of Agricultural Sciences, Sweden
Johanna Tangnäs, SLU Swedish Biodiversity Centre, Department of Urban and Rural Development, Swedish University of Agricultural Sciences, Sweden
Tuija Hilding-Rydevik, SLU Swedish Biodiversity Centre, Department of Urban and Rural Development, Swedish University of Agricultural Sciences, Sweden

Both heritage and resource A relational approach to forest owners' decision-making

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Hanna Ekström Pigot[1, 2]
[1] Department of Political Science, Lund University
[2] Department of Earth and Environmental Sciences, Lund University

Introduction: Loss of forest habitats calls for a change in the intensity and scale at which forests are managed. With voluntary policies on the rise, there is an increased focus on understanding the role and motivations of private forest owners. The management of private forests is likely driven by both economic and non-economic values, but previous literature has paid less attention to how broader aspects of land ownership, such as care for and connection to the land, influence forest management decisions.

Methods: Based on the framework of relational values, this study seeks to understand the relationship between private forest owners and their forests, the activities that shape this relationship, and how it affects forest management decisions. From May to December of 2024, walking interviews with 23 participants were conducted in southern Sweden.

Results: The participating forest owners all shared a strong engagement in their forest, but with different motivations. Across these motivations interviewees often perceived themselves as stewards, expressing care for the heritage they received from previous owners and for future generations. Care is expressed through practices of tending to individual trees, protecting cultural sites, and through active management as necessary to prevent the otherwise perceived decline of the forest. Contrary to some earlier conceptualizations, the study illustrates how relational values may both promote and prevent ecological diversity and how these values are created and maintained through conventional management practices.

Conclusions: Although relational values in the current study appear to promote ecological diversity at the property level, they are insufficient to encourage significant transformation in management practices. Thus, the outcomes invite us to look beyond the motivations of individual landowners and consider the extent to which policies and available infrastructure enable this group of private forest owners to act in accordance with their notions of stewardship, sense of place, and care for the forests. Inspired by the recent surge of social science research on relational values, the study provides new insights into what enables or hinders the implementation of biodiversity policies in privately owned forests.

Conservation-by-Alienation: Koliwadi forest estrangement in Maharashtra, India

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Dr Annie James[1, 2], Dr James Angus Fraser[3], Dr Sergio Villamayor-Tomas[1]
[1] Institute of Environmental Science of Technology, Autonomous University of Barcelona (ICTA, UAB), Spain
[2] Independent Scholar, Gothenburg, Sweden
[3] Lancaster Environment Centre, Lancaster University, United Kingdom

Introduction: Critical conservation science has paid much attention to the failure of mainstream conservation—exemplified in strict protection and neoliberal efforts to monetize nature—and simultaneously demanded that IPLC rights be recognised. Less attention has, however, been paid to how rights-based struggles negotiate and/or counter the State's push to neoliberalise land in conservation hotspots in global South countries. What are the effects of such counters/negotiations on forest peoples' lifeways and traditional rural livelihoods? This paper tackles this issue by drawing on recent contributions in critical theory that call for a structural-ethical response to capitalism's intensifying socio-ecological crises. Such a response elucidates capitalism's functional, moral *and* ethical failures. Towards this goal, the concept of alienation serves as a vital analytical construct. It reveals the connections and disruptions between the objective/material and subjective/psychological realms.

Methods: Specifically, we use alienation to uncover the multifaceted impacts changing forest-governance regimes are having on community-forest relations in a village inside a Protected Area in Western India. Marxist understandings of labour alienation are complemented with inputs from Rahel Jaeggi's social-philosophical treatise on self-alienation to delineate the multiple ruptures capitalist conservation (and capitalism) induces in forest-based lives. Qualitative data comes from a 4-year collaborative ethnography that engaged multiple stakeholders affecting conservation in this PA.

Results: We claim that the effects of fortress conservation be visualised as forms of alienation that persist even when the fortress has been weakened by forest-dwellers' rights-based struggles. Older alienations manifest more subtly at the level of the forest-dweller self especially under conditions of insecure forest rights, increased commodification of needs, treatment of land as capital and the longstanding marginalisation of Indigenous lifeways: factors present in our case but also in other post-colonial contexts. Together these factors give rise to socio-ecological relations that villagers themselves seem uneasy with. Although State forest officials we interview recognise the adverse influence of the wider political-economic context, their preferred solution is to induce greater separations between forest-dwellers and forests.

Conclusions: This perverse logic of (re-)imposing mainstream conservation on forests and forest-dwellers we conceptualise as **Conservation-by-Alienation**, a tendency also witnessed in the global emergence of the 'back-to-the-barriers' approach and the financialisaton of nature.

Farming in Left-Behind Places: Governing effects on biodiversity and local solutions for change

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Johanna Tangnäs[1]
Tuija Hilding-Rydevik[1]
[1] Swedish University of Agricultural Sciences, Department of Urban and Rural Development

Introduction: In times of parallel crises of climate, nature and security, member states across the EU are troubled by issues of food security, self-sufficiency and social cohesion. The number of farms has declined significantly in the European Union (EU) over the past decades, and most of the farms lost in the region are small-scale (Eurostat, 2024). The Common Agricultural Policy (CAP) aims to increase agricultural production in the EU while also addressing areas such as rural development, competitiveness, and the preservation of landscapes and biodiversity (EC, 2023). For the upcoming EU budget period, several proposed changes have sparked farmer protests in Brussels and elsewhere. Territorial injustices, including economic marginalisation and political abandonment in rural areas, create challenging conditions for everyday life and local development. We explore these impacts by looking into farmers' experiences through the analytical lens of Härjedalen as a 'left behind place' (McKinnon et al., 2022; Martin et al., 2021; Rodríguez-Pose, 2018). The aim of this study is to analyse the effects of the EU's Common Agricultural Policy (CAP) on farmers in Härjedalen and to identify alternatives to the current governing, based on farmers' experiences and hopes for the future.

Methods: The methods used for this study are qualitative and inspired by political ethnography. The material consists of semi-structured interviews with farmers and representatives from County Administration Boards, as well as the output of a workshop on alternative pathways to the current governing of agriculture.

Results: The analysis focuses on farmers' livelihoods, prospects for continued farming, and opportunities to provide ecosystem services. Farmers' proposals for future CAP governance include flexible, place-based solutions and restored dialogue with authorities.

Conclusions: Our preliminary results show that CAP funding, as currently managed, does not sufficiently support farmers' initiatives for agricultural development and biodiversity conservation.

Forest Ruins and Fragile Coexistences: The Loss of Oriental Sweetgum Forests in Western Mediterranean Turkey

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Nihan Bozok[1]
Mehmet Bozok[1]
[1] Istanbul Beykent University

Introduction: The focus of this presentation is on the gradual disappearance of endemic Oriental sweetgum (Liqudambar Orientalis Mill.) forests in Muğla's coastal villages, examining the entangled relationships between trees, animals, land practices, and human livelihoods.Based on interviews with 46 participants and immersive forest observations across different seasons, we argue that the loss of this critically endangered species (Kavak and Wilson 2018) marks the dissolution of Mediterranean rhythms —small-scale herding, seasonal livestock migration, and intergenerational ecological knowledge transmission. As van Dooren (2014) discusses, the extinction of a species is not only the loss of individual organisms but the disappearance of entire ways-of-life and world-making practices.

Methods: Drawing on multispecies ethnography (Kirksey and Helmreich 2010) and the concept of "meshwork" (Ingold 2013), we conducted fieldwork between 2020-2025 in Muğla province, along Turkey's western Mediterranean coast, where this critically endangered forest exists in fragmented patches, revealing how deforestation unfolds not merely as biological decline but as relational unraveling.

Results: According to our findings, forest-related memory, collective reminiscences, and local ecological knowledge are disappearing in villages surrounding the forest: while elderly villagers remember animals using Oriental sweetgum balsam to heal wounds and children learning from insects around dead trees, tourism, infrastructure expansion, and rural poverty are severing this intergenerational transmission. Second, our findings reveal gendered conflicting regimes of attention toward this forest: women cultivate sensory relationships with the forest by listening to nightingale concerts and gathering edible wild greens for subsistence, while men transform the forest into a source of balsam extraction and a hunting ground through masculinity performances around hunting. Third, the forest persists as a "disturbed habitat" (Tsing 2015) where the ruins of this disappearing world generate more precarious forms of coexistence.

Conclusions: While geographically specific to the Mediterranean, this research offers a transferable framework for understanding what the loss of an endemic forest species means across different contexts: it demonstrates how biological loss unravels multispecies relationships, gendered knowledges, and intergenerational practices. By revealing how extinction unfolds through the dissolution of specific worlds and the generation of precarious coexistences in ruins, it concretizes social science's methodological and conceptual contribution to biodiversity research.

How to remain critical and still get the work done? Reflections on social scientists' role in biodiversity offsetting research

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Suvi Huttunen[1]
Heidi Lehtiniemi[1], Tuija Seppälä[1], Liisa Varumo[1]
[1] Finnish Environment Institute

Introduction: Biodiversity offsetting has emerged as an important instrument in biodiversity governance, aiming to compensate for ecological losses through measurable gains elsewhere. While it presents concrete means to achieve no net loss, from the perspective of social justice and acceptability it contains several challenges. The focus on offsetting ecological biodiversity values easily neglects local inhabitants' place-based values both in the development and offset sites and can create false legitimacy for development projects. Simultaneously the market-based and growth-oriented idea of offsetting can be criticised for inability to address the root causes of biodiversity loss and preventing a deeper sustainability transformation. Thus, biodiversity offsetting clearly needs critical social scientific research. However, identifying a constructive role for social scientific research in a transdisciplinary setting can be challenging.

Methods: We critically examine the role of social scientists in a biodiversity offsetting focused research project in Finland, where the primary emphasis has been on developing calculation mechanisms led by ecological expertise. Empirically we draw on collaborative auto-ethnography including self-reflective storied accounts of participating researchers and a workshop for sharing and discussing the stories. In our analysis, we will explore the emerging tensions between maintaining a critical stance and contributing constructively to a system that aims to operationalise biodiversity offsetting.

Results: Preliminary reflections suggest that social scientists experience a dual role: as critical observers questioning the assumptions underpinning offsetting, and as pragmatic collaborators contributing to governance solutions. This duality generates tensions around facilitating the development of the instrument and responsibility on its effects. We expect to identify strategies employed by researchers to navigate these tensions, such as negotiating spaces for normative critique. These findings will illuminate how social sciences can both challenge and enable biodiversity governance innovations. Furthermore, our results will reveal broader challenges for social sciences in transformative biodiversity governance.

Conclusions: By unpacking the dilemma of critical yet constructive participation, we contribute to broader debates on knowledge co-production, power asymmetries, and the role of social sciences. Ultimately, the study highlights the need for institutional arrangements that allow critical perspectives to inform policy design without being subsumed under technocratic imperatives.

On the road again: A nature value framework analysis of peatland management in a spatial planning project

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Ingrid Knutsdotter Koren[1]
[1] Department of Civil Engineering and Environmental Sciences, Western Norway University of Applied Sciences

Introduction: Peatlands are widely acknowledged as critical ecosystems for carbon storage, hydrological functions, and biodiversity. Despite this recognition, land use encroachment and the drainage of peatlands for various development purposes continue, serving as significant drivers of biodiversity loss. Co-creating knowledge and embedding values of nature in spatial planning processes and decision-making can contribute to more sustainable, legitimate, just, and democratic processes and outcomes. However, there is limited theoretical and empirical evidence on whether and how nature values are defined, (co-)created, assessed, and integrated into knowledge production and decision-making processes in spatial planning.

Methods: To contribute both theoretically and empirically to the advancement of nature values in knowledge production and peatland management, this study addresses the following research questions: (1) How do planning authorities and other stakeholders value and assess peatlands? (2) Which nature values influences land use decisions, and what roles do different actors play in this context? (3) How can effective and legitimate co-creation of knowledge in peatland management be enhanced? These questions are examined empirically within the context of a road construction project in Western Norway and conceptually through the theoretical framework proposed by Pascual et al. (2023), focusing on instrumental, intrinsic ecological, and relational values of nature. The materials reviewed include documents from the planning process and interviews with various stakeholders involved in the project. Data collection is near completion, with analysis planned for winter/spring 2026.

Results: Preliminary analysis of the empirical material suggests that, although diverse values of peatlands are acknowledged in the road development project, their uptake and meaningful inclusion in decision-making outcomes are insufficient. Instrumental values continue to dominate as rationales for construction on peatlands, while intrinsic ecological and relational values remain undervalued. Furthermore, timing and predefined land use intention can act as a barriers to legitimate knowledge co-creation in spatial planning projects, often prioritising correct procedure and process over substance.

Conclusions: I advocate for the potential of acting upon intrinsic ecological and relational values in knowledge production, as this could strengthen the co-creation of knowledge and legitimacy of sustainable peatland management, thereby challenging the persistent socio-economic rationales for road development and promoting sustainable peatland governance.

Paradoxical Tensions When Navigating Sustainability: The Case of Nordic Forestry

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Chelsey Jo Huisman[1, 2]
Kaisa Koskela-Huotari[1], Suvi Nenonen[1], Hans Kjellberg[1]
[1] Stockholm School of Economics, Department of Marketing and Strategy, Sweden
[2] The Forestry Research Institute of Sweden (Skogforsk), Sweden

Introduction: Forests are a key conduit in the sustainablity transformation of society, mitigating climate change, protecting biodiversity, transitioning to renewable energy, and providing recreation and culture. Managing productive forests to meet these competing demands has escalated tensions between the traditional management system of clearcutting and alternative forest management practices. Prior research recognizes that the use of forests, a limited natural resource, inherently involves built-in conflicting objectives that create tensions. Many actors treat these competing demands as trades-offs, assuming they can be resolved by prioritizing one goal at the expense of another. However, this approach is limiting and potentially detrimental when the future of forests and forestry sectors is contingent upon robust biodiverse ecosystems to ensure all forest functions—including economic and climate-related goals. In this paper, we challenge the notion that all tensions are resolvable. Using paradox theory, the purpose is to explore how different actors in the Nordic forestry sector navigate and manage tensions related to sustainability, offering a new lens to understand this complex phenomenon.

Methods: Empirically, our qualitative case study is situated within the context of Nordic forestry, focusing on forest management practices. Our data consists of semi-structured interviews with 40 diverse forestry stakeholders in Sweden and Finland. In our analysis, we abductively combine these empirical findings with theoretical insights from paradox theory.

Results: The case reveals a progression in how actors manage tensions in forest management: Those who perceive the tension as simple and resolvable or outsource the responsibilty of the tension to another stakeholder tend to adopt either/or thinking, whereas those who experience the tension to be more complex and recurring are more inclined toward both/and thinking.

Conclusions: This paper contributes to our understanding that either/or thinking in forest management—such as choosing between either timber production or biodiversity protection—can narrow our understanding of biodiversity and limit the practices we use to support it. By contrast, both/and thinking encourages practitioners and policymakers to seek synergies, such as recognizing the interconnectedness that biodiversity underpins productivity in forestry. This shift in managing tensions is essential for navigating sustainability transformation and ensuring forests remain resilient, mulitfunctional systems.

Relational Values and Multispecies Well-being in Urban Landscapes: Insights from Finnish Focus Groups

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Kaisa K. Vainio[1]
Misa Tuomala[1], Nora Fagerholm[1]
[1] Turun Yliopisto

Introduction: Urban environments are increasingly recognized as critical spaces for biodiversity, requiring a rethinking of human–nature relationships. As cities expand and ecological pressures intensify, preserving biodiversity within urban landscapes becomes an ecological imperative. These multispecies interactions are not only ecological but also cultural, ethical, and political, shaping how urban residents co-inhabit space with other species. In Finland, as in much of Scandinavia, urban development reflects a dual trend: sprawl and densification. Sprawl, often motivated by proximity to nature, entails risks such as habitat loss, increased emissions, and social segregation. Densification, while aligned with sustainability goals, raises concerns about reduced green spaces, ecological fragmentation, and impacts on well-being. This complexity underscores the need to understand how people relate to local nature, assume responsibilities toward other life forms, and pursue meaningful lives in multispecies contexts.

Methods: This paper explores human interactions with urban nature through the lens of **relational values**, emphasizing interconnectedness and mutual dependencies. We employ the **life frames of nature's values** (IPBES, 2022; O´Connor & Kenter, 2019) and integrate **affordance theory** (Gibson, 1966; 1979) to interpret landscape preferences. Empirical data comprise three focus group interviews conducted in Finnish cities in 2024, examining meanings, emotions, and actions associated with everyday multispecies encounters. Qualitative analysis identified patterns of value creation through perceived benefits, harms, and practices.

Results: Findings reveal affordances for multispecies well-being embedded in everyday nature relationships. Relational values manifest across **life frames** (*living from*, *living with*, *living as*, and *living in nature*), with eight broad values emerging: **kinship, responsibility, community, identity, care, connectedness, learning, and stewardship**.

Conclusions: We argue that urban green spaces should support a plurality of values—not only instrumental (human well-being) and intrinsic (biodiversity conservation), but also relational values arising from multispecies interactions. Strengthening human–nature connectedness can foster well-being and environmentally responsible behaviors, contributing to a transition toward **multispecies justice**.

Tracing Neoliberalism in Finnish Biodiversity Policy: Policy Entrepreneurs and Helmi Habitats Programme

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Oskari Hakala[1]
Anni Arponen[1], Anna Salomaa[2]
[1] University of Turku
[2] LUT University

Introduction: Dominant societal paradigms strongly influence biodiversity loss and its governance. Neoliberalism, in particular, has been linked to commodification of nature and prioritization of economic growth which contribute to biodiversity loss. This article examines (1) *how and why neoliberal conservation has shaped the planning of Helmi Habitats Programme*, a recent initiative in Finland's nature restoration policy. Helmi is a relevant case, as restoration policies are expected to play a central role in halting biodiversity loss and the programme is widely regarded as well implemented.

Methods: Drawing on Kingdon's Multiple Streams Framework, the study examines the role of policy entrepreneurs through 13 semi-structured interviews (interviews are planned to be held in January-March 2026) with public servants involved in the programme's early development. By asking, (2) *what role have potential policy entrepreneurs played in policy process* and (3) *how have they promoted their innovations*, the study traces the mechanisms and rationales through which neoliberal elements could have entered the policy process and to the final policy proposal.

Results: The results expose that neoliberal conservation is present in the programme through mechanisms of commodification, depoliticization, and growth-oriented rationales. These dynamics do not stem from a single policy entrepreneur but emerge from working with broader institutional and political constraints. Interviews reveal that public servants are motivated by biodiversity conservation, yet their ambitions are restricted by governance structures and prevailing policy priorities. The case appears paradoxical: beneficial for biodiversity in the short term, but potentially harmful in the long term when viewed through critical literature on neoliberal conservation.

Conclusions: The study contributes to conservation social science, critical political ecology and geography debates by clarifying how neoliberal logics are embedded in Finnish biodiversity conservation policy processes. It highlights the role of policy entrepreneurs in pursuing particular trajectories and the tensions between biodiversity protection and market-oriented frameworks. By tracing these ideological undercurrents, the paper enhances understanding of the role of individuals with respect to structural barriers of conservation governance and discusses implications of neoliberal conservation for biodiversity.

Unpacking the meaning of 'local' in biodiversity strategies and policies

20. Biodiversity loss and ways forward: How do different research approaches relate to solutions, policy and practice?

Marie Stenseke[1, 2]
[1] Dept of Urban and Rural Development, Swedish university of agricultural sciences
[2] Dept of Economy and Society, University of Gothenburg

Introduction: This paper will explore how the notion 'local' is used in and translated between different spatial levels of biodiversity agreements and policies and how it relates to the situation on the ground, focussing on Sweden. The objective of the exercise is to bring about a nuanced understanding of 'local' that can contribute to improving policy strategies and policy measures when it comes to sustainable land use. There is an increased engagement with biodiversity and land-use globally and in EU. Notably, in both CBD's, Global Biodiversity Framework (GBF) and EU's Nature Restoration Regulation (NRL) emphasise the importance of the 'local level'. The expressions 'local communities', 'local contexts', 'local level' and 'local actors' are frequently used in both documents. Since GBF as well as NRL request the development of national implementation plans, it is for the national governments to appropriately interpret the meaning of these expressions in their respective territories. The question of what is local and belongs to a local community is, however, delicate in the urban and mobile societies of the global north. Moreover, physical landscapes are locally manifested yet influenced by drivers from national, regional and global levels.

Methods: In the paper there will be a literature overview of the term 'local' in relation to spatial scale and national contexts. Then, the use of 'local' in GBF and NRL will be first be examined, and then Swedish policy documents that show or indicate the national interpretations of 'local' will be scrutinized and compared to showcases of conditions on the ground as for communities, actors and driving forces from some case studies of Swedish rural areas.

Results: The results are expected to show a significant urban influence on rural land use, through actors with a great variety of relations to an area.

Conclusions: A potential conclusion is that the traditional rather static view of 'communities' in the Swedish countryside in nature conservation must give away for a more fluid notion in order to better mirror the contemporary situation. Basing the national implementation plans on such an updated view would strengthen the prospects for a more biodiversity friendly land use.

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Policy reversal is now a major scholarly, political, and public concern in contemporary climate and environmental politics. From accumulating experiences of backlash to climate policies across a variety of countries (Patterson 2023; Patterson et al., 2025), to public and parliamentary pushback against European Green Deal policies, and dismantling of policies and institutions in the United States and elsewhere, climate and environmental policy is being challenged in new and profound ways. Yet, the rapidly growing research on these topics remains highly fragmented (e.g., in terms of concepts, causal explanations, methods, and interpretations).

Bridging gaps in scientific knowledge on these proliferating phenomena is urgently needed. This requires: (i) bringing diverse emerging (and longstanding) cases and lines of enquiry into productive dialogue to explain the dynamics and implications of policy reversals, and (ii) identifying similarities and distinguishing differences across and within cases (including among different actor perspectives), to (iii) make sense of the rapidly evolving contexts of climate and environmental policymaking. Doing so is crucial to not only bridging gaps between the urgency of transformation and real-world policy implementation, but also gaps between differing social science disciplines and approaches to such research.

Questions also arise about the implications of policy reversal for environmental politics and future ecological and social outcomes. How does the apparently widespread occurrence of policy reversal challenge our understanding of environmental politics? Might it suggest potential blindspots in theorizing policy and broader political change? Are there circumstances under which policy reversals may be generative (e.g., revealing overlooked interests and values, stimulating new debates, or provoking new strategies for policy action)? If so, under which conditions does this occur, and how does this vary for different actors within heterogeneous and unequal societies? Can we develop systemic comparative and transnational frameworks to understand these phenomena?

We welcome empirical and conceptual fully drafted manuscripts across geographies, political spaces, and disciplinary and interdisciplinary approaches. The workshop will engage deeply with all authors, and discuss comparative learning across differing cases, insights, and arguments.

Convenors
James Patterson, Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands
Stacy VanDeveer, John C. McCormack School of Policy and Global Studies, University of Massachusetts, Boston, United States
Ksenia Anisimova, Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands

Environmental Obstruction and Backsliding in Authoritarian States: Conceptualising Systemic Policy Resistance Across Environmental Domains

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Nina Tynkkynen[1]
Anna Korppoo[2], Geir Honneland[2]
[1] Åbo Akademi University, Finland
[2] Fridtjof Nansen Institute, Norway

Introduction: This paper advances the concepts of environmental obstruction (EO) and environmental backsliding to address gaps in the study of environmental policy reversal. Existing research is mainly about democratic contexts, yet we propose EO as a systemic, cross-policy form of state-led resistance to environmental commitments, especially prevalent in authoritarian regimes. While EO tends to respond to international pressure, environmental agendas can also stem from domestic concerns, pointing to potentially different mechanisms and interest structures. While participation in international agreements is often linked to benefits retrievable from them, environmental policies spurred by domestic interests and pressures may indicate a different approach to implementation of policy goals. Comparing EO based on the source of interest and pressure to pursue a policy offers new leverage for understanding when societal actors can (or cannot) counteract obstruction.
Methods: We define environmental backsliding as EO in polities which have established environmental governance that has subsequently eroded. Together, EO and environmental backsliding offer a comparative conceptual framework for understanding how authoritarian states maintain political-economic primacy over ecological integrity. We adopt a qualitative theory-building strategy that combines process tracing, discourse analysis and exploratory comparison. The analysis begins with Russia as a paradigmatic case that exhibits coordinated EO and backsliding across multiple policy arenas and uses environmental narratives in its broader geopolitical posture. We extend the framework through preliminary comparison with selected (other) authoritarian and hybrid regimes to assess its analytical reach. Empirical materials include policy documents, official discourses, international negotiation behavior and secondary research.

Results: We identify mechanisms and interest structures of EO cutting across issue areas, including appeals to economic sovereignty, securitisation of environmental demands, strategic non-compliance and the instrumental use of environmental narratives in foreign policy. Mapping these across cases illustrates how authoritarian regimes deploy obstruction not as isolated policy reversals but as coherent governance strategies tied to regime stability and geopolitical positioning.

Conclusions: Our findings provide conceptual clarity to understand contemporary policy reversal in authoritarian contexts. By highlighting cross-policy coordination, strategic intentionality and geopolitical dimensions, our findings reveal blind spots in existing theories of environmental change and open pathways for comparative, transnational research on systemic resistance to environmental transformation.

Can party-led effectiveness evaluations prevent backsliding in global pollution treaties?

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Henrik Selin[1]
Noelle Selin[2]
[1] Boston University
[2] Massachusetts Institute of Technology

Introduction: Many global environmental treaties include provisions for parties to evaluate their effectiveness as collective learning and accountability mechanisms. These effectiveness evaluations are, in part, intended to keep parties on track towards meeting collective treaty objectives and provisions. Yet, they have had mixed success, with backlash and backsliding occurring in some high-profile cases. In this paper, we ask the question: Under what conditions do party-led effectiveness evaluation provisions prevent backsliding?

Methods: In our analysis – drawing from the existing literature, reviews of official treaty documents, interviews with national delegates and Secretariat staff, and personal observations at meetings of treaty bodies – we apply a new four-step analytical framework to examine how parties to seven global environmental treaties on four issue areas of hazardous substances have carried out effectiveness evaluations: stratospheric ozone depletion (the Vienna Convention and the Montreal Protocol), persistent organic pollutants (POPs) (the Stockholm Convention), mercury (the Minamata Convention), and climate change (the United Nations Framework Convention on Climate Change, the Kyoto Protocol, and Paris Agreement). The first step, *agreement*, looks at the adoption of treaty objectives and provisions. The second step, *translation*, explores how parties select indicators related to treaty objectives and provisions. The third step, *attribution*, focuses on how parties use the indicators to assess whether treaty implementation has led to desired changes. The fourth step, *reformulation*, details how parties use insights from effectiveness evaluations to adjust treaty objectives and provisions in support of enhanced treaty implementation.

Results: In our analysis, we focus on the degree to which effectiveness evaluations, through a cyclical agreement-translation-attribution-reformulation process, advance or forestall efforts to weaken provisions or reevaluate commitments to shared objectives. We find that for stratospheric ozone depletion, POPs, and mercury, collective evaluation processes have enabled parties to sidestep situations where backsliding might have derailed progress, for example on broadening exemptions for specific substances. For climate change, in contrast, failure to agree on effectiveness evaluation processes have served as a blocking mechanism for future action.

Conclusions: We conclude by drawing lessons about the design of treaty effectiveness evaluations to enhance global environmental governance, including the design of institutional structures and science-policy interfaces.

Climate policy backlash: Geopolitics and the 'almost success' of decarbonization negotiations for shipping at the International Maritime Organization

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

René Taudal Poulsen[1]
Stefano Ponte[1], Elvin Nyukuri[2], Collins Odote[2]
[1] Copenhagen Business School
[2] University of Nairobi

Introduction: An emerging literature on climate policy explores the socio-political conditions under which it occurs and asks why it erupts in specific policy domains (Patterson 2023, Patterson et al. 2025; Anisimova and Patterson 2025a and 2025b). In this literature, scholars have called for studies of different climate policy contexts, which are sensitive both to ideational and material explanations for backlash, and that lend themselves to comparative analyses. We respond to this call with an empirically rich study of state-led backlash in the context of climate policy adoption for the international shipping sector at the UN's International Maritime Organization (IMO). In 2025, IMO member states were in the final stage of adopting a legally binding global GHG pricing mechanism for the sector (named the Net Zero Framework), which would be the first of its kind. In 2023, IMO members had unanimously agreed to develop and adopt "a maritime GHG emissions pricing mechanism" to achieve net zero emissions from the sector by around 2050 (IMO 2023). In April 2025, a large majority of member states approved of the Net Zero Framework. A state-led backlash from the US and oil states, however, prevented its adoption in October 2025. The US made explicit retaliatory threats outside the framework of the IMO – against states and individual diplomates favoring adoption (State Department 2025). This caused many member states to reverse their positions.

Methods: Studying the socio-economic and political contextual factors for backlash in the context of the decarbonization process at the IMO, we ask why it occurred and was successful. We apply an analytical framework on socio-economic conditions for backlash from Patterson et al. (2025) to a rich field material from the IMO climate policy negotiations in 2021-25, where we conducted participant observation in all negotiating sessions as delegates of an African and a European delegation.

Results: Within the IMO, climate policy innovation in the form of global GHG pricing mechanism was deemed feasible. However, it failed when state-led backlash connected the decarbonization process directly to geopolitics outside the realm of the international shipping sector.

Conclusions: We will conclude why climate policy backlash occurred and was successful in the IMO.

Climate Rollback in the US under Trump 2.0: A three-dimensional approach

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Frank Wendler[1]
[1] University of Hamburg (Germany)

Introduction: The second Trump presidency presents a clear case of rollback of policies against climate change, yet its evaluation presents conceptual and methodical challenges: Few of the actions advanced by the present US administration to reverse actions to curb GHG emissions are announced as related to climate change but are part of different agendas promoting ideas of energy dominance, security and affordability, cutting red tape and adopting a more unilateral approach to action on the global stage. How can a conceptual framework be developed to capture dynamics of climate rollback across its various dimensions, and what does it tell us about dynamics of change in the case of the current US administration?

Methods: The paper presents a distinction between three dimensions of climate rollback, namely: policy reversal as the repeal of rules previously adopted with the explicit aim of reducing GHG emissions; policy shifts as the promotion of policies counteracting these targets, such as the facilitation for extracting, transporting and marketing fossil fuels; and finally, policy dismantling as the sum of efforts to reduce resources and mandates to monitor developments associated with climate change. A second step relates these dimensions of climate rollback to interactions between the presidential executive, US Congress and the courts, and between the federal level and individual or groups of states, discussing implications for the degree of policy change enacted through the different dynamics. Concerning its method, the paper combines a survey of relevant sources such as ClimateWire and NYT with coverage by Think Tanks and a review of Executive Orders and Congressional Bills, including the screening of their most relevant topics and keywords using quantitative content analysis.

Results: The main part summarizes and compares policy developments in the dimensions identified above, covering particularly reversal of emission standards, the GOP megabill, permitting and policy guidelines and resources of EPA and Departments of the Interior and Energy.

Conclusions: In its conclusion, the paper refines its core argument that the evaluation of climate rollback is impossible with a focus on explicitly green policies but needs a more integrated approach to policy programs and linkages to capture relevant dynamics.

Corporate Climate Backsliding: Mapping Norm Change in Transnational climate Governance

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Oscar Widerberg[1]
Angel Hsu[2]
[1] Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam
[2] Data-Driven EnviroLab at UNC-Chapel Hill

Introduction: Voluntary corporate climate commitments, particularly net-zero pledges, have become central to global decarbonization efforts. Yet, concerns about "climate backsliding", where firms weaken or withdraw previously announced targets, have dominated recent media coverage and public discourse. Catalysed by political pressure from the US government and Republican politicians, companies may appear to rapidly change their communication around climate change. This paper maps out climate backsliding, providing a quantitative and data-driven basis for theorizing norm change in transnational climate governance. The paper asks: Does corporate climate backsliding exist, where does it occur, and how does it manifest across sectors and geographies? Our analysis also speaks to broader discussions on climate governance in a post-liberal world order.

Methods: The paper combines large-scale text analysis of corporate communications on sustainability and mainstream media coverage, with structured data from disclosure platforms, to create a unique dataset on corporate climate commitments. Using supervised and unsupervised machine learning techniques, we identify commitment changes and classify patterns of backsliding in corporate communication concerning climate change. These insights are integrated with quantitative mapping of commitments, focusing on net-zero targets, across sectors and geographies.

Results: Our preliminary findings suggest that outright removal of climate commitments is less prevalent than expected. Instead, corporations increasingly shift how they communicate ambitions and risks connected to climate change, reframing timelines, emphasizing uncertainty, or softening language, rather than abandoning targets altogether. This suggests that dominant media narratives of massive corporate backsliding may be overstated or mischaracterized. Backsliding is likely concentrated in sectors which are exposed to high transition costs (e.g. fossil fuel industry) or political pressure from the US government (e.g. finance and asset managers).

Conclusions: By systematically mapping corporate climate commitments and identifying backsliding patterns, this study advances understanding of norm dynamics in transnational climate governance. The findings will inform theoretical debates on the resilience and transformation of climate norms under conditions of geopolitical and economic uncertainty, contributing to discussions on climate governance in a post-liberal world order. Ultimately, this research provides actionable insights for policymakers, investors, and civil society on designing accountability mechanisms that sustain ambition and prevent regression.

How political sciences scholars can capture backlash around public policies? Insights from the case of ecological transition policies in France

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Pierre Wokuri[1]
Renaud Hourcade[2]
[1] Sciences Po Rennes
[2] Sciences Po Bordeaux

Introduction: There is a strong disagreement among political sciences researchers about the extent and the substance of backlash against ecological transition policies in Global North countries. On the one hand, a broad range of work assumes that this backlash do not really exist, supporting this claim with surveys on citizens perceptions on climate policies showing a strong level of support about these policies. On the other hand, other scholars have shown backlash dynamics, supporting this claim with different explanations. Whereas both strands of research provide insightful knowledge about backlash, we still lack a precise analytical framework to capture the multiple dimensions encompassing backlash around public policies and the ones related to ecological transition in particular.

Methods: This Method article proposes to fill this gap by providing a more precise definition and practical recommendations to capture policy backlash illustrated through the case of ecological transition policies in France. To do so, the article is structured in three sections.

Results: In the first section, we will emphasize how the combination of social movement studies and policy analysis is fundamental to capture policy backlash dynamics. In the second section, we will emphasize that it is critical to distinguish policy backlash from electoral backlash and to other types of public responses such as climate obstruction *(*Brulle *et al*, 2024), acceptance, non-acceptance and support (Anisimova and Patterson, 2024). In the third section, we will illustrate the proposed recommendations and considerations through the case of two ecological transition policies in France: the Linky meter and the low emissions zones (LEZs).

Conclusions: These two policies have been selected because there are falling into the two different main categories of environmental policy (Schulze, 2021) with the second one experiencing more backlash than the first one: “soft policies” such as voluntary approaches and information-based policies (Hsueh and Prakash, 2012) for Linky and “hard policies” with regulation (which imposes limits or constraints on certain forms of behavior), pricing/taxation (which imposes mandatory costs on certain behavior or activities), and phase-outs (which imposes mandatory shifts away from certain forms of technology or production)” (Anisimova and Patterson, 2024: 2) for the low emissions zones (LEZ).

Making sense of energy policy changes in the Biden-Trump transition

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Parrish Bergquist[1]
Eric Patashnik[2], Elizabeth Thom[3]
[1] University of Pennsylvania
[2] Brown University
[3] Northwestern University

Introduction: US President Joe Biden signed three laws that contained major investments in the US clean-energy supply chain: the Inflation Reduction Act (IRA), the Chips and Science Act (CHIPS), and the Infrastructure Investment and Jobs Act (IIJA). These laws reflected a politically informed tactical shift in climate policy design. In the years since the Obama-era failure to pass cap-and-trade legislation and enact a carbon price, climate policy advocates adopted a benefits-forward approach, informed by scholarship suggesting that strategically targeted incentives could bolster key constituencies and promote policy durability through the mechanism of "policy feedback." This approach helped the Biden Administration avoid voter backlash and exceed historical expectations during the 2022 midterms. Just a few years later, however, a Republican-controlled Congress and President Donald Trump rolled back many of the clean energy investments enacted by IRA, IIJA, and CHIPS. Still, whereas headlines focus on the dismantling of the Biden-era climate project, some of the laws' key provisions were left in place. In this study, we conduct a comparative assessment of the adoption and post-enactment trajectories of the IRA, IIJA, and CHIPS acts.

Methods: We use qualitative process tracing to explain why some components of the three laws proved more vulnerable to reversal than others. To address this topic, our research draws on an analysis of Congressional testimony, media coverage, federal lobbying reports, White House visitor records, and stakeholder interviews.

Results: We argue that the balance of access and influence between incumbent and new firms shaped the structure of revisions, and that programs that received bipartisan support in their enactment proved more durable than those that were passed with only Democratic votes. We also show how partisan loyalty and the authoritarian presidency constrain the policy feedback process.

Conclusions: We conclude by highlighting the implications of our analysis for the trajectory of clean-energy manufacturing in the United States. Our analysis also illuminates new theoretical concepts and mechanisms that explain backlash dynamics, policy durability, and retrenchment in polarized political contexts with authoritarian elements.

Policy implications of the Green Backlash for the EU Green Deal: comparative analysis of agriculture, consumer protection and transport policies

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Charlotte Halpern[1]
Matteo Mandelli[1]
[1] Sciences Po, Centre for European studies and comparative politics (CEE), Paris (France)

Introduction: The green transition, after strong momentum in the late 2010s, now faces polarization and contestation. This has been described as a "green backlash" (Bosetti et al., 2024 ; Patterson et al., 2025). While useful, the concept remains underdeveloped and requires further theoretical and empirical work. Key is understanding its policy implications—how backlash shapes green policy initiatives by enabling, constraining, delaying, softening, or dismantling them. This paper analyses the European Green Deal Strategy, launched in 2018 to achieve climate neutrality by 2050. Building on global momentum around the climate emergency, the agenda combined broad goals with sector-specific initiatives (Eckert, 2021 ; Hohmeyer et al., 2022). Five years later, in a transformed geopolitical context, evidence indicates that a 'green backlash' is influencing the EU Green Deal implementation. Parliamentary resistance explains only part of these dynamics, alongside geopolitical changes, interest group mobilization, and varying consensus within the Commission.

Methods: Drawing on comparative policy analysis (Fontaine & Peters, 2024) and public policy change literature (Hall, 1993; Howlett & Cashore, 2009; Mahoney & Thelen, 2009), we argue that backlash does not emerge uniformly nor produce identical outcomes. Variations depend on degrees of politicization (Pierson, 2009; Fawcett et al., 2017) and pre-existing policy dynamics. We re-analyse qualitative datasets from our earlier research on the EU Green Deal's deployment in agriculture, consumer protection, and transport. These materials include document analyses of major strategies (about 1990–2025) and 8-10 interviews per case with policymakers, NGOs, business representatives, and experts. This enables us to trace backlash emergence, its influence on policy dynamics (framing, instruments, collective action), and its impact on policy outputs such as adoption or rejection of specific measures.

Results: The comparative analysis confirms that the Green backlash has shaped EU policy processes unevenly. Findings show variations linked to politicization drivers and policy stages. Farmers' protests in early 2024 led to scaled-back climate ambitions in agriculture. In consumer protection, a Directive empowering consumers was adopted, yet the Green claims Directive was later withdrawn. In transport, mounting pressure from member states and the automobile industry challenges the planned 2035 fossil fuel vehicle ban.

Conclusions: These findings support building a comparative framework for within-sector and cross-regional analysis.

Political backlash against the Sustainable Development Goals: Exploring accountability challenges at the global-national nexus

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Magdalena Bexell[1]
Thomas Hickmann[1], Nina Weitz[2]
[1] Lund University
[2] Stockholm Environment Institute

Introduction: Global policy initiatives seeking a holistic response to poverty, widening inequalities, and environmental degradation face strong headwinds. The 2030 Agenda with the Sustainable Development Goals (SDGs) are a case in point. After initial political momentum, the SDGs are now encountering backlash in many countries. At the same time, actors and institutions across governance levels strive to prevent policy reversal, seeking to hold governments accountable for their SDG commitments. This paper explores challenges and opportunities for creating national-level SDG accountability for globally agreed policy goals.

Methods: Theoretically, the paper elaborates the concept of *public accountability ecosystems* which we understand as interconnected institutional mechanisms designed to hold public actors accountable for advancing the SDGs. These ecosystems encompass horizontal, vertical, and diagonal dimensions, which we theorize in relation to sustainable development policy processes at the global-national nexus. Empirically, the paper builds upon a mapping of SDG accountability mechanisms across countries and offers a set of country case studies that illustrate different trajectories with regard to SDG accountability. These theory-driven studies show how elements of public accountability ecosystems for the SDGs have emerged and illuminate the challenges they encounter in diverse national contexts. Our analysis draws on primary sources, including government documents, records of parliamentary debates and hearings, or national audit reports. We also examine statements by civil society organizations and political parties, media coverage of SDG processes, and reports on SDG implementation from statistics agencies, research institutes, the United Nations, and other international bodies. In addition, we incorporate insights from interviews with country experts and policy-makers.

Results: Our results shed light on broader patterns of SDG accountability across countries and identify factors that enable or constrain the development of national-level SDG accountability. We expect such factors to arise *from below* through civil society organizations and voters; *from within* political-administrative system through opposition parties, advisory committees, and oversight bodies; and *from above* through international SDG reporting and indices, and pressure from bilateral donors.

Conclusions: Our overall conclusion is that global policy initiatives such as the SDGs require robust vertical, horizontal, and diagonal accountability mechanisms at the national level to prevent policy backlash over long policy cycles.

Private Environmental Backsliding? A Longitudinal Analysis of Corporate Nature- and Biodiversity-related Commitments in High-Impact Sectors

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Philip Schleifer[1]
[1] University of Amsterdam

Introduction: Scholarly and political debates increasingly highlight environmental backsliding—the weakening or reversal of environmental policies. To date, this literature has focused largely on public-policy rollbacks, especially in the climate domain. Yet corporations are central actors in global environmental politics, advancing voluntary commitments that function as forms of private environmental governance. Whether these commitments are also stagnating or weakening under the current political context, however, remains unclear. This gap is striking for nature- and biodiversity-related commitments, an underexplored area despite the significant ecological impacts of sectors such as agrifood, mining, and construction. Although companies increasingly reference biodiversity in their reporting, little is known about how their commitments evolve over time—or whether they show signs of erosion as part of a broader environmental backsliding trend. This paper addresses this gap by analysing longitudinal trajectories of corporate biodiversity commitments and introducing private environmental backsliding to capture the potential dilution or rollback of these commitments.

Methods: The analysis draws on a longitudinal corpus of roughly 2,500 sustainability reports (2014–2025) from 300 major agrifood, mining, and construction companies. The study proceeds in three steps. First, it maps sectoral trends in sustainability reporting. Second, it assesses biodiversity salience through a large-scale keyword analysis. Third, biodiversity-related excerpts are extracted and coded using a validated large language model (LLM) workflow. This enables fine-grained analysis of the existence and stringency of corporate biodiversity commitments across a large, multi-year corpus.

Results: Sectoral variation is expected. Preliminary analysis indicates that although biodiversity discourse has increased, the stringency of commitments remains low and uneven, with mining companies showing the highest baseline but recent signs of stagnation. The analysis also anticipates identifying cases of commitment backsliding, including weakened or removed targets, extended deadlines, and shifts from concrete “targets” to more ambiguous “aspirations.”

Conclusions: The paper examines whether environmental backsliding extends beyond the state and also characterises forms of private governance. Evidence of weakening corporate biodiversity commitments would challenge prevailing assumptions that the business sector is “stepping up” to drive stronger environmental ambition, and it would highlight private environmental backsliding as an underexamined dimension of global environmental politics.

The discursive mechanisms behind green policy backlash: Studying delegitimization practices using the case of a German heating bill

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Maxine Mölgen[1]
[1] Copenhagen Business School, Department of Organization, Denmark

Introduction: Across advanced democracies, abstract support for environmental protection increasingly contrasts with emerging backlash against specific climate policies (Bosetti et al., 2025). The 2023/24 controversy around the German heating bill ("Heizungsgesetz") is a particularly visible example. Despite broadly pro-environment attitudes of voters, the policy faced intense opposition, media criticism, and ended up diluted (tagesschau, 2024; Umweltbundesamt, 2023). This discrepancy between abstract pro-environmental attitudes and resistance to concrete implementation remains under-explained. Recent work argues that material explanations alone do not fully capture backlash dynamics, highlighting the importance of culture, identity and meaning-making (Patterson, 2022, 2023). Research on right-wing populism similarly links identity politics to climate attitudes (Dickson & Hobolt, 2025; Lockwood, 2018). Yet further empirical analysis is needed that focuses on how such cultural meanings and identity boundaries are mobilized within specific policy controversies. This project asks: How do media discourses mobilize narratives to delegitimate climate policies? I treat media coverage as a key arena in which legitimacy is constructed and contested, shaping public perceptions of climate measures and feeding back into political decision-making (Dablander et al., 2025; Hacker & Pierson, 2019; Vogler & Eisenegger, 2021).

Methods: I conduct a narrative analysis of coverage in three German media outlets (center-left to right) from February 2023 (draft leak) until mid-2024 (media attention decline). Using inductive coding, I examine how the bill was problematized, the moral evaluations attached to different actors, and the narrative structures framing the proposal. I pay particular attention to storylines portraying the bill as elite overreach, cultural imposition, or a threat to "ordinary homeowners."

Results: I expect to show how discursive mechanisms, rather than shifts in underlying climate attitudes, helped turn a technical regulatory reform into a contested identity issue. I anticipate identifying recurring narrative patterns that contributed to delegitimizing the policy and shaping public dissatisfaction despite continued general support for environmental protection.

Conclusions: This study contributes to emerging research on green policy backlash by tracing how specific narrative mechanisms construct and erode the legitimacy of climate measures. It highlights how conflicts over climate policy can be transformed into broader cultural fault lines through narrative work, clarifying the discursive conditions of green policy contestation.

Turbulence, Polycrisis, and the Shifting Landscape of Voluntary Climate Action

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Lauri Peterson[1, 2]
Sander Chan[3]
[1] Uppsala University
[2] University of Eastern Finland
[3] Radboud University

Introduction: Voluntary climate action has become a central pillar of global climate governance, especially during periods of weak government leadership, popular backlash, and reversal of climate measures. Yet, the relation between voluntary climate action and political backlash on the national level remains poorly understood.

Methods: This paper specifically investigates how cooperative climate initiatives (CCIs), transnational collaborative arrangements engaging non-state and subnational actors in climate action, respond to the rise of populism. It offers the first global, longitudinal analysis of how such action changes under growing populism. To achieve this analysis we combine (1) the CoAct database that tracks CCIs (including commitments, participation patterns, and implementation status); and (2) the OECD Environmental Policy Stringency Index on national climate policies; with additional data (3) on economic conditions and media issue salience. Our analysis examines three potential mechanisms of cooperative climate action in response to populism. First, we identify **substitution**, where CCIs expand engagement in climate action to compensate for declining state ambition. Second, we account for **parallel retrenchment**, in which nonstate actors reduce voluntary climate action when governments *abandon or reverse* public climate measures, due to weakened policy signals and reduced reputational pressures. Third, we distinguish **distraction/overload**, in which crises in other domains (e.g., economic, humanitarian, and political) redirect attention and resources away from climate action. We test these dynamics using panel models with country-year CCI activity as the outcome, combined with crisis-intensity covariates and event-study designs around major populist political transitions.

Results: Preliminary results suggest that the surge in nonstate climate action following the 2016 U.S. election was atypically strong, reflecting a period of lower global crisis density. In contrast, recent years show more muted nonstate responses even under comparable political shocks, consistent with a crowding-out effect of the increasing number of parallel global crises.

Conclusions: The paper contributes to debates on political backlash, regime legitimacy, and global climate governance by showing that voluntary climate action is not only politically responsive but also constrained by the expanding demands placed on nonstate actors in a turbulent world.

What Drives Public Backlash to Climate Policy? The Case of the German Heating Reform

21. Backlash, rollback, and backsliding: Comparing the dynamics and implications of reversing climate and environmental policies

Niklas Kramer[1, 2]
Théo Konc[3], Jan Steckel[4]
[1] Potsdam Institute for Climate Impact Research, Germany
[2] Otto Suhr Institute for Political Science, Freie Universität Berlin, Germany
[3] Wageningen University & Research, Netherlands
[4] School of Social Science and Technology, Technical University of Munich, Germany

Introduction: Climate policies are often facing popular backlash. In this paper, we investigate the drivers of this backlash. Building on policy feedback theory, we hypothesize that disproportionate exposure to the costs of a new policy activates self-interest, diminishing the willingness to support and pay for similar policies, and potentially even causing a loss of trust in political institutions. Similar effects might be caused by exposure to negative partisan cues if the policy is subject to elite countermobilization. We test these propositions for the case of the German heating reform, which introduced the first phase-out policy for fossil-fuel heating systems in Germany. The reform sparked a contentious public debate after a draft bill was leaked by tabloid media in February 2023. The government's proposal would have imposed high costs upon many homeowners who still rely on fossil fuels for heating. After heavy countermobilization from the opposition, the government watered down its ambitions and passed a revised version of the bill.

Methods: To analyze the drivers of public backlash, we exploit a quasi-experimental setting by drawing from panel survey data, which we collected in four waves directly before, during, and after the contentious media debate. Applying a difference-in-difference design, we estimate the effects of the policy change on the attitudes of those disproportionately exposed to the costs and those exposed to negative partisan cues over the policy.

Results: We find that individuals exposed to the costs of the policy scaled back their willingness to pay for further climate policy and became more distrustful of the government, particularly if they had a low capacity to pay. Individuals exposed to negative partisan cues over the reform became less supportive of new climate policy but not less willing to pay for such. These effects sustained over the entire survey period, despite the government's backtracking.

Conclusions: These findings suggest that public backlash to climate policy is driven by both material and ideological factors, although material factors dominate in our case. Our paper offers both a theory of policy backlash among the mass public and robust evidence in support of this theory.

22. Understanding the bridge between literal climate change denial and cultures of ignorance

This workshop has been combined with workshop 14 "Stop obsessing over climate disinformation? Bridging the gap between the cultural and material explanations in climate obstruction research". Please see the description of workshop 14 for further information.

Climate obstruction is in part driven by elite actors, such as the fossil fuel industry, neo-liberal think-tanks, and nationalist parties, who try to delay action on climate change, either by literally denying scientific knowledge about the climate, alternatively, by spreading discourses of delay to fend off governmental action regulating carbon emissions. Both climate denialism and discourses of delay constitute and are constituted by broader cultures of ignorance or socially organised denial. Efforts to communicate more knowledge about the climate sciences to the public have mostly proven ineffective, arguably because cultures of ignorance are embedded in the high-carbon lifestyle of most inhabitants in industrialised countries. The latter kind of climate obstruction is sometimes spoken of as response or implicatory denial, where the scientific facts are acknowledged, but the will to act accordingly is missing.

This workshop aims to investigate the connection between climate obstruction by elite actors, and cultures of ignorance and everyday complacency among the lay population. We invite both empirical and theoretical fully drafted manuscripts which address questions such as:

- Is it possible to combat elite climate obstruction without breaking free from a culture of ignorance?
- How are discourses of delay that are pushed by elite actors perceived by the population at large?
- How do cultures of ignorance support fossil fuel extractivism, and how does elite climate obstruction help sustain cultures of ignorance?
- What strategies have elite actors adopted to cater to preexisting concerns and values among the public and specific demographies?
- What are the historical precedents of present-day climate obstruction, and what can these cases tell us about the interplay between elite actors and lay populations in maintaining cultures of ignorance?

Bibliography

Brulle, R. J. et al., eds. 2024. Climate Obstruction across Europe. New York, NY: Oxford University Press.
Lamb, W.F. et al. 2020. Discourses of Climate Delay. Global Sustainability 3: e17, 1–5.
Norgaard, K.M. 2011. Living in Denial. Cambridge: The MIT Press.
Oreskes, N. and Conway, E. 2011. Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming. New York: Bloomsbury Press.

Convenors

Kjell Vowles, Department of Sociology and Work Science, University of Gothenburg, Sweden
Johan Söderberg, Linguistics and Theory of Science Unit, Gothenburg University, Sweden
Victoria Vallström, Department of Sociology and Work Science, University of Gothenburg, Sweden

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Amidst the 2021-23 energy crisis, many European governments took decisions to support their citizens with rapidly increasing energy costs. However, in countries like Sweden and Finland, some of the subsidies were based solely on households' energy expenditure. These subsidies benefited anyone with high energy costs – including high-income households with high electricity bills (Ahlvik et al. 2023). At the same time, households that decreased their consumption in response to price hikes and societal pressure were left with a smaller subsidy. The case exemplifies how policies that could alleviate energy vulnerability may benefit wealthier households and normalise high levels of consumption.

This workshop addresses the contradictions of energy vulnerability and justice within contexts of 'overconsumption'. We understand overconsumption as a concept-in-making (e.g. Kjellberg 2008) and direct attention to how the concept is enacted in debates on energy justice. In addition to questions of access and distribution, the workshop invites broader perspectives on the ethics of energy production, consumption, and policies. This includes perspectives on how people and governments make ethical judgements related to energy (Smith & High 2017, 2019), how environmentally and economically 'efficient' policies may fail to account for questions of social justice (Jalas & Numminen 2022), as well as how wider patterns of power imbalances are linked to energy poverty and inequality (Vahnberg & von Platten 2025).

We invite fully drafted manuscripts focused on various contexts across the globe. The workshop may include perspectives on household energy questions, energy production, energy infrastructures, as well as transport. We also welcome papers that connect energy justice and ethics to climate change and/or natural resource use.

Papers in this workshop may be related, but not limited to:

- How is 'overconsumption' understood in relation to energy use?
- How and why do certain patterns of energy consumption become necessary?
- How are energy justice and vulnerability addressed in contexts of, and in connection with, overconsumption?
- How do infrastructural, technical, or political energy solutions and initiatives frame and address overconsumption?
- How can academic knowledge on overconsumption inform policy-making? What other knowledge-users are there?
- What kinds of broader social, material, temporal, and economic relations drive energy poverty and inequality in particular settings?

Convenors
Sini Numminen, Department of Design, Aalto University, Finland
Jack Vahnberg, RISE Research Institutes of Sweden, Malmö University, Sweden
Jenni Viitala, Department of Design, Aalto University, Finland
Mikko Jalas, Department of Design, Aalto University, Finland

Between pride and shame: Navigating social conventions of vacations

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Vilde Blix Huseby[1]
[1] Department of Sociology and Human Geography, University of Oslo

Introduction: Understanding how and why high-impact consumption practices evolve, change and become understood as "necessary" is critical for informing sustainability transformations. Energy consumption from vacations is particularly interesting due to its significant emissions, especially from long-distance flying—a practice that has shifted from rare to expected in just decades. Despite public discourse on flight shame, actual behaviors remain unchanged: In 2024, the hottest year on record, international aviation surpassed pre-pandemic levels. This study uses social practice theory and the sociology of emotions to examine how vacation practices become normalized and persist.

Methods: Vacations are often planned and negotiated collectively. Data for this study come from qualitative analyses of group interviews and visual methods with 20 urban Norwegian families (N=92), spanning two and three generations (ages 9-84), conducted between October 2023 and March 2024. Norway offers a strategic case due to its wealth, generous vacation policies and high flight-frequency. Group interviews and visual methods are well suited for analyzing norms, emotions and collective ethical reasoning.

Results: Findings reveal a tension between emerging climate ethics and entrenched cultural conventions. While few families alter vacation behaviors, many express guilt or feel they "should" feel guilt, as well as engaging in justification—signaling evolving climate norms. These norms are countered by strong cultural conventions of holidaying, emphasizing variation, travel and novelty. Interviews are coded for also emotional responses such as shame, pride, joy and anger. Shame appears both for climate-unfriendly holidays and for vacations perceived as insufficiently "exciting." This interplay creates a shame/ pride nexus, with emotions shifting depending on context. Ethical awareness is present in terms of reflections on overconsumption, but rarely on global energy justice, and is often overridden by social expectations and relational dynamics.

Conclusions: To meet social conventions, individuals must both demonstrate travel competence (often implying high emissions) and climate awareness. These conflicting expectations create a "double bind," producing contrasting emotional strategies and potentially hindering climate-friendly behavior. Addressing this tension requires policies and narratives that can recognize and reshape cultural norms around what constitutes a "good" vacation.

Disentangling contrasting and coexisting narratives about forest-based bioenergy and its environmental implications

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Anna Berg Grimstad[1]
[1] Natural Resources and Sustainable Development, Department of Earth Sciences, Uppsala university

Introduction: Forest-based bioenergy is contested around the world, so also in Sweden. Overlapping and inconsistent narratives exist concerning the environmental sustainability of using forest-based bioenergy. A core challenge is related to the associated and contradictory claims to scientific authority that exist within the narratives and how these are used to legitimate contrasting views on the environmental sustainability its use, which raise questions about how knowledge claims regarding its environmental effects are established. This can for example be seen in Sweden, where forest-based bioenergy plays a key role for environmental governance and researchers' views diverge regarding the effects of its use on climate change and biodiversity loss. In this study, I deepen the understanding of these multiple claims by asking Swedish researchers how they define forest-based bioenergy, what they perceive the effects are for climate and biodiversity, and what they base their understandings on.

Methods: The study comprises 17 interviews with researchers from different disciplines who have been identified as experts in the field of forest-based bioenergy in Sweden.

Results: I identify multiple ways of defining forest-based bioenergy, in terms of what bioenergy is and how it becomes known. The findings highlight how perceptions of its environmental effects depend intimately on methodological and normative choices, including spatial and temporal boundaries. I discuss the implications of these multiple science-perspectives on bioenergy in relation to policy narratives that seek to present clear and coherent stories of how climate and biodiversity can and should be governed synergistically.

Conclusions: The study contributes to an understanding of how epistemic assumptions, storytelling, and disciplinary imaginaries influence scientific knowledge claims. It thereby engages with wider literature on the politics of environmental knowledge and the ways in which scientific knowledge claims are mobilised in policymaking, and how this influences perceptions around sustainable futures.

Enacting energy justice in the context of data centres and overconsumption in California, US - more affirmative or prohibitive justice?

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Darren McCauley[1]
[1] Newcastle Law School, Newcastle University, UK

Introduction: Data centres and AI are driving major spikes in energy consumption across developing world contexts. The requirements of AI for excessive energy production means that new dimensions of energy justice are being experienced. These dimensions are different to those experienced in the past. They focused on visibly evident inequalities emerging from energy production sites like coal or gas plants. The level of investment in AI presumes a new form of energy consumption, not from people directly but rather data centres. How can we understand these new inequalities? And more importantly, how can we address this new form of overconsumption?

Methods: This paper uses interview data from a project centred on California, US. It explored energy production questions surrounding the demands of AI. This opened up a new discussion on overconsumption, now assumed through increased AI use. Over 40 interviews were conducted, analysed and reflected upon. They began with legal questions of production, leading to necessary insights into the real questions of how to deal with over-consumption.

Results: The results focus on affirmative and prohibitive justice solutions to this over-consumption. Affirmative justice poses the key question – whose rights should be increased in such a context? This raised new insights into the right to be disassociated with new forms of AI over-consumption. In short, interviewees argued – when did we all buy into the assumption that over-consumption AI is for everyone when it really serves the interests of few. On prohibitive, new answers open up on the need to regulate a new demand for data centres to be forced to develop their own energy sources, and draw on national grid systems.

Conclusions: A new legal geography of AI-driven over-consumption is upon us - and some answers are emerging.

Nuclear childhoods: Exploring children's roles in energy transition and nuclearity

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Karin Edberg[1]
Yelyzaveta Hrechaniuk[1]
[1] Linköping University

Introduction: A period characterized by negative attitudes toward nuclear power has recently been challenged by a more nuclear-positive political narrative in countries worldwide, including Sweden. As the political turmoil persist, the establishment, operation, and decommissioning of nuclear infrastructures are embedded in lived landscapes and intersect with everyday life—not only for adults but also for children, whose perspectives have been largely absent from energy scholarship despite their proximity to industrial communities and their exposure to the distant effects of energy production.

Methods: This article introduces ***Nuclear Childhoods*** as a conceptual lens to examine how children and childhood are mobilized within nuclear narratives, policies, and imaginaries, and to foreground children's diverse experiences and knowledges of nuclear power. The arguments are illustrated by examples from the authors' earlier research and advances an agenda for just energy transition studies and childhood studies.

Results: We consider nuclearity as heterogeneous across space, time, and social position, and as impossible to separate from the social political and spatial relations that brings it to life (Hecht 2012). We further argue that children occupy a particular place in this heterogeneity: they are simultaneously targets of adult-oriented explanations (via education, media, and popular culture) and agents with their own situated understandings. Moreover, idealized tropes of "the child" and "future generations" are frequently invoked to justify or contest nuclear trajectories, while concrete mechanisms for children's inclusion in decision-making remain rare.

Conclusions: Empirically anchored in Sweden yet conceptually portable, Nuclear childhoods, in plural, are diverse and situated, and draws attention to children's lives that in significant and tangible or intangible ways intertwine with nuclear energy nearby or far away. As shown in this article, the nuclear experience can be of a mundane everyday character as well as an incumbent more-or-less abstract risk. It also involves both the playful and the serious, in children's own experiences as well as in the adult portrait of nuclear. Nuclear childhoods encompass that ambiguity.

Power over energy: Integrating the missing concept in energy poverty research through the Nordic case

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Jack Vahnberg[1, 2]
Sini Numminen[3], Jenny Von Platten[4], Jenni Viitala[3]
[1] Malmö University
[2] RISE Sweden
[3] Aalto University
[4] Stockholm Environment Institute

Introduction: Energy poverty research has recently been criticized for lacking a coherent theoretical basis, and being unable to inscribe the phenomena in a broader social and political context. This theoretical lack has been described as leaving the field without a complete causal explanation for why some households experience inadequate household energy services. One consequence of the patchwork of theories and measures is that the Nordic countries have long been excluded from research on energy poverty based on claims that energy poverty is negligible in the context.

Methods: In this paper, we wish to develop the theoretical understanding of energy poverty as a consequence of capital inequality and the power that capital ownership entails. We situate this theory in the dichotomy of affordability and access, as well as the divide between the Global South and the Global North. We follow this by examining several specific institutional and infrastructural cases of varying degrees of energy access in the Nordic context. These cases will vary across scale and policy contexts, with examples from rental, cooperative and single-family housing, district heating and energy grids, and let us try and flesh out the theoretical apparatus of energy poverty as a matter of uneven access caused by unequal distributions of power.

Results: Empirical research has begun to show that energy poverty does exist in the Nordic context, in contrast to theoretical expectations. We expect that a closer look at the institutional and infrastructural cases from a rigorous theoretical lens will make the existence of energy poverty in the Nordics understandable while simultaneously reconciling existing dichotomies and make conceptual contributions to the field. Moreover, we expect that a broad range of case studies across scales also show how ownership lends power in different specific ways depending on institutional context, and how that affects households' energy access differently.

Conclusions: Centering ownership and power at the center of energy poverty theory has the potential to unify a larger share of phenomena, overcoming the affordability/access divide that often follows a Global North/South dichotomy in the literature. Given the specific institutional focus, we also see the potential for very specific and novel policy suggestions.

Power to the People: The Local Economic Effects of Renewable Energy Communities

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Joël Bühler[1]
Gökhan Dılek[1]
[1] Governments and Markets Research Group, Applied Economics Institute, Universitat de Barcelona, Spain

Introduction: Local resistance to renewable energy developments because of perceived externalities increasingly threatens the rapid expansion of renewable energy capacity (Susskind et al., 2022; Schütt, 2024; Jarvis, 2025). However, some renewable projects may overcome or mitigate such conflicts through governance arrangements that internalize local costs and benefits. A prominent example are Renewable Energy Communities (REC), where citizens collectively own and manage renewable installations. We investigate whether renewable energy plants increase local income and employment, and whether community ownership mediates these effects. Existing evidence, largely from case studies and modelling exercises, suggests that RECs generate stronger local economic benefits than investor-owned plants (Lantz and Tegen, 2009; Farrell, 2014; Kienbaum et al., 2023; Community Energy England, 2024). Our study adds to the quantitative literature exploring the local economic effects of renewables (e.g., Brown et al., 2012; Mauritzen, 2020; Fabra et al., 2024; Serra-Sala, 2024) by differentiating between the effects of REC and commercial renewable plants.

Methods: We compile a novel panel dataset combining administrative and open data sources from Wierling et al. (2023), the Renewable Energy Guarantees of Origin (REGO) list from the Office of Gas and Electricity Markets (Ofgem) and aggregate it to Local Authority Districts (LADs) using shapefiles from the Open Geography Portal. Local income (Gross Disposable Household Income, GDHI) and employment indicators are sourced from the National Online Manpower Information System (NOMIS). Our empirical strategy leverages the continuous difference-in-differences (DiD) estimator developed by de Chaisemartin and D'Haultfoeuille (2024) to estimate the effect of the cumulative renewable energy capacity on income per capita in each LAD. We also explore potential short-run "construction period" effects using monthly data, identifying temporary deviations in employment outcomes around commissioning years.

Results: Preliminary results suggest that solar plants, regardless of ownership, do not significantly affect local income per capita, though REC solar plants show modest positive and significant effects in some specifications (between £112 and £186 per capita). Wind plants appear to generate stronger local income gains, particularly for investor-owned projects and in places where community benefit payments from commercial projects are common practice.

Conclusions: Community engagement practices play a role for local economic effects of renewable energy plants.

The Domestication Of Energy Technologies In the Dutch Energy Transition: Practices, Resistance, and Adaptation of Technology in Social Housing

23. Energy justice, ethics and policies in contexts of 'overconsumption'

Simone Van Wieringen[1]
Kyra de Korte[2]
[1] Department of Geography, Planning and Environment, Institute for Management Research
[2] Interdisciplinary Hub for Digitalization and Society, Radboud University, Nijmegen, the Netherlands

Introduction: Current energy policy often frames the Dutch energy transition (ET) aimed at a more sustainable housing stock as a primarily technical challenge, portraying domestic energy technologies (DET) as panaceas (de Korte et al., 2025). Yet DET can produce unforeseen harms when the 'problems' they are intended to solve are poorly defined, a phenomenon known as *technosolutionism* (Siffels & Sharon, 2024). By overlooking social, cultural, and justice-related aspects of everyday energy use, technosolutionism fails to capture the complexity of life in households. The domestication framework offers a valuable alternative, conceptualizing technology adoption as a dynamic, non-linear, and socially embedded process (Juntunen, 2014; Silverstone & Hirsch, 1994). This lens allows us to examine whether and how DET are adopted and embedded, revealing the frictions, adaptations, and negotiations shaping their everyday use in housing.

Methods: Our study is based on ethnographic home visits in social housing and photography. Since tenants have less control over the DET in their homes, the potential harms of technosolutionism are particularly visible. In addition, we conducted in-depth interviews with tenants and professionals such as social workers, energy coaches, and maintenance workers. Together, the data show how DET often clash with situated practices.

Results: Through the domestication lens, we observe how DET are or fail to be integrated into everyday practices. Technologies may break down, fail to meet comfort needs, or be actively adapted or resisted, such as solar panels underperforming, additional heaters being used, or a blocked mechanical ventilation system to reduce noise. These processes show how residents negotiate the functioning of technologies, actively shaping their use rather than passively accepting them. These adaptations can lead to overconsumption of energy, highlighting tensions between intended efficiency and actual household practices.

Conclusions: The situated adaptations of DET directly affect ET goals, yet are often overlooked in policy and design, remaining invisible and rarely recognized as legitimate engagement with DET. We conclude that the adoption of DET can go wrong at various stages in the domestication process. When implementing DET, consideration must be given to how people become accustomed to technology and incorporate it into their daily lives rather than promoting a technosolutionist future.

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

In this session we explore the so-called “labour-recognition-transformation hypothesis” (Eisen 2020) which states that work that people do with animals can generate moral intuitions and social practices that help to reconnect people with nature. For this purpose we invite studies of human-animal work that scrutinize this hypothesis. Examples of human-animal work that we have in mind here include (but are not limited to) animal traction, (silvo)pastoralism, beekeeping, and even mutualistic human-wildlife cooperation.

Consideration of human-animal work is often missing from recent proposals for transformative change. Human-animal work, and the knowledge and skills that this work requires, is recognised for its cultural-historical value, but is largely considered as irrelevant for transformative change due to its reliance on labour-intensive technology, low economic profitability, hard physical labour, but also assumptions about animal abuse and overexploitation of ecosystems. However, evidence from rural sociology, agroecology and conservation biology, as well as the repeasantisation of rural areas suggests that these modes of land use can offer a radical and promising alternative to modern agriculture which is responsible for 86% of all species currently threatened with extinction.

We are inviting fully drafted manuscripts that integrate sociological, philosophical, and biological theories, together with case studies representing different landscapes and practices of human-animal work, to examine how human-animal interdependency is shaped through work, and how the work influences human morals and values related to sustainability concerns. We are also interested in analytical studies that theorise and conceptualise human-animal work as forms of resistance, and meaningful alternatives, to a trajectory of agrarian and rural mechanization and intensification that is responsible for the alienation that comes from the widening divide between natures and modern societies.

We aim to use this session as a springboard for a special issue of scientific publications that introduce the under-appreciated potential and limitations of human-animal work to (re)generate sustainability transformations for a broad scientific audience interested in sustainability matters.

References

Eisen, J. 2020. Down on the Farm: Status, Exploitation, and Agricultural Exceptionalism. In: C.E. Blattner et al. (eds.), Animal labour: A new frontier of interspecies justice. Oxford: Oxford University Press, pp. 139-159.

Convenors

Wynand Boonstra, Natural Resources and Sustainable Development, Department of Earth Sciences, Uppsala University, Sweden
Anna Skarin, Department of Applied Animal Science and Welfare, Swedish University for Agricultural Sciences, Sweden
Andrea Pettit, Anthropology Lab, University of Liège, Belgium

"Other than" as meaningful alternative: Theorising the transformative meaning of relational practice in human-animal assemblages

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

Kajsa Resare Sahlin[1, 2]
[1] University of Cape Town
[2] Swedish University of Agricultural Sciences

Introduction: Within contemporary capitalist food systems, science and activism are attempting to enact alternative food realities through advocacy for *other* farming and eating practices, including for example organic and ideas of "less but better" meat. What constitutes *otherness* and alterity is however poorly theorised regarding the efficacy of such ideas to be, and speak to, transformations of food. In her critique of the "labour-recognition-transformation thesis", Eisen (2020) concludes that human-animal work relations moulded through *kinship* are more meaningful ways forward for exploring transformative change. This paper expands on her call by aiming to contribute some of the ontological groundwork.

Methods: I will weave the works of Annemarie Mol on theorising eating (Mol, 2021), and Karen Barad's agential realism (Barad, 2007), and use publicly available historical records of *fäbodbruk* – Nordic transhumance – as a case. *Fäbodbruk* was historically widespread in Sweden, Norway and parts of Finland, and is still practiced across the region – although contemporarily in stark contrast to dominant human-animal relational arrangements in farming. As such, I use it as an illustrative example of *other* human-animal relations, and work based on the assumption that the shared activities and multispecies labour in the feeding/eating of a *fäbod* capture the notion of kinship.

Results: Approaching transformative change as ontological, in this paper, I draw on new materialist thinking to explore how *other than* modernist, industrialised relations in human-animal assemblages matter, thereby providing insights into how other ways of being and relating to non-human animals are *real* forms of enacting meaningful alternatives to mainstream food.

Conclusions: This paper is therefore expected to contribute to theorisation of enacting food system change, concretise notions of *otherness* and meaningful change in human-animal farming relations, as well as continue the conversation between theories/thinkers related to food and farming.

Affect and Emotion in contestations about the Wolf in the Netherlands

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

Femke Hoekstra[1]
[1] University of Groningen, Integrated Research on Energy, Environment and Society, and European Language and Culture, The Netherlands

Introduction: In the Netherlands, contentious politics regarding the wolf and current established management efforts and policies are showing similarities to those in other European states. Since the reemergence of wolves, conflicts about the wolf seem polarised. One camp in opposition to the wolf to secure livestock, landscapes, and (human) life, the other camp in favour of the wolf for advancing ecological values and giving space to 'wild' or 'natural' forces that have rights of their own. The summers of 2024 and 2025 showed heightened pushback against wolf management practices and against the wolf more generally, sparked by two so-called problem wolves. With the lowering of the legal level of protection of the wolf under an amendment to the EU Habitats Directive, and these wolves being perceived as threats, protest actions surrounding killing permits emerged. In light of recent explorations into wolf conflicts, which link it to populist tendencies (Zscheischler and Friedrich 2022; van Velzen 2025), post-political practices (Komi 2025), but also affirmative biopolitics (Donfranscesco and Sandbrook 2025), I want to extend these efforts by asking how affect and emotions relate to contentious politics surrounding the wolf in the Netherlands. Especially, to inquire into how these contestations relate to literatures uncovering how conflicts are central to both sustainability transformations and democracy (Pichler et al. 2020, 199; Kalt 2024; Mouffe 2000, 33).

Methods: In the research, an affective-discursive analysis (Wheterell 2015) will explore how affect and emotion function in producing meanings, imaginations, power relations, and the political. By focusing on public circulations (mainly newspaper sources) of contestations in the last two years, this case study involves discursive accounts of push-back processes against the wolf as spontaneous rewilding and policy decisions regarding wolf culling.

Results: Some expected results are that emotions are underlying contentious political acts and tied to imagined truths regarding wildlife and appropriate policy, but also (in)utilised to (de)stabilise perspectives towards wolves, in the end, all reinforcing post-political practices.

Conclusions: Overall, the dynamics of policy reversal and perceived or imagined impacts are investigated with attention to the populist and post-political context and a focus on power relations by including an emotional turn.

Cross-Country Learning for Coexistence: Evaluating Governance of Pastoralism and Wildlife in Europe

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

Auvikki de Boon[1]
Katrina Marsden[2], Carlos J. Durá-Alemañ[3], Eleni Kollia[4], Olve Krange[5], Aleksandra Majić Skrbinšek[6], Filippo Marino[7], Daniel Martín-Collado[8], Nino Leporini[9], Luise Meissner[10], Agnieszka Olszańska[11], Jānis Ozoliņš[12], Agata Pietrzyk-Kaszyńska[11], Mihai Pop[13], Maria Psaralexi[4], Robin Rigg[6], Evangelos Theodosiadis[4], Eduardo Torres[8], Juliette Young[9], Camilla Sandström[1]
[1] Department of Political Science, Umeå University
[2] Biodiversity and Water Programme, Adelphi research
[3] Institute for Advanced Social Studies of the Spanish National Research Council (IESA-CSIC)
[4] Callisto- Wildlife and Nature Conservation Society
[5] Norwegian Institute for Nature Research (NINA)
[6] Biotechnical Faculty, University of Ljubljana
[7] Istituto di Ecologia Applicata (IEA)
[8] Department of Animal Science, Agri-Food Research and Technology Centre of Aragon (CITA)
[9] UMR Agroécologie, INRAE
[10] Agricultural Landscape Systems, Leibniz-Centre for Agricultural Landscape Research (ZALF)
[11] Institute of Nature Conservation, Polish Academy of Sciences
[12] Wildlife management, LSFRI ''Silava''
[13] Wildlife Management, Research and Development Institute for Wildlife and Mountain Resources

Introduction: The resurgence of large carnivores across Europe represents a biodiversity success but has reignited conflicts over wildlife damage, especially livestock predation and safety concerns. These tensions pose significant challenges for rural communities and pastoralists and risk undermining biodiversity values linked to traditional pastoral practices, creating trade-offs between different aspects of biodiversity. Addressing this complex socio-ecological challenge requires coordinated policy mixes across sectors to meet diverse stakeholder needs and mitigate human-wildlife conflicts. However, as pastoralism and wildlife policies have evolved over time through incremental adjustments, the resulting landscape has become an intricate policy assemblage that is difficult to navigate, and it is not always clear whether policies complement each other or create unintended conflicts. Disentangling this complexity and examining how, and to what extent, the pastoralism and wildlife policies work together is essential to enable a future that secures and values pastoralists' presence whilst ensuring that Europe's wildlife can continue to recover. This paper maps the pastoralism–wildlife policy landscape across 12 European countries, examining policy-making and implementation processes and identifying key actors. We explore opportunities for cross-country learning and provide policy recommendations at EU and national levels.

Methods: Our analysis focuses on policy consistency, process coherence, overall comprehensiveness, and environmental justice considerations. Building on a policy mix framework enriched with insights from environmental justice literature, we conduct a scoping review of policy

documents and scientific- and grey literature. The document analysis is further complemented with expert input and results from a survey exploring stakeholder perceptions regarding the policy landscape.

Results: The policy landscape has been mapped for the individual countries. Country specific results are currently being compared. Preliminary results indicate considerable variation in governance approaches between the countries, but overall, the policy landscape is fragmented, characterised by incoherent processes, weak element consistency, and policy mix incomprehensiveness.

Conclusions: Based on preliminary results, we conclude that there is an urgent need for better coordination between policy processes within and across the agricultural- and environmental sector. More attention also needs to be paid to better align policy elements. Finally, more focus needs to be placed on addressing all underlying dimensions of pastoralism-wildlife interactions, beyond solely economic impacts.

Encountering Seaweed: Life In and Beyond Macroalgae Farming Through Lived Experience of Farmers

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

Xiaoxuan Sophie Meng[1]
[1] Human Ecology Division, Department of Human Geography, Faculty of Social Sciences, Lund University

Introduction: Macroalgae farming has been a production adopted by communities to get out of poverty. In recent years it has captured more attention for the potential of carbon dioxide removal. This study dived into two major farming regions in China to study the local living worlds, and ask: how do villagers experience and make sense of their farming, ways of life, and environments? By asking that, I intend to explore human-nonhuman interplay through their sea-based life, and how such interplay acts against the backdrop of modernization and mechanization.

Methods: This study adopted a feminist approach to ground the study in perceptions and experiences of coastal villagers. Data were collected mainly through ethnographic interviews, complemented by village visits and document research, and the analysis was guided by Braun & Clark's Reflexive Thematic Analysis. The primary data consist of eleven semi-structured in-depth villager interviews, accompanied by secondary data of twelve documents including local archives and relevant policy and technical papers to situate the study.

Results: Villagers' arrangement of everyday work and life is with rhythms of their physical world. Their locally attuned lifestyle is not merely an attitude of willingness—it's an empirical learning process through which the villagers negotiate with local dynamics to achieve a responsive coexistence. They not only build local ecological knowledge relationally, but live by a relational sense of time that assist their agricultural planning. What's more, in developing "parent" and "child" connections with ocean and macroalgae through working, villagers see themselves as assistants rather than chiefs, supporting the growth of macroalgae instead of growing them.

Conclusions: Through this study, I argue that by re-embedding the ecological functions of human-nonhuman work to the relational organic dynamics from which they emerged in the first place, we could start activating a capacity to act beyond the dominant social order and create alternatives. The countermovement, as in Polanyi's theory of double movement, needs to be considered in terms of the more-than-human world instead of just the human society, because entanglements do not stop with social relations, and impacts go beyond the human race.

More-than-human skilled visions: Farmers, bovines, and critters working for regeneration

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

Hanna Wernersson[1]
[1] Gothenburg University

Introduction: Regenerative agriculture has emerged as a reaction and response to the unsustainability of modern agriculture. In Sweden, regenerative agriculture materialize as a grassroots movement of farmers that aim to minimize use of synthetic inputs and instead mimic natural rhythms and logics to revitalize agroecosystems. Central to regenerative farming is to go beyond narrow productivist logics to imagine and practice changed ways of farmer doings and beings.

Methods: In this article, I draw on one-year ethnographic fieldwork on five regenerative farms across Sweden, and focus on the epistemologies of regeneration. The regenerative farmers hold that the vast complexity of ecosystems can never be fully grasped: they need to learn how to *not* know. Thinking with Eduardo Kohn's more-than-human semiotics and Christina Grasseni's skilled vision, I suggest that not-knowing, in regenerative farming, simultaneously enables and is managed by developing a multispecies skilled vision. The regenerative farmers are never farming alone but work to develop a sensitivity to epistemologies beyond the human through seeing, smelling, feeling, tasting, sensing.

Results: The regenerative farmers' ways of knowing are reflective of their experience of, and ways of relating to, their lands. To read the landscape through non-logocentric sign modalities builds on an engagement with nature as wise and lively; recognizes the subjectivity and know-how of other beings in the landscape; and it is reflective of the farmers' strive to unlearn and resist the dominant discourses and knowledges that order Swedish farming in modernity. Not-knowing, thus, operate as a form of Foucauldian ethics that govern the regenerative farmers' behavior.

Conclusions: It follows that the farmers' know-how is shaped by the laboring context of this knowing. It is to get particular—*regenerating*—farm work done in the landscape that the farmers learn to attune to signs of multispecies information. Thus, the regenerative epistemology is simultaneously an ethical good and a necessity to maintain a particular agricultural production; it is a critique of farming according to narrow productivist logics *and* an engine for productivity. The regenerative epistemology, thus, brings to the fore that what is unconsolidated and challenging, porous and promising in the practice of regeneration.

Why farmers work with horses

24. Working with animals to overcome the nature-society divide? Exploring the potential of the work that people do with animals for transformative change

Wynand Boonstra[1]
[1] Department of Earth Sciences, Uppsala University

Introduction: The central role of the draft horse as a source of labour marginalized with the introduction of fossil fuel in agriculture. But there have always remained communities of farmers that continued using horses to farm. The purpose of this paper is to first understand and explain why nowadays some farming communities continue to work with horses, and second to use these results to discuss the (lack of) significance of horse farming for the transition to post-growth farming, agrarian and rural development. Farming with horses can improve soil health, reduce fuel and chemical use, lower maintenance costs, contribute to food security and resilience in the face of crises or resource scarcity, and offer opportunities to do work that is experienced by people as deeply meaningful, skill imposing, and rewarding. Yet, farming with horses remains recognised only for its cultural and historical value, but often deemed irrelevant for transformative change.

Methods: Using an eclectic and wide choice of qualitative empirical material I will describe six reasons why farmers nowadays continue to work with horses.

Results: Farmers have continued to work with horses for environmental and economic arguments, but also because they want to keep autonomy over their work, the scale of their farm, and experience work as meaningful. Finally, farmers also work with horses because they like horses. Based on these descriptions I will discuss how the practices of horse farmers as teamsters, tinkerers, and teachers have contributed to an alternative style of farming – a *subagriculture* – that holds promise for post-growth farming, agrarian and rural development focusing on ecological sustainability and self-reliance.

Conclusions: Although farming with horses can make a potential important contribution to the transition to farming, agrarian and rural development that centres on ecological sustainability and self-reliance, there are a number of concerns remaining. First, the transformative potential of farming with horses is not commonly recognized. Second, the skills and knowledge that the horse farming community represents is quickly disappearing. More knowledge and recognition of the contribution and role of horses in agroecology, regenerative farming and meaningful work is needed to help realise the transformative potential of this form of subagriculture.

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

While energy transition is urgent and promises broad societal benefits, it also risks aggravating existing injustices and land use conflicts. In this workshop we direct specific focus on the disproportionate burdens increasingly placed on Indigenous peoples by energy transition policy and projects, globally and in the Nordics. Such industrial (re)expansion on Indigenous territory is often framed as green transition but is increasingly contested and questioned as expressions of green colonialism or green sacrifice.

The importance of critical social science scholarship is increasingly recognized to examine and address such tensions, including power disparities and the inherently political dimension of transition policies and project implementation. Concepts such as “just transitions” or “just transformations” are quickly coming in-demand in both academic and policy circles. This simultaneously raises important questions on how benefits and burdens are divided across social groups and scales, what justice means for those impacted, how rights and rights-holders are respected and fairly treated, and who has a say in determining what futures – and what human-environmental relations – we seek transitions towards? How can research contribute to the implementation of corporate responsibilities and state duties to protect and uphold Indigenous rights under increasing pressures and colliding societal goals and values?

This workshop invites fully drafted manuscripts that engage in this complex nexus of transition, justice, coloniality, Indigenous rights and land use politics. We welcome both empirical, theoretical and transdisciplinary elaborations from Sápmi and beyond. In the workshop, we devote time to discuss comparative learnings across the different cases, sectors and geographies.

Convenors

Annette Löf, Rights and Equity, Stockholm Environment Institute, Sweden
Rasmus Kløcker Larsen, Stockholm Environment Institute / Uppsala University, Sweden
Katarina Inga, Stockholm Environment Institute / Mittuniversitetet/ Gaskeuniversiteete, Sweden

Collaborative governance under pressure: Sámi-industry agreements in the green transition

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Elsa Reimerson[1]
[1] Umeå University, Department of Political Science

Introduction: Negotiated agreements between extractive industries and Indigenous communities are increasingly promoted as instruments for conflict mitigation and participatory governance in resource and energy transitions. This paper examines agreements between a mining company and two Sámi reindeer herding communities in northern Sweden. These agreements aimed to structure consultation and negotiation regarding mineral extraction on Indigenous lands. While such arrangements are often framed as collaborative and just, questions remain about their ability to safeguard Indigenous rights under conditions of structural inequality – particularly as mining for critical minerals is justified as essential for the global green transition.

Methods: The study draws on an evaluation commissioned by the parties to inform renegotiation or renewal of the agreements. Data sources include the agreements themselves, meeting minutes, and semi-structured interviews with representatives of both parties. The analysis applies the Integrative Framework for Collaborative Governance (IFCG), which considers contextual factors, institutional arrangements, and interaction dynamics within collaborative processes.

Results: Preliminary findings indicate that the agreements have improved procedural clarity and provided a platform for dialogue. However, significant challenges persist in clarifying goals, operationalizing principles such as Free, Prior, and Informed Consent (FPIC), and addressing power asymmetries. Resource allocation and mechanisms for follow-up remain weak, and adherence to international human rights guidelines is inconsistent. These gaps limit the agreements' capacity to deliver substantive justice.

Conclusions: The study suggests that while negotiated agreements can offer tailored solutions and reduce uncertainty, they often struggle to overcome structural inequalities inherent in extractive governance. This raises critical questions about whether project-specific collaboration can ensure Indigenous rights in the context of global energy and resource transitions. By situating these findings within broader debates on justice and consent, the paper contributes to understanding the limits and possibilities of collaborative governance on Indigenous lands.

Competing perceptions of (in)justice in sustainability transitions – the case of Sámi reindeer herding and industrial forestry in Sápmi/Sweden

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Kaisa Raitio[1]
Anna Hjelm[1]
[1] Swedish University of Agricultural Sciences SLU

Introduction: If the rapidly increasing academic and policy debates on just transitions are to make a difference on the ground, it is critical to attend to the policy actors' multiple interpretations and contestations around the concept itself. How do different actors conceptualise justice, and what role do these understandings play in creating/obstructing change towards more just and sustainable land and resource use?

Methods: Decades of environmental conflict research has shown that shifting actors' contradictory perceptions (frames) is key to making progress in land and resource conflicts. While conflict analysis has typically focused on actors' ways of framing a conflict itself, in this paper we apply frame analysis to studying actors' perceptions of justice, or 'justice frames'. We seek to understand whether the failure to find mutually acceptable ways forward in protracted conflicts between Sámi reindeer herding and industrial forestry in Sweden could be related to differences in how the actors define what is (in)just. We used public statements and 11 semi-structured interviews to analyse Sámi, corporate and state authorities' perceptions on the three dimension of environmental justice in forestry planning: recognition, distribution and procedural justice. We also looked at the extent to which structural (in)justice was mentioned in the different frames.

Results: Despite four decades of institutionalised dialogues between Sámi reindeer herding communities (*samebyar)* and forestry corporations, the level of conflict caused by the adverse impacts of forestry on reindeer pastures remains high. Forest companies and reindeer herding communities have overlapping, legally recognised property rights to same land. Due to Sweden's colonial legacy, however, the reindeer herding rights - and the rights of the Sámi as an Indigenous people - are absent from the sectoral regulations on forestry, paving way for multiple interpretations over both legality and justice. Our results show significant differences in the reindeer herding and forestry actors' justice frames, as well as in the extent to which the different frames highlight/omit the structural injustice caused by the regulatory gap between sectoral regulations and the rights of Sámi reindeer herding.

Conclusions: TBA

Energy transition or energy expansion? Challenging un-green imaginaries

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Vanessa Masterson[1, 2]
Lisa Deutsch[1], Amanda Jiménez-Aceituno[1], Luís Gustavo de Lima Sales[3], Ricélia Maria Marinho Sales[3], Michele-Lee Moore[1, 4], **Hanna Sinare**[1], Taís Sonetti González[1, 5], May-Britt Öhman[6]
[1] Stockholm Resilience Centre, Stockholm University, Sweden
[2] Department of Anthropology, Rhodes University, South Africa
[3] Centre for Agro-Food Science and Technology, Federal University of Campina Grande, Brazil
[4] Department of Geography and Centre for Global Studies, University of Victoria, Canada
[5] Geoscience Institute, State University of Campinas, Brazil
[6] Centre for Multidisciplinary Studies on Racism, Uppsala University, Sweden

Introduction: Sweden and Brazil are investing in large-scale industrial wind energy expansion but the particular socio-spatial imaginaries used to justify their development in Indigenous territories and unique ecosystems reveals critical sustainability and justice dilemmas. In Sweden, Norrland is presented by the State as 'the land of the future' (Össbo, 2025), important for greening energy and steel production. In Brazil, over 70% of wind energy occurs in the sparsely populated, but fragile Caatinga Biome.
Methods: We weave together Indigenous knowledge and empirical data (from completed interviews, and planned analysis of social media and other secondary sources), and conceptual analysis from two cases - in Norrland, in Swedish Sápmi, and in Quilombola community lands in Chapada do Araripe, Brazil - to discuss three ways that Indigenous People and local communities (IPLCs) are challenging these imaginaries.
Results: Firstly, energy and climate policies prioritise centralized energy supply and the role of wind energy in bolstering national energy sovereignty and economic growth. These narratives simultaneously ignore Indigenous sovereignty and rights, and contrast with the realities that IPLCs do not experience improvements in energy access, employment or economic benefits promised by state and corporate actors. In Brazil, communities have begun to advocate for a decentralized energy model to regain authority as small-scale local energy producers. Secondly, rapid wind energy development creates conflicts with established local practices, negatively impacting both food security and sovereignty. In Brazil, wind developments directly impact family farming communities engaged in agroecological production; in Sweden, developments disrupt access to local protein sources from reindeer husbandry, fishing and hunting. Both cases reveal conflict between national policies aiming to expand energy and those aiming to fight hunger or prioritize national food security. Thirdly, IPLCs openly critique the claims of 'green' or 'just' energy transitions, and recognize the intentions of 'green colonialism' that hampers the key role of IPLCs in stewarding increasingly fragmented landscapes and threatened biodiversity.
Conclusions: The dissonance between imaginaries expressed through mainstream narratives and lived realities are also linked to social and psychological distress. Such harms and losses exacerbate social stigmas and environmental racism but are made invisible by socio-spatial imaginaries fixated on growth and notions of the future.

Green Extraction, Just Transition? Discursive Framings and Future Injustice(s) in The Planned Per Geijer Mine

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

EMIL OLOFSSON[1]
[1] Umeå university, Department of Political Science, Sweden

Introduction: This paper critically examines the state-owned mining company LKAB's plan to mine the Per Geijer deposit. LKAB announced in 2023 that new explorations had confirmed the Per Geijer deposit as Europe's largest known source of rare earth elements, making it vital for advancing the green transition and securing critical raw material supply amid geopolitical tensions and uncertainties in global trade. The abundance of iron ore furthermore makes the deposit vital for green steel production in northern Sweden. The Per Geijer deposit has since been designated a Strategic Project under the EU's Critical Raw Materials Act (CRMA), which opens up for a fast-track permitting process. Within a discourse of urgency, extracting the Per Geijer deposit has been framed by LKAB as 'green' and necessary for the European-wide energy transition, legitimizing a rapid timeframe for the project. Located in Sápmi, Sámi reindeer herding communities have raised alarm and critiqued the project as a new encroachment on Sámi lands, intensifying land-use conflicts and existing injustices and tensions.

Methods: This paper utilizes poststructuralist discourse theory to explore the discursive framing which legitimizes the Per Geijer project and what type of 'green' and 'just' transition is being crafted into being, as well as counter-discourses that challenge the hegemonic framing. This paper will be based on document analysis and interviews with rights- and stakeholders. Document analysis has begun, and interviews will begin in spring 2026. Document analysis will be finished by submission, but not all analysis of interviews.

Results: The expected results will most likely show how different actors approach the project in radically different ways, either as a necessity for the green transition or as a form of green colonialism. By highlighting the situated and plural nature of justice, as well as dominant power relations, I aim to showcase how the mining project open up and foreclose different 'green' and 'just' futures, and whose justice is considered in the process.

Conclusions: The paper will contribute to debates on contestation in just transitions, land-use conflicts and extractivism on Indigenous lands, and how the green transition becomes entangled with the geopolitics of securing stable value-chains for critical raw materials.

Green Justice in the Swedish Arctic: Indigenous Rights and Power Dynamics in Green Transitions on Sámi

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Anudini Wijayarathna[1]
[1] University of Helsinki

Introduction: Green transitions in the Swedish Arctic, while framed as essential for climate mitigation and sustainable development, increasingly intersect with Sámi territories, raising urgent questions of justice, rights, and participation. Large-scale projects renewable energy development and the rare earth mine expansions exemplify the socio-environmental tensions that arise when industrial and green transition agendas collide with Indigenous land use.

Methods: This study adopts a multi-scalar policy and document analysis approach, examining EU green transitions directives, Swedish national legislation, planning documents, and consultation records associated with planned and ongoing the wind power and mining projects in Gällivare, Sweden. Drawing on literature on environmental justice, green colonialism, and Indigenous rights, the research identifies how governance structures distribute benefits and burdens, and how procedural and structural power asymmetries shape Sámi participation in decision-making for green transition.

Results: Expected findings suggest that, despite formal recognition of Indigenous rights in policy frameworks, decision-making processes often privilege dominant priorities over local socio-cultural and ecological knowledge. Consultation mechanisms, while present, may inadequately capture Sámi perspectives and enable meaningful participation, limiting Sámi involvement in co-creating green transition agendas and shaping project outcomes. Analysis of the cases highlights context-specific challenges and broader structural patterns affecting justice outcomes in Arctic green transition governance.

Conclusions: The study contributes to debates on “just transitions” by illustrating how Indigenous rights, environmental justice, and power dynamics intersect in practice. It highlights the need for multi-level governance approaches that move beyond procedural inclusion towards meaningful inclusion of Sámi voices, co-creation of policies, and integration of Indigenous knowledge systems. The findings offer critical insights for scholars, practitioners, and policy makers seeking to align green transition imperatives with the rights, priorities, and land stewardship responsibilities of Indigenous communities.

Human rights impact assessment in Sápmi: a methodological framework

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Rasmus Klöcker Larsen[1]
Carl Österlin[1], Johanna Westeson[1], Annette Löf[1]
[1] Stockholm Environment Institute, Sweden

Introduction: International law has articulated due diligence obligations for companies, such as in the mining sector, hoping to commence operations on Indigenous lands. This includes expectations to conduct human rights impact assessments (HRIA) to avoid and/or mitigate human rights violations. In Europe, partly in recognition of the insufficiency of corporate voluntarism, a growing trend has also been observed towards mandatory due diligence rules. The Nordics, however, still lack methodological guidance for such assessments. Moreover, mining companies generally fail to conduct and/or disclose HRIAs for projects on Indigenous Sámi lands.

Methods: This paper presents a novel methodological framework to aid understanding of the human rights risks of mineral extraction projects for members of Sámi reindeer herding communities. It has been piloted together with Gabna herding community, a mountain herding community with customary lands extending from the boreal forests near Junusuoando, Sweden, to the high mountains west of Riksgränsen into Norway. As case study we focus on Swedish state-owned mining company LKAB's proposal to commence extraction of rare earth elements, together with iron ore, at the Per Geijer deposit outside Kiruna, Sweden – a project promoted by Swedish government and accredited as one of the first strategic mining projects under the EU's Critical Raw Materials Act.

Results: The results are currently being drafted and cannot be disclosed for this abstract, pending final analysis (however, it can be fully reported in May).

Conclusions: The full paper will present and discuss both the methodological framework and the findings from its application to the proposed LKAB mining project.

Iconoclasm in the Green Transition? Protecting Sacred landscapes in Sápmi

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Marianne Friisberg Larssen[1]
[1] University of Oslo, Department of Culture, Religion, Asian and Middle Eastern Studies

Introduction: This article explores how certain Sámi activists and organizations mobilize sacredness as a political and legal strategy to resist wind industry expansion in Finnmark, Norway. How do these activists mobilize "the sacred" as a rhetorical strategy to resist wind industry development in Finnmark, and what does this reveal about recognition, environmental justice, and the limits of the Norwegian cultural-heritage act in protecting sacred Sámi places?

Methods: Drawing on fieldwork (2024–2025) with the Sámi Belief and Lifeview Association and a reindeer-herding family in Skhuotanjárga siida, the study analyzes narratives and iconification of two areas: Rástigáissá and Sieiddeduottar (the sacred tundra). The paper conceptualizes wind power development through the lens of iconoclasm to foreground how industrial encroachment threatens sacred landscapes, echoing historical Christianization, Norwegianization, and the historical destruction of Sámi ritual objects and sites.

Results: Some voices strategically compare mountains to churches (e.g., Nidaros Cathedral) to expose asymmetries in cultural heritage protection and to challenge a regime whose mapping tools struggle to accommodate Sámi understandings of land. The Norwegian Water and Energy Directorate’s recent decision to stop the wind Project Davvi, citing Sámi culture and traditional use, illustrates the political traction of these strategies and raises broader questions about recognition, environmental justice, and how Norwegian law can meaningfully protect sacred Sámi landscapes.

Conclusions: By advocating for the sacredness of their landscapes, these Sámi voices are not merely resisting industrial encroachment of grazing land, but are inviting broader conversations about cultural recognition, environmental justice, and the preservation of traditional knowledge in the face of a double burden: the arctic herding landscapes are extremely vulnerable to climate change and that the proposed climate mitigation initiatives, wind turbines, encroaches on these same herding lands.

Is the Boundary Just? Bordering the Swedish–Finnish Iron Frontier

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Marie Widengård[1]
[1] University of Gothenburg, Global Studies

Introduction: As green industrial expansion accelerates in the Nordic region, extractive projects increasingly intersect with Indigenous lands, prompting urgent questions about how justice is defined, delivered—and delimited. Focusing on two interlinked iron ore projects—Kaunisvaara in Sweden and Hannukainen in Finland—this paper explores how courts, zoning plans, and environmental assessments become key arenas for bordering in the energy transition. Originally conceived as a transnational twin project, these proposed mines cross not only national borders but also Sámi territories, reindeer migration routes, and transboundary watersheds.

Methods: Using insights from critical border studies, the paper applies border as method. It treats legal judgments not simply as technical decisions, but as acts of bordering that determine which harms and mobilities are recognised, which rights are upheld, and which landscapes are rendered available for extraction. Through close analysis of court rulings and appeals, it traces how legal bordering sorts claims, scales, and subjects—Sámi, reindeer, dust, runoff, roads, and residents—into categories of relevance or disregard.

Results: The findings reveal uneven outcomes: in 2025, Finland's Supreme Administrative Court annulled the Hannukainen zoning plan, citing uncertain risks to nearby ecosystems and residents; Sweden's Environmental Court, by contrast, approved Kaunis Iron's expansion despite Sámi objections and cross-border impacts. Appeals are ongoing: Gabna sameby has brought its case to the Supreme Court, and Finnish authorities and associations have filed complaints over the project's cross-border impacts.

Conclusions: In this Swedish–Finnish iron frontier, a form of borderline justice emerges—where legal boundaries are continuously redrawn, environmental harms spill across jurisdictions, and Indigenous rights are unevenly recognised within fragmented legal systems.

Land Rights and Land Use in the Energy Transition – What Can We Learn from Härjedalen, Sweden?

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Emil Planting Mollaoglu[1]
[1] SLU, Sveriges lantbruksuniversitet

Introduction: This paper addresses land and property rights related to the climate transition by focusing on wind power projects in indigenous and rural areas. The question I explore is how land rights affect possibilities for a just transition.

Methods: Through ethnographically inspired fieldwork in Härjedalen municipality in mid-western Sweden, I study two areas where three wind farms are established. The data consists of interviews with people and organisations involved in- or affected by the wind farms, observations and interactions with people in their everyday lives, and a desk study of relevant documents.

Results: Preliminary results indicate that landowners play a central role in wind power developments as they can accept or reject projects on their properties. Both landowners (through lease agreements) and local communities (through rural grants) can benefit economically from wind power revenue. On the flip side, communities adverse to wind power risk missing out of funding opportunities, and reindeer herders in Härjedalen have (as far as I know at this point in time) not been viewed as a group eligible for funding or compensation for loss of grazing land.

Conclusions: A possible conclusion is that there can be asymmetrical distribution of benefits and burdens depending on how strong your land rights are and whether you have been in favour or opposed of wind power projects.

Rickard Länta on extractive pressures on reindeer herding in Sápmi

25. Is it green? Is it just? Critically examining energy transition policy and projects on Indigenous lands – cases from Sápmi and beyond

Georgia De Leeuw[1]
[1] Human Rights Studies, Department of History, LUX, Lund University, SE-221 00 LUND, Sweden; https://orcid.org/0000-0002-6979-0210

Introduction: This article, co-authored with reindeer herder Rickard Länta, discusses cumulative impacts and injustices of various waves of extraction in indigenous Sápmi. It discusses indigenous claims for justice through notions of exceptionalism, colonial forgetfulness and the feminist killjoy. It discusses the realities of extractive industry expansion for Sami livelihoods and the failures of current industry and government "solutions" to alleviate such harms.

Methods: The article is based on a series of conversations with Rickard about the challenges that he and others in his reindeer herding community face in light of industrial cumulative impacts on their land, "green" and otherwise. In these discussions, Rickard voiced that he wishes not to be anonymized and instead own his story. Therefore, the result is this co-produced text which centres his experiences.

Results: Rickard Länta is a reindeer herder in Jåhkågasska reindeer herding community in the Swedish administered Sápmi. The land in which his reindeer are grazing has already been impacted by projects such as deforestation, hydropower, infrastructure development, and tourism. In addition, the controversial Gállok mining project, which is also located in this land, has now been approved by the Swedish government and supreme court. This article describes the consequences of a mining project as the next drop of extractive impulses, many of which narrated as important for the green transition such as Sweden's "green steel" project, in relation to existing threats that are already severely challenging the conditions for reindeer herding. He also discusses how these industrial ventures relate to the overarching issue of climate change and its impacts for reindeer herding.

Conclusions: Centring Rickard's experience and knowledge, this article explores the cumulative impacts of green extractivism layering existing scars of earlier industrial expansion. We discuss the insult of colonial narratives of neglect, proposed industry "solutions" to extractive harms that only expand the colonial wound, and the dismissal of Sami claims to land through racist and colonial tropes, effectively rejecting the value of Sami knowledge production. The paper discusses Rickard's claim for justice through notions of Swedish exceptionalism and colonial forgetfulness.

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

This workshop explores how knowledge can be mobilized to support democratic engagement and empower social movements as drivers of sustainability transitions. The implementation of environmental goals is often hindered by political resistance, institutional inertia, and limited public participation. The potential of democracy as a wheel of change is held back by depoliticization of the public sphere, while social movements and civil society actors, which could play a vital role in pushing for transformative change, face challenges in sustaining momentum, influencing policy, and navigating power dynamics. The aim of this workshop is to critically examine how democratic institutions and processes can be strengthened in the context of contested transitions, and how social movements can become more effective in achieving their goals. We encourage transdisciplinary approaches that engage with policy, governance, activism, and knowledge co-production. Fully drafted but not published manuscripts are invited.

Empirical and theoretical papers may explore cases topics such as:

- Grassroots initiatives advancing local sustainability and justice
- Climate protests movements and youth-led mobilizations
- Conflicts around resource extraction and land use
- Re-politicization and environmental politics
- Participatory governance, and citizen engagement in environmental decision-making
- Relations between researchers and activists in co-producing transformative knowledge
- Policies for inclusive and just transitions for communities in polluting or extractive industries

Key questions include:

- How can democratic participation and legitimacy be enhanced in sustainability policymaking and implementation?
- How can social movements build strategic alliances, sustain mobilization, and influence policy over time?
- What role does knowledge—scientific, experiential, and activist—play in shaping transformative policies and movement strategies?
- How can researchers interact with movements and communities to co-produce knowledge that supports transformative action?

This workshop addresses how gaps between environmental goals and implementation can be bridged through democratic engagement and movement-led action; how diverse forms of knowledge can be integrated into policymaking; and how co-production and collaboration across science, society, and activism can advance sustainability.

Convenors

Kristina Boreus, Institute for Housing and Urban Research, Uppsala University, Sweden
Rikard Hjorth Warlenius, School of Natural Science, Technology and Environmental Studies, Södertörn University, Sweden
Karin Bradley, Urban and Regional Studies, KTH Royal Institute of Technology, Sweden
Kim von der Heide, School of Global Studies, University of Gothenburg, Sweden

A White Cis-Woman, a Gay Conservative Man, and an Urban Sámi Walk into a Room to Deliberate: Can Feminist Deliberative Democracy Deliver Justice?

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Eedla Sofia Rahikainen[1]
[1] University of Lapland, Faculty of Social Sciences, Finland

Introduction: Democratic engagement is increasingly invoked as a remedy to the implementation and legitimacy gap in sustainability transitions. Yet deliberative processes often reproduce the capitalist, patriarchal, and colonial power asymmetries that hinder transformative change. Drawing on feminist deliberative theory and Indigenous political theory, this paper examines how deliberative democracy might be reshaped for better and more equal decision-making in contested transitions. I build on the concepts of *individuals-in-relations* and the *norm of integrity* to ask whether deliberative practices can be cultivated in ways that confront structural inequalities rather than reproduce them.
Methods: This paper is part of my ongoing PhD work. I shall conduct a theoretical analysis of the transformative potential of deliberative democracy in just green transitions, engaging with feminist and Indigenous critiques of the incremental, proceduralist nature of Habermasian deliberation. This includes a structured reading of key feminist and Indigenous political theorists to develop an analytical framework for *relational procedural justice*. Second, I aim to integrate practice-based methodological insights from my prior work executing democratic innovations such as Citizen Assemblies. These experiences inform a procedural typology of techniques that mitigate power asymmetries in practice. The empirical component is situated in the Sámi context and lived experiences through a research project called “SápmiDem”.
Results: Preliminary analysis suggests three mechanisms that could strengthen equal deliberation in contested green transitions:

1. **Relational Procedural Justice**: Designs that cultivate trust not only between individuals but towards the deliberative process itself, enabling participation within social stratification.
2. **Epistemic Pluralisation**: Practices such as storytelling, emotional reasoning, and acknowledgment of gendered or situated knowledge that counter the dominance of rationalist, masculinised deliberative norms.
3. **Structural Power Mitigation**: Techniques drawn from feminist theory (managing verbal domination, rebalancing expertise, addressing mansplaining and Master Suppression Techniques) that confront group-level inequalities universally without essentialising individuals.

Conclusions: The paper argues that deliberation can support citizen-centred sustainability transitions when redesigned around relational procedural justice, integrity, epistemic diversity, and attention to structural power. Rather than assuming unity or consensus, deliberation can enable transformative action by recognising participants as individuals-in-relations within stratified political contexts. This has implications for how democratic institutions design legitimate and meaningful participation in transition governance.

Citizens' assemblies – from experiment to governance for transformation

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Karin Bradley[1]
Pernilla Hagbert[1]
[1] KTH Royal Institute of Technology, Department of Urban Planning and Environment

Introduction: For transformations to more sustainable futures, new ways of thinking about the organization and planning of society are required. Governance experiments which aim to tackle institutional inertia and political deadlocks have gained attention, both in practice and in academia to. This paper explores how a governance experiment with citizens' assemblies can foster transformative institutional capacity in municipal governance.

Methods: The paper builds on a case study of the first municipal citizens' assembly in Sweden, organised by the City of Gothenburg during 2024. The case study is based on 16 interviews with public officials and politicians, as well as participant observations at the assembly sessions. In order to analyse the empirical material, we develop an analytical framework for transformative institutional capacity.

Results: The results demonstrate that the experiment contributed to new framings of sustainability by providing an arena for voices of underrepresented citizens' and facilitating deliberative processes that enabled reasoning and idea generation beyond 'the political game'. The findings also demonstrate how the experiment disturbed traditional decision-making structures, pushing for governance that transcends silos and traditional representative democracy.

Conclusions: It is concluded that citizens' assemblies can challenge preconceived notions of municipal mandates and of the types of policy measures that have public support. Citizen's assemblies often generate policy recommendations that go beyond weak forms of transition governance, making them a vital tool for enabling more profound democratic transformations.

Climate Activism 3.0: From Protest to Social and Economic Reconstruction

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Jonathan Feldman[1]
[1] Stockholm University, Department of Economic History and International Relations

Introduction: Contemporary environmental movements face an unprecedented crisis of scale and speed. Despite growing public awareness and increasingly dire scientific warnings, movements have consistently failed to generate transformative change at the pace required. This failure stems from strategic deficiencies: enablers do not clear the path forward, while active agents in political, economic, and cultural spheres block transformation. To overcome these barriers requires building on the intellectual legacy of scholars who understood that effective transformation demands combining (a) constraints like decarbonization treaties, (b) incentives such as Green New Deal projects, (c) both bottom-up horizontal and top-down vertical mobilizations, and (d) synergy through teach-ins and cooperatives. Contemporary movements fall into verticalism-horizontalism traps, lacking economic, political, and cultural multipliers that create dynamic, self-reinforcing power accumulation systems.

Methods: This research employs historical analysis, case studies, and interviews to diagnose strategic failures and identify transformation pathways. Earth Day 1970's historical materials reveal how mass mobilization translated into bipartisan legislation. Contemporary case studies include the Occupy Movement and Extinction Rebellion (analyzing horizontal organizing limitations), Mondragon Corporation (examining cooperative economic architecture), and Hitachi Energy (investigating corporate-municipal partnerships creating user-lobbyists). Interviews with key activist thinkers and movement strategists, combined with profiles analyzing their theoretical contributions, illuminate understanding of technology, power, and social change. This multi-method approach reveals patterns of success and failure across different organizational models and historical periods.

Results: Analysis reveals that successful movements like Earth Day 1970 achieved permanence by creating self-reinforcing socio-economic engines. Earth Day's bipartisan legislation constituted new green technology markets, aligning economic incentives with ecological goals. Mondragon demonstrates how democratic ownership structures create resilient alternatives for equity and community well-being. Conversely, Occupy and Extinction Rebellion achieved mobilization but failed to build institutional power or economic multipliers. Hitachi's municipal partnerships show creating user-lobbyists generates political multipliers.

Conclusions: Climate Activism 3.0 must synthesize Earth Day's coalition-building with Mondragon's democratic economic architecture. Success requires actively fostering democratically-owned, community-scaled socio-technical systems—energy cooperatives, green banks, sustainable supply chains—creating alternatives. By building ecosystems where social mobilization fuels democratic ownership, movements can create irreversible substitution effects displacing the fossil fuel regime. This approach closes the strategic circle, moving beyond protest to construct self-reinforcing transformation.

Contesting Green Consensus: Earth Uprisings and the Resurgence of Political Antagonism in French Environmental Movements

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Pablo Lapuente Tiana[1]
[1] Stockholm University, Department of Social Anthropology and Södertörn University

Introduction: As tensions rise around sustainability transitions in Europe, new forms of political conflict have emerged within environmental civil society. This paper examines Les Soulèvements de la Terre (Earth Uprisings), a French activist coalition founded in 2021, known for employing direct action tactics such as blockades, land occupations, and sabotage. The group has generated significant controversy, culminating in an attempted government ban. This study explores how frustration among young climate activists over perceived institutional inaction in France has prompted the development of new strategies, alliances, and discourses—reshaping the relationship between environmental movements and democratic governance.

Methods: The research employs a poststructuralist discourse analysis, informed by the theoretical framework of Laclau and Mouffe and the methodological approach of the logics of critical explanation (Glynos & Howarth). This framework is well suited to examining complex environmental conflicts involving social movements, and counts with a scholarly tradition focused on such cases. The empirical material comprises publicly available sources—including statements, media coverage, and activist communications—from 2021 to 2024. The analysis investigates how activists and allied groups construct shared meanings of environmentalism, legitimacy, and democracy. Data collection and coding are complete, and the study is currently in its final writing phase.

Results: Preliminary analysis indicates that the disillusionment of young climate activists with the French government's response has led many to join Earth Uprisings, signalling a shift from traditional symbolic forms of participation to more confrontational, locally rooted forms of environmental activism. The movement forges alliances among farmers, local communities, and environmentalists, generating new forms of collective learning and co-produced discourses around land defence and ecological justice. These developments expose deepening fractures within mainstream sustainability narratives and challenge governance approaches perceived as inadequate. They also show how limited governmental responsiveness can intensify antagonism and drive radicalisation within activist strategies.

Conclusions: The study contributes to a deeper understanding of how dissatisfaction with mainstream sustainability governance is giving rise to new forms of environmental activism in Europe. These emerging practices involve new strategies, alliances, and ways of knowing that both contest and reimagine democratic engagement. The findings raise critical questions about the inclusiveness and adaptability of current sustainability governance frameworks.

Extra Time: Exploring Football Fans' Potential for Transformative (Climate) Action

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Jennifer Amann[1]
[1] Loughborough University

Introduction: Tackling climate change requires systemic transformation, yet many efforts still focus on individuals with limited success (Rees and Bamberg 2014). Social movements are vital for challenging norms and institutions sustaining unsustainable practices (Louis and Montiel 2018). While environmental movements have been widely studied, non-environmental communities with strong collective identities - such as football fans - remain underexplored (Baldwin 2010; Middlemiss 2011). Football fandom, one of the largest forms of contemporary collective behaviour (Cleland et al. 2018), fosters emotional bonds and regular gatherings, enabling mobilization beyond sport. Leveraging fan groups' scale and influence offers a promising pathway for collective transformative action (Amann and Doidge 2023). This study is part of my PhD project: Extra-time - Enabling climate action in/through football which aims to understand the context in which football fans in Germany engage with climate change to realise transformation. Ideally, this helps to gain a better understanding of non-environmental movements' roles in taking/demanding climate action resulting in broader societal change.

Methods: This study uses a single case study of fans from one German Bundesliga club. A qualitative approach was adopted, including participant observation (three matchdays), one focus group with four climate-engaged fans, and 31 semi-structured interviews with football fans. Data collection is complete, and reflective thematic analysis (Braun and Clarke 2019) is underway to identify patterns. An inductive coding process will provide a data-driven understanding of how fans perceive and engage with climate action, informing strategies for mobilization within football and beyond.

Results: Preliminary findings suggest fans see significant potential in clubs' role-model influence but perceive limited personal agency, particularly in the context of climate change. Ideally, this study results in the co-production of knowledge with fans to design strategies that challenge norms and foster transformative environmental change within and beyond football, and can provide reflections on how we as researchers interact with groups to support sustained mobilisation and systemic change.

Conclusions: This study will likely argue that football fandom offers untapped potential for transformative action through alliances between fans and clubs, leveraging cultural influence and fan agency. It will further explore how co-producing strategies with fans can foster systemic change within and beyond the sport.

Form Follows Function: Guiding Principles for Sustainability Institutions

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Okka Lou Mathis[1, 2]
Florian Wieczorek[3]
[1] German Institute of Development and Sustainability (IDOS)
[2] Leuphana University Lüneburg
[3] Mehr Demokratie e.V.

Introduction: A growing number of governments and parliaments around the world create specialized political bodies for sustainability, sustainable development, or future generations. We argue that it is not enough to task bodies with promoting sustainability. The challenge is to design and integrate them according to their core purpose.

Methods: In this normative-conceptual article, we derive a set of guiding principles for the design and integration of sustainability institutions, based on a narrow ecological concept of sustainability, the overarching purposes of sustainability institutions and the structural drivers of political unsustainability.

Results: Our design principles demand providing long-term incentives, representing absent affect entities like young people, future generations, non-human nature and non-compatriots, as well as deliberation. As principles of integration, we propose independence, vertical integration, and emphasize the political empowerment. We discuss the practical prospects of implementing the principles and identify major political challenges.

Conclusions: We conclude that the derived principles are relevant beyond single specialized sustainability bodies and should be applied in a systemic perspective to guide the creation of sustainability states.

From protests to roundtables: the Swedish climate movement's staging of a democratic and just transition through local climate assemblies

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Fredrik Envall[1]
Eva Lövbrand[1]
[1] Linköpings universitet

Introduction: How do we build public support for the system change required to decarbonize our late modern societies and hereby avert an escalating climate crisis? This question has preoccupied scholars, policymakers and social movements in recent years. At a time when climate science speaks the language of emergency and insists that climate action needs to accelerate, liberal democracies are suffering from a growing party polarization on climate change and a mounting popular discontent with the costs and burdens of bold climate legislation. As countries like Sweden are witnessing a parliamentary pushback against national climate targets, the climate movement seems increasingly torn between competing transformative narratives and strategies. While some see climate catastrophe as unavoidable and transformation within the boundaries of the prevailing liberal system as a lost cause, others are experimenting with deliberative forms of citizen engagement to foster democratic and just transitions.

Methods: In this paper, we attend to one deliberative experiment of this kind initiated by Klimatriksdagen (The People's Climate Parliament) in three Swedish cities – Sollefteå, Malmö, and Borås – during 2024. Through participant observation and interviews with involved actors, we trace how these local citizen deliberations were staged and enacted to build public support for transformative climate action.

Results: We pay particular attention to the democratic and transformative ideals that underpinned these experiments, and how they balance between differing expectations such as improving the institutionalized practices of liberal democracies, brokering consensus for a just transition, and system-critical disruption. We ask what the climate movement does with local climate assemblies in the contemporary populist moment, and situate this engagement in relation to literature on the climate movement's fragmentation. Further, we ask what the enactment of local climate assemblies does to the climate movement, in terms of which democratic ideals come into play and how this affect the movement's further strategies for a democratic and just climate transition.

Conclusions: Our findings indicate that while local climate assemblies have become an increasingly popular instrument among parts of the Swedish climate movement, a variety of – perhaps incompatible – democratic ideals are enacted through the assemblies, with implications for the future of the climate movement.

Gender, Age and Urban Space in Nea Smyrne: From Everyday Knowledge to Collective Empowerment through Feminist Action Research

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Christina Marouli[1]
[1] Environmental Studies – Department of Science & Mathematics; American College of Greece

Introduction: Western societies are urbanized and rapidly ageing, intensifying pressures on cities to adapt to demographic change and address environmental challenges. Feminist scholarship has demonstrated that urban space reflects gender and other social inequalities circumscribing women's 'right to the city'. Older women often face compounded challenges due to gendered norms, ageism, and infrastructural limitations, yet their perspectives remain underrepresented in research and urban policy. In the context of the broader shift toward sustainable and inclusive cities, this paper explores the following questions: (1) How do older women experience urban space in Nea Smyrne, Greece? (2) How can their knowledge contribute to empowerment and participatory urban design in sustainability transformations?

Methods: The research employs a qualitative and participatory design combining semi-structured interviews and Feminist Participatory Action Research (FAR). Of 32 conducted in Nea Smyrne, seven involved women over 70 years old. These interviews informed the development of the FAR initiative "We envision our city", carried out with a local group of approximately 20 older women. Over four two-hour sessions, participants shared everyday experiences, analyzed urban challenges, and collectively imagined desirable urban futures. The dual-method approach enables comparison between individually narrated experiences and collectively constructed analyses produced through feminist dialogic processes.

Results: Interview findings highlight recurring challenges related to deteriorated sidewalks, insufficient local public transport, feelings of insecurity in public spaces, and perceived distance from municipal authorities. The FAR sessions revealed that collective dialogue deepened participants' analytical reflections uncovering structural dimensions of exclusion while strengthening a sense of shared identity and agency. The group generated proposals for safer pedestrian infrastructure, improved lighting, accessible mobility routes, and more meaningful channels of communication with the municipality. The comparison of interviews and FAR outcomes demonstrates how participatory dialogue transforms isolated personal concerns into shared political demands.

Conclusions: The study argues that in ageing urban societies, it is important to integrate older women's voices into urban planning and FAR can play a significant role in participatory urban design and governance. By valuing everyday knowledge, creating democratic dialogic spaces, and empowering marginalized groups, FAR contributes to more inclusive, just, and sustainable cities.

Governing Through Incompleteness: Democracy and Grassroots Movements in Sustainability Transitions

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

María José Zapata Campos[1]
Patrik Zapata[1]
[1] University of Gothenburg

Introduction: This paper develops the concept of governance incompleteness as a democratic resource for strengthening grassroots movements and advancing sustainability transitions.

Methods: Drawing on organizational and urban studies, as well as illustrations from grassroots initiatives in Gothenburg, Amsterdam, Barcelona and Nantes, we challenge the prevailing "myth of completeness" that shapes municipal expectations of rationality, stability, and bureaucratic order.

Results: While local governments tend to interpret informality, fluctuation, and ambiguity as signs of weakness or risk, we show how many grassroots initiatives deliberately rely on incomplete, flexible and temporary organizational forms to mobilize scarce resources, cultivate democratic practices, and maintain continuity through fluctuation and reactivation. These forms of "grassroots incompleteness" reveal hidden capacities (care infrastructures, welfare functions, and deliberative democratic practices) that remain invisible when assessed through an institutional logic of completeness. Such a logic, with its insistence on formal structures, measurable outcomes, and risk avoidance, create barriers to collaboration, reduce points of contact with civil society, and risk producing *faked progressive governance*, where participation and sustainability are celebrated rhetorically but undermined by rigid institutional practices.

Conclusions: Instead, we propose an alternative logic of governance incompleteness. Rather than demanding closure, predictability, or full integration of grassroots actors, incomplete governance embraces contingency, emergence, ambiguity and polycentricity. This enables more open-ended co-production, supports public–common partnerships without assimilation, and expands democratic spaces where diverse knowledges and practices can shape transition pathways. The paper argues that embracing incompleteness can enhance democratic legitimacy, strengthen social movements' transformative capacities, and better align governance with the uncertain and contested nature of socio-ecological transitions.

Green citizens, green cities: how active citizenship in management of urban green spaces promotes urban biodiversity

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Deborah Van Der Vlist[1]
[1] Utrecht Univeristy

Introduction: Urban biodiversity is under increasing pressure from densification, habitat loss, and fragmented governance. While policy efforts such as the EU Biodiversity Strategy for 2030 acknowledge the importance of ecological quality and management, the role of active citizens in maintaining urban green spaces remains undervalued and insufficiently embedded in policy. This paper positions citizen-led management of urban green spaces as a critical yet underutilized contributor to urban biodiversity.

Methods: This study presents six case studies in Utrecht, the Netherlands, where eight active citizens were interviewed about their management in the urban green space as well as their collaboration with the municipality herin, backed up by interviews with four local government officials.

Results: The paper demonstrates how active citizens meaningfully contribute to selected biodiversity goals based on the EUBS2030, including habitat maintenance, pesticide-free management, pollinator support, and invasive species control, though their efforts are constrained by fragmented green networks and limited institutional support. The findings highlight three governance pathways for strengthening citizen contributions: connecting isolated green spaces through ecological corridors, connecting citizens to one another and to municipal institutions, and communicating more clearly and inclusively about goals, responsibilities, and ecological knowledge needs.

Conclusions: Together, these recommendations emphasize how local governments can better harness active citizenship as a driver for biodiverse cities.

How the theoretical setup of Street Experiments shapes their transformative capacity

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Elvira Grahn[1]
Karin Winter[1]
[1] Lund University

Introduction: In this piece, we engage with Street Experiments as one contemporary answer to how knowledge can be mobilized to support democratic engagement and empower social movements. In literature concerned with street experiments, they are commonly viewed as capable of generating transformative knowledge, operating as vehicles for epistemic and procedural justice (Smeds, 2023), and as catalysts for mobilization of citizens (VanHoose, 2023). They present a form of semiofficial space that is typically initiated from outside, but which nevertheless is aiming for a bottom-up structure (Garau et al., 2024). Yet the same literature documents recurring tensions: experiments are often met with citizen's discontent and institutional resistance – and governance requirements that contradict their imagined bottom-up character. Considering these tensions, we analyze the onto-epistemological underpinnings that sustain the promises of the experimental form. The aim is to better understand the theoretical positions that shape the experiment as an invention and investigate the implications for the promise of social empowerment.

Methods: The study builds on a literature review of scholarly contributions conceptualizing street experiments. The literature is analyzed by drawing on Lacanian theory, and particularly Todd McGowan's work on capitalism as well as his conceptualization of an anti-capitalist stance (McGowan, 2016). Through this lens, we interrogate the underpinnings of street experiments by paying attention to articulations and implicit assumptions concerning notions such as knowledge, planning, the social, and the subject – not least the researching subject – to better understand this body of literature, which ultimately shapes the experimental form.

Results: Our analysis shows that literature in the field is theoretically elusive and abandons more traditional knowledge to uphold the imagery of the experimental form as ideal. We also find a tension between the imagined functions of street experiments in terms of justice and democracy in relation to the form they tend to be given.

Conclusions: We conclude that the theoretical underpinnings of street experiments do not fully align with the upholding of experiments as inherently progressive tool. We argue that this mismatch is consequential for what can be included in the knowledge produced in street experiments, and what is left out, which ultimately hampers the transformative capacity.

Implementing urban climate justice: an exploration with civil servants at the municipality of Gothenburg

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Kim von der Heide[1]
[1] Kim von der Heide (University of Gothenburg, School of Global Studies; Sweden)

Introduction: Calls for integrating justice into sustainability transformations have grown in research and policy. As inequalities are rising particularly in cities, and municipalities have emerged as important, sometimes progressive global actors, exploring justice in urban climate action is key. However, existing studies have often remained in abstract critique, merely studying documents and plans rather than implementation.

Methods: Our paper aims to address this gap and gain a better understanding of how climate justice may be implemented in an urban context such as the City of Gothenburg. Within a transdisciplinary methodology, our qualitative work is based on policy documents and in-depth engagement with civil servants involved in strategic planning for climate action, through interviews and complementary participation in city administration meetings.

Results: While municipal documents only briefly mention the need for a 'just transition' with no clear measures, civil servants themselves provide complex reflections on urban climate justice in theory and practice. Their conceptualizations of climate justice mainly concerned distributional matters, e.g., contemplating differential responsibilities to bear climate measures connected to levels of consumption and income/wealth both at global and local levels, as well as representation and inclusion of (more) diverse demographics and perspectives. Meanwhile, underlying recognitional dimensions of justice were rarely discussed. Questions of what kinds of measures might be most effective, both for mitigation and distributional justice concerns, seemed particularly salient for the practitioners. Nevertheless, they also raise important questions about which mandates and tools cities possess to work for more climate just futures. Among other things, they point towards potential knowledge gaps, and organizational and political obstacles for implementation, such as the perceived lack of prioritization, clarity and politically charged understandings of the term "justice".

Conclusions: We conclude that although some political texts and administrative projects signal an ambition to work with justice in the context of climate, the Municipality of Gothenburg engages with the concept in a limited, non-systematic way. Civil servants themselves point out a need to overcome a number of obstacles for implementation. Further research engagement and political commitment on the matter seem necessary to overcome the former.

Intergenerational knowledge sharing and recognition of young people in biodiversity conservation and sustainability transformation

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Irmeli Mustalahti[1]
Tiina Jääskeläinen[1], Amaniel Athuman[2], Ubaldus Tumaini[2]
[1] University of Eastern Finland
[2] Collage of Business Education Tanzania

Introduction: Different societies worldwide have historically employed diverse methods to share knowledge on biodiversity, on how to conserve biodiversity and on how to use natural resources sustainably. Rapid socio-economic and environmental changes may impoverish the knowledge base of local communities required to conserve biodiversity. What role does knowledges (such scientific and traditional) play in shaping sustainability transformation? Today, younger generations tend to have more recent scientific knowledge on the state of biodiversity and on conservation methods while elder generations tend to have traditional and local ecological knowledge on those. Regrettably, young people interested in biodiversity conservation often face the challenge of being expected to learn from the elders, while their knowledge remains less recognised by elder generations.

Methods: In this qualitative case study based on interviews and workshops, we seek to understand whether and how intergenerational knowledge sharing can enable the recognition of young people's knowledge in biodiversity conservation. We studied participatory actions and younger generations´ role in biodiversity conservation in two UNESCO Biosphere Reserves: in North Karelia, Finland, and in Amani Nature Reserve, Tanzania.

Results: Findings reveal that, different generations have different but complementary knowledge on biodiversity and competences of social movements in conserve biodiversity. Practices that enable intergenerational learning can work as platforms for different generations to democratic participation, debate, learn and understand each other's perspectives, expectations. Hence intergenerational knowledge sharing enable the forming of common understandings of appropriate measures to conserve biodiversity.

Conclusions: We argue thus that intergenerational knowledge sharing can catalyze collective action for biodiversity conservation. The complementary knowledges and competences of different generations can turn into collective capability on designing, developing and adopting new strategies towards sustainability transformation if facilitated in ways that recognise young people´s competences.

Localizing Sustainability Transformations in the North Karelia Biosphere Reserve

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Niko Nesterinen[1]
[1] University of Eastern Finland, Department of History and Geography Studies, Finland

Introduction: The concept of sustainability transformation is inherently abstract and open to multiple interpretations. To transform its strategic objectives into contextually relevant action, the concept must be localized and operationalized. Localization is not merely a technical exercise; it is deeply entangled with prevailing political and epistemic tensions. This phenomenon offers a compelling lens through which to explore the interplay of knowledge and power in shaping shared understandings of sustainability transformations at the local level. My research is situated in the North Karelia Biosphere Reserve, Finland. As part of UNESCO's Man and the Biosphere Programme, biosphere reserves are envisioned as drivers, arenas, and experimental platforms for advancing sustainability transformations by fostering collaboration among local actors. To put the concept into practice, the biosphere reserve seeks ways to localize and concretize sustainability transformations into locally meaningful interpretations and actions in collaboration with its partners. My study examines the question: How does the localization of sustainability transformation unfold in the North Karelia Biosphere Reserve?

Methods: The study employs organizational ethnography as its methodological approach. The data was collected during a 12-month fieldwork period in 2025 at the North Karelia Biosphere Reserve (completed at the end of 2025). It includes participatory observation documented in field diaries, outputs and transcribed recordings from three stakeholder workshops, 14 semi-structured interviews and relevant documentary material. The research material is analyzed through ethnographic analysis.

Results: The findings indicate that localizing the concept of sustainability transformation is a challenging process. Developing a shared situational understanding across fragmented, cross-sectoral collaboration arrangements is hindered by resource constraints, institutional inertia, limited capacity to adopt new governance models and difficulties in producing shared knowledge. Collectively, these factors prevent the concept from becoming a commonly held local understanding; instead, it remains either a distant abstraction or a set of competing interpretations.

Conclusions: Based on this study, a multi-level transformation requires integrating knowledge into policy beyond fragmented projects and siloed sectors, supported by stronger structural mechanisms and cultural change. In North Karelia, the intertwined challenge of localizing both the sustainability transformation and the biosphere reserve concept constrain the ability to translate their potential into concrete, democratic, and locally collaborative action.

Mapping Controversies in Critical Mineral Extraction

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Rikard H Warlenius[1, 2]
Jan Bachmann[1], Amanda M Machin[3]
[1] School of Global Studies, University of Gothenburg
[2] School of Natural Science, Technology, and Environmental Studies, Södertörn University
[3] Department of Sociology and Social Work, University of Agder

Introduction: The green transition's hunger for minerals creates tensions between, on one hand, the promises of politics and industry for sustainable development and green jobs and, on the other hand, concerns about negative impacts on the environment, indigenous rights, and the long-term livelihoods of local communities. The proposed expansion of critical mineral extraction has generated considerable controversy in societies across Sweden. At the same time, affected groups express increasing frustration with formalized ways of finding consensus. In a recently started research project, we investigate whether democratic participation can be maintained and even strengthened in connection with conflicts surrounding the extraction of critical minerals.

Methods: A focus on controversies or discord is central to several disciplines and approaches, most notably in Science and Technology Studies as well as in pragmatic (Boltanski) and agonistic (Mouffe) approaches within social theory. In selected cases of proposed mining of critical minerals, this project will in a first step map stakeholders, their claims as well as how practices of (de-)legitimation of mining projects have evolved over time. For this purpose, we will analyze media reports, policy documents, and public records including legal documents and will carry out interviews with key informants such as experts, government officials (on national and municipal levels), industry and trade union representatives, civil society and other local stakeholders.

Results: The research is just about to begin and for this presentation, we have two aims: to present our methodological approach in greater detail, and to present preliminary findings (probably without interview data) from one potential site of extraction in Sweden. We expect to be able to present how discourses around mineral extraction at the selected site are clustered among agents and stakeholders.

Conclusions: The controversy mapping will be crucial for the following steps of the research project, which is to investigate the institutions and arenas where controversies play out, how values of democracy are treated and affected, through which mechanisms, and finally to investigate, together with agents and stakeholders identified in the mapping, how these processes may be enhanced.

Mapping the Demands of Indigenous Women's Organizations in Peru: Exploring Discourse Coalitions for Climate Change Adaptation

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Maria Espinoza[1]
Sara Ramirez Zubillaga[2]
[1] Michigan state university
[2] Independent Researcher- Peru

Introduction: The 2025 *Lancet Countdown Latin America Report* highlights a critical gap between escalating climate-related health risks and insufficient adaptation across the region. In Latin America, these delays disproportionately affect economically and politically marginalized groups, particularly Indigenous peoples and women. In Peru, climate change undermines Indigenous livelihoods, transportation routes, cultural practices, and relationships with nature, while intensifying exposure to infectious diseases, mental health stressors, wildfire smoke, and extreme temperatures. These threats are compounded by reduced access to clean water, land, and rivers. Indigenous communities are also at the forefront of resisting extractive activities and land dispossession, often facing criminalization and violence. Indigenous women experience heightened vulnerability due to gendered discrimination and targeted forms of violence, despite their growing—yet still limited—participation in environmental governance. While Indigenous women play a central role in Amazon protection, their specific demands for climate adaptation remain underexamined.

Methods: This study draws on Hajer's (1995) concept of "discourse coalitions" to analyze how Indigenous women's organizations in Peru articulate climate adaptation demands, particularly at the intersection of land defense, health, and Buen Vivir. We employ a mixed qualitative approach that combines content analysis of secondary sources—including organizational websites, reports, press releases, interviews, government documents, and social media content—with primary data collection. Primary data will consist of in-depth interviews and focus groups with leaders and members of eleven Indigenous women's organizations active in environmental protection and Indigenous rights advocacy. At least two participants per organization will be interviewed, and a validation workshop will be conducted in spring 2026 to refine findings.

Results: Preliminary analysis indicates that while land rights and Buen Vivir are powerful unifying frameworks within transnational and national advocacy, they can obscure localized health and social welfare demands. Indigenous women's organizations articulate concerns related to healthcare access, protection from gender-based violence, food security, and clean water, yet these demands are often underrepresented in dominant adaptation discourses.

Conclusions: The study is expected to show that centering Indigenous women's health-related demands is essential for equitable climate adaptation. By systematically mapping these demands, the project will support stronger alliances, more targeted policy responses, and alternative development narratives aligned with social justice and ecological sustainability.

Non-profit actors in Swedish sharing economy

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Mayya Shmidt[1]
[1] Uppsala University

Introduction: The proposed paper is a part of dissertation project that investigates the institutionalization of the organizational field for non-profit sharing economy initiatives in Sweden. Drawing on neo-institutional theory, it examines how non-profit organizations contribute to the formation of field-level norms, meanings, and boundaries within the Swedish sharing economy. The study conceptualizes the sharing economy as an emergent and contested field characterized by the coexistence of multiple institutional logics (market, civil society, governance, and community) and analyses how these logics interact to shape organizational identities, practices, and strategies.

Methods: The empirical analysis is based on an organizational ethnography conducted in Stockholm, Gothenburg, Malmö, and Umeå, integrating 30 semi-structured interviews, observations and study visits, and textual data.

Results: Findings demonstrate that non-profit actors negotiate complex tensions between economic rationalization and ideological commitments to social and environmental sustainability. By aligning with dominant policy frameworks, and circular economy discourses, while preserving community-oriented practices, these organizations hybridize diverse institutional logics to secure legitimacy and resources. The dissertation contributes to organizational and sociological scholarship by advancing our knowledge on how non-profit sharing organizations reconfigure the boundaries between market and non-market forms of exchange, thereby advancing theoretical understanding of field emergence, institutional pluralism, and hybrid organizing within the context of contemporary sharing economy.

Conclusions: Findings demonstrate that non-profit actors negotiate complex tensions between economic rationalization and ideological commitments to social and environmental sustainability. By aligning with dominant policy frameworks, and circular economy discourses, while preserving community-oriented practices, these organizations hybridize diverse institutional logics to secure legitimacy and resources. The dissertation contributes to organizational and sociological scholarship by advancing our knowledge on how non-profit sharing organizations reconfigure the boundaries between market and non-market forms of exchange, thereby advancing theoretical understanding of field emergence, institutional pluralism, and hybrid organizing within the context of contemporary sharing economy.

Polytactics vs. Monotactics: Advancing Theory in Environmental Movement Strategy

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Kristina Boréus[1]
Rikard Hjort Warlenius[2], Katrin Uba[3]
[1] Institute for Housing and Urban Research, Uppsala Univesity, Sweden
[2] Natural Sciences, Technology and Environmental Studies, Södertörn University, Sweden
[3] Department of Goverment, Uppsala University, Sweden

Introduction: Sustainability transformations are essential to mitigate global warming and the biodiversity crisis. Yet, neither governments nor private enterprises seem willing to lead, making popular pressure for change crucial. To strengthen such pressure, we need better knowledge about the efficiency of social movements' tactics and strategies. This article examines a key tactical choice that has received limited attention: using combined tactics—such as protests, mitigation, and prefigurative activities—versus intensifying a single tactic, like increasing protest participation. We refer to the first approach as **polytactics** and the second as **monotactics**. The study explores how and why polytactics may benefit two types of environmental movements: protest movements and prefigurative movements (also known as grassroots initiatives for sustainability transformations).

Methods: To address **RQ1: What are the advantages of using polytactics in the strive for sustainability transformations, and why do they work?**, we conduct systematic literature searches and a quantitative analysis based on the EJAtlas database of environmental conflicts. We review research on protest movements' impacts, prefigurative movements' scaling attempts, the radical flank effect, and emerging literature on constructive resistance. A second question is explored through broader literature: **RQ2: What are the problems with, and limitations of, polytactics?**

Results: Our analysis identifies several reasons why polytactics can be particularly effective under certain conditions. Preliminary findings suggest that polytactics outperform monotactics in many contexts, offering greater adaptability and resilience. These results also clarify mechanisms behind their effectiveness.

Conclusions: Polytactics appear to provide significant advantages for social movements seeking sustainability transformations, though their success depends on contextual factors. At the same time, polytactics entail challenges and limitations that require further investigation to fully understand their potential and risks.

Reclaiming the Green Commons: Civic-Ecological Agency and Democratic Transformation in Denmark's Common Housing Landscapes

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Søren Christensen[1]
Maria Figueroa[1]
[1] Copenhagen Business School, Frederiksberg, Copenhagen

Introduction: This paper examines how bottom-up civic-ecological practices in Denmark's non-profit housing sector can act as drivers of democratic sustainability transitions. Managing more than 27,000 hectares of common green areas, the sector oversees one of Denmark's most extensive urban-proximate landscapes. Historically shaped by modernist ideals of openness and uniformity, these areas have long existed as "silent green landscapes," despite their considerable potential to become biodiverse ecosystems and sites of everyday democratic engagement. At a time when sustainability transitions are constrained by political resistance and institutional inertia, emerging resident-led ecological practices offer new forms of civic agency that resist technocratic narrowing and reopen political space for collective action. The study investigates how these practices can contribute to strengthening democratic participation, enhancing legitimacy, and reactivating the sector's historic civic role.

Methods: The paper draws on participatory action research with two non-profit housing associations. Empirical material includes photo-elicitation interviews with residents (of an expected twenty), three participatory action workshops involving residents and local partners (with two workshops planned), and spatial mapping of large common green areas to assess existing socio-ecological affordances and constraints. Additional interviews with housing professionals and municipal planners will further examine institutional conditions for scaling civic-ecological practices.

Results: Preliminary observations and collaborative planning processes suggest that residents and housing staff are beginning to explore how green commons can be reclaimed as socio-ecological spaces for care, learning, and democratic engagement. These early-stage initiatives appear to cultivate forms of ecological agency from below - broadening participation, engaging everyday ecological practices, and blurring conventional boundaries between maintenance, governance, and stewardship. In parallel, initial spatial analyses of selected sites indicate substantial potential for transforming monofunctional lawns into biodiverse, climate-adaptive landscapes. These findings will inform the participatory research process and are expected to align resident-led actions with national biodiversity and climate adaptation goals.

Conclusions: (potential) The study suggests that democratizing ecological transformation through embedded participation and co-produced knowledge can reconnect informal civic action with formal governance structures. Such integration can strengthen democratic legitimacy, support movement-like forms of collective ecological engagement, and reposition the non-profit housing sector as an institutional actor capable of advancing regenerative and socially just urban transitions.

Sidelining just transition? – A critical analysis of (de-)politicising strategies in the European Parliament

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Josefina Marklund[1]
[1] Södertörn university

Introduction: While the European Commission's Green Deal initially positioned just transition as a core objective, recent shifts in EU policy priorities – from sustainability to competitiveness and security concerns – suggests that the commitment to a just transition may be taking a back seat. In light of these developments, this study examines how political actors in the European Parliament conceptualise just transition and how this conceptualisation changes over time.

Methods: Drawing on transcripts of parliamentary debates between 2019–2025, which capture perspectives from different EU actors, including Members of Parliament, Commission members, and the Council, I analyse how just transition is constructed as a political object of concern. Using political discourse theory, particularly the lenses of politicisation and depoliticisation, I trace how actors contest and de-contest notions of justice, transition, and economic priorities within and beyond the Green Deal agenda.

Results: The analysis reveals a discursive trajectory across three stages: first, *Contesting Justice*, where debates centre on who qualifies as the primary subject of justice and link justice to broader demands such as post-COVID economic recovery; second, *Contesting Transition*, where justice recedes as climate objectives themselves are questioned – either as inadequate or overly ambitious; and finally, *The Politics of Sidelining*, where previous consensus on prioritising just transition disappears from the parliamentary discourse.

Conclusions: I argue that these shifts are enabled by framing the Parliament as a constrained space of political concern, where political actors strategically deploy accusations of politicisation to delegitimise certain policy agendas. Ultimately, I suggest what these dynamics mean for the Parliament as a democratic arena and for the future of just transition politics.

Terrains of resistance in extractive places

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Sara Persson[1]
Jacqueline Kirk[2], Elme Vivier[2]
[1] Department of Organization and Management, Mälardalen University, Sweden
[2] Centre for Responsible and Sustainable Business, Nottingham Trent University, UK

Introduction: The aim of this paper is to contribute to the literature on the role of place in extractive industry conflicts. We draw on Doreen Massey's poststructuralist view of place as a contingent phenomenon that is the result of hegemonic articulations in a specific location and time. By comparing two geographical areas (Österlen and Hörby in southern Sweden) which were subjects to the same prospecting company and mining plans but where community resistance was mobilized in very different ways, we aim to answer the question why opposition to mining become hegemonic and successful in some areas but not in others.

Methods: In line with Paul Routledge's concept of "terrains of resistance", we use the concept of 'terrain' as both a literal and metaphorical space including streets, townhalls, and prospecting sites but also the political, cultural, social, legal and economic terrains where resistance takes shape. Our analysis is based on a qualitative enquiry comprised of field visits, 32 interviews and document studies (including documents from authorities, social media posts, websites and media).

Results: We show how the terrains in which the struggle around extractivism took place (in Österlen), or failed to take place (in Hörby), include cultural identities, economic livelihoods, legacies of protests, party politics, community ties, and land ownership structures. The trajectories of these terrains explain why opposition to mining became hegemonic in Österlen but not in Hörby.

Conclusions: These findings highlight key aspects of place that are important to consider when examining how resistance to extractive projects unfold.

The Legacy of an Ambition: The Indo-Norwegian Project and the "Anti-Politics" of Kerala's Marine Fisheries

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Akhila Kumaran[1]
[1] Tata Institute of Social Sciences, Mumbai, India

Introduction: The famed Indo-Norwegian Project (INP), launched in 1940s, was a foundational, 'development' led policy ambition aimed at modernizing Kerala's traditional fisheries under the nationalist ambition of building a nation-state. While the initial goal was comprehensive community development, the project soon evolved its focus, prioritizing a capital-intensive model centered on mechanized trawling (especially for shrimp) to serve the international export market. Instead of the promised development, the project subsequently a flagship governance structure of the state's marine fisheries was yet another capital-intensive model was supposed to lead to overall economic improvement but failed to improve the standard of living for the poorest, traditional fishermen. Instead devastatingly, there was a creation/ maintenance of inequality in the state. Instead of poverty reduction, it led to a new class of mechanized boat owners and a marginalization of traditional fishers, thus increasing inequality. The INP's focus on export-oriented trawling marginalized the traditional, artisanal sector that sustained local livelihoods.

Methods: Drawing on historical materials especially policy documents in the state, and in depth interviews in one of the villages that earned the title of a successful transformation story, the paper intends to understand and explore, what happens when policies are implemented in a top down manner to not just environment and economy, but also to the processes of democracy and to governance

Results: Based on three decade long income data from fisheries co-operative societies, there is economic stagnation predicted by early critics persists to this day, representing the ultimate failure of the INP's "ambition" to deliver practical benefits for the community. Further, t the state's current welfare schemes (like the Saving-Cum-Relief) function as an "anti-politics machine." This governance model is not designed to *solve* the implementation gap but to *manage* its symptoms—the very precarity and institutional dependency that the INP's model created—by reframing structural poverty as a technical problem of "thrift".

Conclusions: The contemporary "implementation gap" is the INP's enduring legacy. The state's welfare acts as an "anti-politics machine," depoliticizing economic stagnation (proven by income data) by reframing structural poverty as a technical problem of "thrift," thus perpetuating the colonial, extractive, and unequal capital-intensive model.

The Promise and Limits of Place-Based Deliberation in Local Urban Governance

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Julia Jokiaho[1]
Jamil Khan[2]
[1] Stockholm Environment Institute (SEI), Sweden
[2] Lund University, Environmental and Energy Systems Studies, Sweden

Introduction: This article examines the potentials and limits of place-based deliberation in local urban governance. It focuses on a neighborhood-level citizens' assembly addressing the climate impacts of everyday consumption and explores how deliberation shaped by place, lived experience, and socio-economic conditions influences participation, dialogue, and policy development. The study asks: (1) How do citizen dialogues generate policy advice grounded in everyday practices, material conditions, and attachments to place? (2) How does socio-economic diversity shape interaction and the emergence of tensions, negotiations, or solidarities? (3) To what extent can place-based deliberation support proposals that link climate action with equity, inclusion, and wellbeing, and where do its limits appear within local governance?

Methods: The case study centers on a municipality-led citizen dialogue in Lund, Sweden, involving 23 participants across four meetings (November-December 2025) on reducing consumption-related emissions while maintaining a good life. Data collection combines systematic observations of deliberative sessions, pre- and post-dialogue surveys (October and December 2025), and 20-30 semi-structured interviews with participants and facilitators that will be conducted early January 2026. The analysis combines thematic coding with descriptive statistics to enable triangulation across sources.

Results: The study is expected to generate insights into how place-based deliberation operates within everyday realities of urban governance, highlighting its capacity to mobilize situated knowledge and its limits when confronted with institutional routines and political constraints. Findings are likely to illustrate how local context and socio-economic diversity shape dialogue, the proposals that emerge, and negotiation of tensions and solidarities. The analysis may also reveal instances where mini-publics reproduce individualised responsibility narratives or overlook structural inequalities, reflecting risks of over-idealising the local scale and constraints from multi-level governance.

Conclusions: The findings will contribute to debates on democratic participation and sustainability transitions by unpacking the promise and limits of place-based deliberation in local governance. The study will discuss how citizen assemblies mobilize experiential knowledge and support more inclusive climate governance, while highlighting conditions that may restrict their transformative potential. Overall, it will contribute to debates on the role of mini-publics in urban sustainability governance and offer insights into how local governments can address consumption-based emissions through place-based approaches.

Walking Together: Knowledge Sharing and Environmental Participation in Algerian Hiking groups

26. Knowledge for action: Democratic participation and social movements in sustainability transformations

Yahia Benyamina[1, 2]
[1] University of Helsinki (Finland)
[2] Centre of Research in Social and Cultural Anthropology (Algeria)

Introduction: Hiking groups in Algeria have expanded significantly over the last decade and now play roles that go beyond recreational activity. Alongside outdoor leisure, many of these groups engage in environmental awareness, collective learning, and local community outreach. This paper examines how these hiking groups mobilize ecological knowledge, foster shared practices, and contribute to emerging forms of public engagement around environmental issues. The study aims to describe how experiential knowledge and group organization support small-scale forms of environmental participation within the Algerian context.

Methods: This proposal relies on reflexive thematic analysis of press articles on hiking in Algeria and some interviews conducted with founders of hiking groups, as well as a conceptual framework drawing on civic ecology, environmental sociology, and studies on citizen initiatives. Together, these approaches aim to examine how ecological knowledge is produced, communicated, and implemented within these groups.

Results: Preliminary findings indicate that hiking groups often act as spaces where participants collectively share information about local ecosystems, landscapes, and environmental conditions. Activities such as guided walks, clean-up initiatives, and informal discussions during outings provide opportunities for exchanging experiential knowledge related to biodiversity, trail maintenance, and environmental care. Many groups also incorporate elements of local history and cultural heritage into their activities, contributing to place- based understanding of landscapes. These practices appear to support forms of participation that combine outdoor activity, environmental awareness, and community interaction.

Conclusions: The study suggests that Algerian hiking groups provide a platform for the circulation of ecological knowledge and for the development of environmentally oriented practices among participants. Their activities illustrate how grassroots associations can contribute to localized forms of engagement with environmental issues through regular collective action, shared learning, and repeated interaction with natural sites. The paper also identifies potential avenues for future collaboration between researchers and hiking groups, particularly in developing participatory approaches to environmental knowledge and monitoring.

27. Bridging temporal gaps in low-carbon transitions

Low-carbon transitions are not only spatial but also deeply temporal. Despite its centrality, temporal dimensions of transitions have received less explicit conceptual and empirical attention than spatial ones. While inroads are being made, certain topics and approaches have gained more visibility than others. In recent years, for example, a burgeoning body of work has focused on anticipating and imagining futures, seeking to pluralize these beyond those included in scientific scenarios or roadmaps. In contrast, the role of the past has remained comparatively underexplored, aside from a few key concepts, such as path dependency. Elsewhere, anthropological and humanities research has advanced the "politics of time", highlighting how infrastructures' are entangled with promissory, future-oriented temporalities. Yet, the uptake of these ideas in social science scholarship on low-carbon transitions is still fairly limited.

This workshop engages the conference theme by addressing overlooked gaps between different ways of knowing and organizing time. We ask: How can different conceptual and disciplinary approaches to temporality be connected? How can policy timeframes (e.g. "net zero by 2050") be reconciled with lived temporalities of communities and practitioners? How can the urgency of rapid decarbonization be bridged with slower institutional change, or with legacies that shape possible futures?

The aim is to make the temporal dimensions of low-carbon transitions more explicit across social sciences, humanities, and policy-relevant research. We invite both conceptual and empirical fully drafted manuscripts that address temporal gaps in transitions, including but not limited to:

- Conceptualizing time: how time can be known, theorized, and observed in transitions.
- Interacting temporalities: past-present-future entanglements, nostalgia, anticipation, uncertainty.
- Experiencing and governing time: speed, urgency, deadlines, tipping points, and their political effects.
- The politics of possibility: speculation, open futures, and the sustaining of uncertainty.
- Scales of time: from everyday rhythms to geological epochs and planetary thresholds.

Convenors
Bregje van Veelen, Centre for Sustainability Studies, Lund University, Sweden
Magdalena Kuchler, Natural Resources and Sustainable Development, Department of Earth Sciences, Uppsala University, Sweden

Beyond Human Timescales: Recognizing Future Generations in Subsurface Development Policy

27. Bridging temporal gaps in low-carbon transitions

Kyra Verbruggen[1]
Anne Bergmans[1], Tine Compernolle[2, 3]
[1] Department of Sociology, Faculty of Social Sciences, University of Antwerp
[2] Department of Engineering Management, Faculty of Business & Economics, University of Antwerp
[3] Geological Survey of Belgium, Institute of Natural Sciences

Introduction: Geological resources, including geothermal energy and subsurface (pore) space, are increasingly being recognised as potential contributors to a carbon-neutral society. In Flanders (Belgium), the Campine Basin has become an area of interest for subsurface development. However, developing some geological resources can have impacts extending far beyond the next few generations, potentially beyond human timescales. For instance, nuclear waste requires safe disposal for tens or even hundreds of thousands of years. Interactions between subsurface activities must also be considered, since future developments could affect the safety of those already in place. While future generations are generally considered as important for environmental policy, no research has examined whether they are actually recognized in current subsurface policy, and, if so, where the cut-off point lies.

Methods: We analyzed Flemish and Belgian legislation and policy documents relating to the subsurface in general, as well as to groundwater, shallow and deep geothermal energy and gas storage. Additional analysis of policy for CO_2 and nuclear waste disposal, as well as EU directives and regulations, will be completed by March 2026. Our aim is to establish whether these temporal elements are currently represented within the policy framework for subsurface development, if there are differences between different subsurface activities and if interactions are recognized for their potential long-term impact. Intergenerational and recognition justice guide this analysis.

Results: Our preliminary findings indicate that temporal considerations are absent from Flemish and Belgian legislation for geothermal energy, groundwater and gas storage. Although (financial) cost distribution is discussed, these responsibilities only extend to one future generation. So far, no differences have been found between activities, and future interactions are not discussed at all. We expect similar results for CO2 storage, but policy related to nuclear waste disposal may include more temporal considerations due to the well-known risks associated with nuclear waste. We anticipate finding greater recognition of future interests in EU directives and regulations, albeit likely not beyond 2-3 generations.

Conclusions: Therefore, current subsurface policies in Flanders and Belgium largely overlook long-term responsibilities, focusing solely on the present and near future. This gap conflicts with the enduring nature of geological resources and their intergenerational impact.

Looking at infrastructure through time: An integrative review on maintenance, repair, and environmental concern

27. Bridging temporal gaps in low-carbon transitions

Sanna Tegel[1]
Jenny Rinkinen[1]
[1] LUT University

Introduction: Recently, the infrastructure turn in social sciences has conceptualised infrastructures as socio-technical processes with notably temporal dimensions. The turn has directed attention to their processuality, fragility, and the continuous work of maintenance and repair needed to keep them going. This article investigates how this understanding of infrastructures as fragile, temporal arrangements connects with environmental concerns and low-carbon transitions. Simultaneously enabling and destructive, infrastructures create the conditions for contemporary life but are linked with environmental harm, unsustainable resource use, and overconsuming lifestyles. Despite a recognition of their role in the Anthropocene, the environmental implications of their fragility—their inevitable deterioration and the work needed to counter it—remain understudied.

Methods: Building on the notion of "broken world thinking", we conduct an integrative review to synthesise how infrastructure fragility has been discussed in relation to environmental concerns. We pull insights from maintenance and repair studies, infrastructure studies, and adjacent disciplines.

Results: We identify four lines of scholarly discussion, (1) virtuous maintenance and repair, (2) maintenance and repair as possibility for change, (3) long-term dynamics of maintenance and repair, and (4) problematising objects of maintenance and repair, that each contribute differently to analysing the environmental implications of infrastructure fragility. Based on the reviewed literature, we build on the notion of the "temporal fragility" of infrastructure to develop environmental considerations of infrastructures. We argue that looking at infrastructure through time reveals dynamics and consequences relevant to understanding their environmental implications.

Conclusions: We suggest that as a lens, the temporal fragility of infrastructure reorients analyses of the role of infrastructures in low-carbon transitions by attending to their temporal dimension. Looking at infrastructures through time reveals the ongoingness of their material claims and points out the limitations, possibilities, and contingencies inherent in their fragility.

Low-carbon transition, inequalities and changing temporal orders

27. Bridging temporal gaps in low-carbon transitions

Sara MacBride-Stewart[1]
[1] Cardiff University

Introduction: In the Great Derangement, Gosh (2015) wrote "*the Anthropocene has reversed the temporal order of modernity. Those at the margins are now the first to experience the future that awaits all of us. It is they who confront most directly, vast titanic inhuman nature*". This paper explores the concept of just transitions through his proposition of a temporal reversal. Just transitions have been globally advocated and legislated for as key tool for redistribution during transition. Wales produced its first Just Transitions Framework in Dec 2025, just as many governments and businesses commit to developing Just Transitions further. Their expectation is that going beyond redistribution requires epistemic justice that removes restrictions on fairer, greener opportunities for the most vulnerable. But concern is building about the effectiveness of Just transitions frameworks.

Methods: Using the Welsh context, we conducted an action research study of equality mainstreaming in Net Zero (skills) policy development – which engaged with equality experts, and other stakeholders invested in a green transition in Wales. The Equalities Mainstreaming Policy Development Model (Parken, 2010) resembles a systems methodology that considers the deep systemic roots of inequality, which are present in the ways in which economic and ecological processes interact with and exacerbate each other across the kind of societal developments promoted by low-carbon transitions.

Results: Our results identify the potential of policy to i) promote a more wide-ranging ecological ethos, ii) scope to redefine Net Zero employment, plus a need for iii) wholesale environmental upskilling. Further to these findings, in this paper I will show how the absence of both an environmental and care ethos, has resulted from the displacement of the structural embeddedness of inequalities in a Net Zero skills transition, what Nixon refers to as 'slow violence'.

Conclusions: Drawing on Gosh and Fraser (2019) to ask 'how are why are Just Transitions contested?, what are the temporalities involved, and what are the consequences of this contestation for the temporal order of justice, in a Just Transition? this paper reaches some conclusions about the changing and reversing of temporalities of inequalities in a Just Transition, both in the past and in the future.

Making time for (and with) plants: Vegetal metabolism, net zero, and the contingent temporalities of low-carbon 'transition'

27. Bridging temporal gaps in low-carbon transitions

James Palmer[1]
[1] School of Geographical Sciences, University of Bristol

Introduction: Across diverse fields today, from energy provision and carbon dioxide removal to sustainable agriculture and urban regeneration, scientific, commercial and policy actors are increasingly pinning hopes for accelerated low-carbon transitions upon plants. Through photosynthesis, plants assemble organic compounds which can be converted into 'bio-based' renewable fuels and sustainable construction materials. They also absorb atmospheric carbon which can be locked away—in soils or deep underground—to achieve so-called 'negative emissions'. Despite the ubiquity of plant-based solutions for lower-carbon futures, however, little attention has been paid to the ways in which **vegetal lifeforms themselves might complicate or resist linear, chronological understandings of time** implied in headline policy commitments to achieve 'net zero' emissions objectives.

Methods: In this paper, I draw on documentary analysis and interviews to examine the **time-making capacities** of plants across three cases: 1) the development of advanced bioenergy crops for sustainable aviation fuels in the US; 2) experiments with willow and biochar to achieve so-called 'reverse coal' in eastern England, and 3) projections of large-scale bioenergy with carbon capture and storage (BECCS) in global net zero emissions scenarios. In each case, I examine how plants are being put to work not strictly to eradicate or reduce our current socio-economic dependence upon carbon-intensive forms of resource use, but rather to **forge new entanglements between past, present and future forms of carbon itself.**

Results: Mainstream accounts tend to depict biofuels, biochar and indeed BECCS as low- or negative-carbon solutions. By contrast, I contend that these plant-based interventions serve principally to **rechoreograph the geographies and temporalities of carbon cycling**, complicating binary distinctions between biological and geological time, while also transcending the divide between a supposedly 'natural' carbon cycle and anthropogenic emissions.

Conclusions: Plants can, no doubt, be made to reorganise carbon temporalities in ways conducive—theoretically at least—to meeting net zero goals. In concluding, however, I suggest that to properly **make time for plants** in low-carbon transitions would entail giving vegetal lifeforms a role not merely in bending emissions curves downwards, but also in reshaping the rhythms of everyday economic life—away from productivist dreams of perpetual growth, and towards more open-ended and non-linear futures.

Making time for the transition; temporal conflicts and potential synergies regarding a Paris compliant pathway in Swedish regional climate governance

27. Bridging temporal gaps in low-carbon transitions

Paula Lenninger[1]
[1] Uppsala University

Introduction: By recognizing that CO2 emissions have a cumulative impact on the climate, the carbon budget manifests the urgency to accelerate the transition to a zero-carbon society. By going from "target to budget", carbon budgets as a policy instrument are expected to shift focus from the *future* to the *present*. However, the multiple temporalities involved in the appurtenant democratic planning process and its conflicting temporal frames are not sufficiently considered. In Sweden, many regional governments have calculated carbon budgets for their respective geographical area. Drawing on literature on sociology of time, the aim of this paper is to explore what specific temporal conflicts that occur when incorporating the regional carbon budgets (RCB's), as well as the attempts to overcome these conflicts.

Methods: I draw upon workshops in three Swedish counties with regional actors with direct control over territorial fossil CO^2 emissions, as well as on 30 qualitative, semi-structured interviews with a selection of participants from the workshops.

Results: I propose a typology of temporal conflicts occurring from *the 'imperative of speed'*; 1) democratic processes, 2) bureaucracy, 3) policy fragmentation 4) growth paradigm/ecomodernism, 5) national security and 6) political nervousness/indecisiveness. These non-exclusive categories each inhabit more specific conflicts, which span various temporal aspects. In search for opportunities for temporal conflict resolution, the informants recognize venues for temporal *synergies*, or for *making time*. These possibilities mostly occur within the linear- and efficiency oriented temporal paradigm.

Conclusions: There is a dividing line between those conflicts that ought to be considered inevitable in a well-functioning democracy, and those that must be resolved for the climate transition to accelerate. In order to make time for the processes, a focus on sufficiency in terms of energy use could be applied. However, such imaginaries regarding alternative temporal paradigms are absent. I also conclude that 'urgency' in the regional climate transition is expressed as the urgency to *maintain* the status quo rather than to *change* it. This results in all actions that threaten the prevailing temporal paradigm having to be forcefully postponed from the present to an abstract future. Thus, the RCB's do not create the hoped-for 'interval', i.e. 'time-space for action'.

Out of Sync: Misaligned Temporalities in Low-Carbon Heat Planning

27. Bridging temporal gaps in low-carbon transitions

Martin Green[1]
[1] The University of Reading

Introduction: Low-carbon transitions involve not only shifts in infrastructure but also in how time is known, measured, and governed. Yet temporal dimensions of transitions have received less explicit attention than spatial ones. This paper explores how temporal horizons are made and remade through planning for district heating in the UK-a technology with significant decarbonisation potential but limited deployment. It asks: which temporalities shape transition planning, and which are marginalised?

Methods: The paper draws on qualitative research conducted in Reading, UK. Data collection comprised semi-structured interviews with transition stakeholders-including heat suppliers, local authority officers, hospital representatives, and members of low-carbon community organisations-alongside documentary analysis of planning materials, policy documents, and public consultation records.

Results: The research reveals diverse and often misaligned temporalities at play in district heating planning. Suppliers evaluate potential network routes through annualised demand density estimates, rendering time calculable and commodified. Local authorities navigate policy cycles and carbon budgets, working toward targets such as net zero by 2030 or 2050. Hospitals, as potential anchor loads for heat networks, operate according to their own procurement timelines and long-term estate-planning horizons. Meanwhile, low-carbon community organisations advise households on retrofit timing and everyday heating rhythms-temporalities rooted in domestic life and seasonal variation. These temporal frames frequently come into tension, with actors working to different deadlines, planning horizons, and understandings of urgency.

Conclusions: The paper argues that dominant techno-economic approaches to transition planning-oriented toward calculable, commodified time-risk marginalising the slower, more uncertain, and lived temporalities on which low-carbon transitions ultimately depend. Making these temporal tensions explicit opens space to acknowledge the plurality of temporalities at play in low-carbon transitions.

Past-present-future entanglements in solar hydrogen innovation: the case of photoelectrochemical technologies

27. Bridging temporal gaps in low-carbon transitions

Alison Lesdos[1, 2], Gilles Debizet[1], Jonas Pigeon[2]
[1] Université Grenoble Alpes
[2] ENGIE Lab Crigen

Introduction: Low-carbon transitions are not only technological shifts but are also characterized by temporal tensions: inherited infrastructures impose slow rhythms, while climate targets demand acceleration, and innovation imaginaries project alternative futures. These tensions do not simply delay innovation; they actively shape how futures are imagined and enacted. Photoelectrochemical (PEC) technologies for solar hydrogen production—still largely speculative and designed to overcome some constraints of electrolysis-based hydrogen—offer a lens to examine these dynamics. While electrolysis-based hydrogen relies on infrastructures rooted in fossil fuel systems (electricity grids, gas pipelines), PEC technologies evoke imaginaries of autonomy and decentralization. This raises two intertwined temporal questions: how do future promises of PEC challenge representations anchored in the past, and conversely, how do past and present temporalities reshape future-oriented projects?

Methods: We adopt a reflexive approach to time by combining:
- Expert interviews to capture how PEC developers articulate past lessons, present challenges, and future expectations;
- Stakeholder interviews on electrolysis projects to trace infrastructural path dependencies and their temporal inertia;
- Interviews with potential users of PEC technologies to assess the alignment—or misalignment—between developers' projections and users' expectations;
- A literature review of policy frameworks and hydrogen roadmaps to trace assumptions about hydrogen's evolving role in energy transitions.

Our conceptual lens draws on the sociology of the future (anticipations, imaginaries) and path dependency, emphasizing how temporal framings shape innovation trajectories.

Results: Preliminary insights suggest that hydrogen development is governed by infrastructural inertia, producing a mismatch between accelerated policy timelines and slower material transformations. Expectations are continuously recalibrated to present constraints rather than radical futures. For PEC technologies, this raises a paradox: while imagined as disruptive and autonomous, they risk being absorbed into existing centralized infrastructures, reproducing past temporalities instead of creating new ones.

Conclusions: Understanding these past-present-future entanglements is crucial for designing adaptive innovation strategies and policy frameworks. By foregrounding time as an analytical category and by examining PEC technologies as a case study, this research highlights the importance of anticipatory governance and the need to reconcile imaginaries of autonomy with the material realities of energy infrastructures. Such insights can inform more realistic pathways for solar hydrogen and, more broadly, for low-carbon transitions.

Pluralizing low-carbon transition temporalities: Exploring non-linear conceptions of time in post-Soviet Hungary and post-industrial Southern Italy

27. Bridging temporal gaps in low-carbon transitions

Réka Sára Mezei[1]
Simona Mancusi[1]
[1] IT University of Copenhagen

Introduction: Many environmental policies and initiatives emanating from the European Commission employ linear models of innovation, privileging the future and either erasing or instrumentalizing the past. Our paper turns towards the European Green Deal and argues that it too builds on a linear logic of transition. These reductive temporal logics present challenges to peripheralized regions, like Southern and Eastern Europe, which are seen as lagging or resistant to futures embedded in these strategies and policies. Financial aid exists to support marginalized regions, such as the Just Transition Mechanism; however, we argue that this support imposes a spatial and infrastructural focus, which tends to ignore how temporal logics can marginalize regions too. Moreover, we show that the unique historical realities of peripheral sites often influence resistance to transitions. We draw on work that explores how the past continues to shape site-specific practices, troubling linear transition narratives, and tending to these sites otherwise.

Methods: We build on hauntology and *cuerpo-territorio-memoria* to explore non-linear conceptions of time, using historical cases, archival traces, and media discourses. Research in Hungary will utilize the Blinken OSA Archive, a counter-archive in Hungary that documents social and environmental movements, showing how historical traces trouble temporal linearity. Whereas, research in Southern Italy will look at the embodied memories and territorial relations of environmental movements.

Results: The research shows how caring for the past can mobilize people in making changes in their everyday lives. Using these theoretical lenses, we explore nonlinear temporalities in post-Soviet Hungary and post-industrial Southern Italy. Through our analysis, we show how sites, pasts, and bodies are uniquely intertwined in shaping the adoption of green transition within specific territories. We argue that these regions' resistance to change is not for a lack of engaged and imaginative climate initiatives, but rather because the past as lived and embodied experience informs how transitions are imagined.

Conclusions: By exploring the peripheral timescapes of Hungary and Southern Italy, we argue that these peripheries hold situated temporal imaginaries that can inform efforts to pluralize green transition pathways by considering the histories, the land, and its people when developing these strategies.

Rhythmanalysis as Critical Phenomenology of Time: Lessons for Studying Low-Carbon Energy Infrastructure Projects

27. Bridging temporal gaps in low-carbon transitions

Sebastian Koa[1]
[1] University of Exeter, Department of Geography, United Kingdom

Introduction: How are the myriad rhythms of low-carbon transition projects *lived*? That is, how are such *lived* temporalities not only internalised and experienced, but also produced, contested, and mediated, unfolding dialectically through the interactions between projects and communities? This paper makes the case that the question of 'inhabiting time' demands an approach that is simultaneously sensitive to the immediacy of everyday lived experience (phenomenology), as well as to the forms of subjectivity that emerge from within broader social structures and conditions (critical theory). Henri Lefebvre's rhythmanalysis – predisposed to both embodied and socially produced articulations of time – is fertile conceptual ground to advance such a critical phenomenology (Dyring 2021; Salamon 2018) of the temporalities of low-carbon transition projects.

Methods: This paper advances this conceptual argument through an empirical case study of communities living with the Hinkley Point C nuclear power megaproject in Somerset, UK. Utilising ethnography (2023-ongoing) and semi-structured interviews (n=28, data collection completed), and presented using composite narratives, this paper traces the rhythmic lifeways of taxi drivers, riggers, anti-nuclear activists, local government officials, and reactor plant operators in Somerset.

Results: Still under construction, the Hinkley Point C project is variously imagined and inhabited as a window of economic opportunity, an interruption to everyday life, an obstacle to the attainment of key life stages, a boom time with a looming bust, and an interminable present to be endured. These stories help us understand the different ways by which Hinkley Point C is figured as temporal, where each figuration entails both an internalisation of specific rhythms into an inner time-consciousness, as well as an unfolding outward through differential forms of relational attachment. Where these figurations are out of sync ('arrhythmic'), or even inimical to the good health of the community ('dysrhythmic'), low-carbon transition projects like Hinkley Point C can become sites of contestation and controversy.

Conclusions: The paper ends by considering the implications of such an approach to our understandings of communities in transition. Moving beyond the simplistic lens of socioeconomic investment or jobs, this paper concludes by calling for understanding such transition projects through the myriad embodied temporal vantages of the communities that host them.

The double paradox of the Anthropocene

27. Bridging temporal gaps in low-carbon transitions

Sofie Hellberg[1]
[1] University of Gothenburg, School of Global Studies

Introduction: This paper explores a *double paradox* at the heart of democracy in the Anthropocene. The first concerns **time**: people are called upon to respond rapidly to environmental threats, yet they inhabit temporal experiences that rarely align with this demand. For some, the effects of climate change appear to have already slipped beyond meaningful intervention. For others, it remains slow, or difficult to perceive as urgent. These divergent temporal orientations complicate collective action, unsettle expectations about when political decisions should take effect, and generate uncertainty about what counts as acting "in time." They expose the tension between climate disruption, lived rhythms of change and the temporal frameworks through which public decisions are organised. The second paradox concerns the **relationship between humans and the Earth systems they have transformed**. Climate change is the cumulative result of human activity yet increasingly unfolds as if driven by forces that escape human control. It thus appears simultaneously as a human-made condition and as something that exceeds human direction. This duality unsettles established understandings of agency, responsibility, and causation.

Methods: Bringing these paradoxes together, the paper employs a theoretical and interpretive method drawing on political theory, the politics of the Antroposcene, and temporal analysis to illuminate the interdependence of agency and temporality in the Anthropocene.

Results: The paper illuminates that individuals and institutions understand themselves to be capable of doing depends on the temporal horizons through which they interpret change, horizons shaped both by inherited pasts (such as emissions, infrastructures, and institutional path dependencies) and by futures that appear increasingly open-ended, unstable, or difficult to forecast as well as dependent on others' will to act. Likewise, shifting expectations of agency reorient how communities position themselves within unfolding environmental change, influencing whether disruptions are experienced as thresholds, warnings, or gradual transformations.

Conclusions: By making these tensions explicit, the paper offers a conceptual approach for understanding how democratic imaginaries and practices are recast when political life becomes entangled with volatile environmental processes. Attending to this entanglement helps clarify how the search for collective futures is shaped by contradictory temporal experiences.

Volatile temporalities: Insights from the Danish Agri-Food Transitions

27. Bridging temporal gaps in low-carbon transitions

Emily Christley[1]
Allan Dahl Andersen[1]
[1] University of Copenhagen

Introduction: The concept of tipping points, originating in the natural sciences as critical thresholds where small perturbations trigger rapid qualitative change, is gaining prominence in the research field of sustainability transitions. Its uptake signals a shift from linear, path-dependent trajectories towards non-linear and dynamic temporalities enacted through interactions between multiple actors. Yet whilst tipping points have been applied to socio-technical infrastructures such as offshore wind, electric vehicles and solar photovoltaics, it has rarely been used to examine transitions in agri-food systems. In this paper, we examine these temporalities in the case of organic milk in Denmark, a European frontrunner in production.

Methods: We trace the development of the Danish organic milk sector over time by analysing legislative texts and policy documents, trade publications (e.g., *Magasinet Økologisk*), and media articles. Our aim is to map evolving relationships between actors, technologies, and institutions from 1980 to 2025, identifying moments of acceleration, stagnation, and reconfiguration. This document-based timeline will be complemented by interviews conducted in spring 2026 to examine how actors' positions, strategies, and learning processes have shifted, and how feedback loops have intensified or dissipated over time.

Results: We expect to identify distinct learning processes in the development of organic milk, particularly on the production side, where knowledge sharing amongst farmers and supportive policy mechanisms have played a central role. At the same time, we anticipate periods of stagnation, even amidst moments of expansion, stemming from mismatches between production and consumption. We expect these learning curves to differ from those typically conceptualised in socio-technical transitions, reflecting instead the characteristics of socio-ecological transitions shaped by ecological rhythms and earth-system processes.

Conclusions: We aim to extend the application of tipping points to agri-food systems, demonstrating how transitions unfold through uneven and interacting temporalities. We expect to show how temporal mismatches, heterogeneous learning processes, and political interventions shape the direction and pace of transformation. In doing so, we contribute to a broader shift in sustainability transitions research, viewing transitions as non-linear, dynamic, and deeply embedded within socio-ecological temporalities.

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

In this workshop we will address the social dimension and how to engage various citizens in activities around green transition of the transport system and built environment in the Nordic countries.

Citizen participation (travellers and potential travellers) is often limited in transport planning. When people are invited to the planning process, this is often to a public consultation meeting for receiving information about a project or plan which has already been developed by experts. Citizens can make complaints about barriers and raise questions about things that aren't working in the transport system and their neighbourhoods; however, they are seldom involved early in the planning process in a systematic way.

Current travel survey data, though quantitatively rich, lack insight into why people travel as they do, how they perceive transport systems, and what shapes their mobility decisions. Qualitative methods, e.g. interviews, focus groups, observations, can uncover motivations, experiences, social norms, and the implications of not travelling, which are crucial for understanding mobility-related injustices and social sustainability. However, such studies are often context-specific, focused on isolated cases, and rarely conducted to gather more general knowledge of the population in a city or region. This workshop will discuss fully drafted manuscripts on projects that address this lack of understanding on everyday mobility and discuss how to bridge the gap between expert knowledge and citizens' everyday routines.

The topic of this workshop session feeds into the efforts of connecting the overall global aims of green transition with equality and social sustainable communities. It will address various activities to inform and include local people in the green transition, e.g. children, young, and older people, gender and diversity, This has been expressed in strategies such as "Towards a green and gender equal Europe" by the EU, as well as in the UN 2030 goals. In the context of global challenges of climate change, insecurity and uneven power relations, the work for increasing social sustainability is the most urgent (following e.g. UN SDGs 5 - Gender Equality, 10 - Reduced Inequalities, and 11 - Sustainable Cities and Communities).

Convenors

Lena Levin, VTI - The Swedish National Road and Transport Research Intitute, Sweden
Robin Nuruzzaman, VTI - The Swedish National Road and Transport Research Intitute, Sweden

Affective Hotspots and Urban Decision making in revitalised post-industrial cities: Developing a Participatory Emotional- Mapping Toolkit

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Babra Sulaiman Qureshi[1]
Karin Edberg[1]
[1] Linköping University

Introduction: Urban regeneration in post-industrial cities is often celebrated as a sign of progress and creativity, yet its emotional and social consequences for residents remain underexplored. As cities like Lodz, once the "Manchester of Poland", or Norrköping, once the "Manchester of Sweden" reinvent themselves through large -scale revitalisation projects, questions arise about how these transformations reshape resident's emotional geographies, sense of safety, belonging, and attachment to place. Understanding these affective dimensions is crucial in an era when sustainable urban development increasingly depends on fostering emotional well-being and community inclusion, not merely physical restructuring.

Methods: This research employs emotional mapping, which acts as a participatory, spatial and phenomenological tool that visualises how individuals relate to urban spaces. Emotional mapping method design is tri-layered approach using feeling maps, where participants mark places on the map with associations of happiness, fear, sadness, frustration and fun, combined with interviews and observations. We argue that emotional mapping reveals hidden inequalities, gentrification pressures and power imbalances, offering the potential to give voice to underrepresented groups and create a more inclusive human-centred approach at the onset of planning process.

Results: Resident's emotional geographies both mirror and push back against the narrative set by the municipality to define the official story of revitalisation, regeneration and pedestrianised green zones. The revitalised cityscape attract positive affect, pride and sociability to promote walkability while streets in the left-behind pockets accumulate negative effects of fear, frustration and sadness due to dilapidated buildings and not much active urbanism on the streets. Emotional maps therefore cannot only reveal where regeneration works but where it produces exclusion, anxiety and loss.

Conclusions: By understanding emotional and sensory dimensions, walkability as a marker has potential to measure not only infrastructure state but also affective and rhythmic engagements with the place and its people. Emotional mapping acts as a tool for collaborative process, to reveal a persistent gap between institutional intentions and residents lived realities. By integrating emotional mapping toolkit as a ground zero of community planning, urban revitalisation efforts can move beyond physical renewal, prioritising residents emotional and psychological well-being, ensuring that regenerated spaces genuinely resonate with the communities they serve.

BYRESAN – a citizen participatory approach that increased local interest and commitment to sustainable travel, traffic safety and cycling

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Lena Levin[1]
[1] VTI, the Swedish National Road and Transport Research Institute

Introduction: This paper presents result from participatory research during 2024-2025. The development project Byresan (the village trip) aimed to facilitate for people in the countryside and in villages in Region Kronoberg, Sweden, to adjust to new means of travel. Byresan focused on reshaping and reuse of the present roads in order to create a safe and welcoming environment in interaction with citizens. An extensive cycling test was carried out in nine villages where 40 electric bicycles were available to the residents for six weeks at a time, and co-creative workshops were held.

Methods: The project used different methods: Questionnaires for the test cyclists, observations and conversations in connection with the delivery and collection of bicycles, ARCGIS that mapped the cyclists' experiences, qualitative interviews with a selection of cyclists, and workshop-labs with school children and adults.

Results: A survey before the cycling test showed that the majority of the 220 people who registered an interest in participating in the study used cars even for distances shorter than 2 km. For distances of 2–10 km, car use was 90–100% before the test cycling. During the study, cycling has increased in the selected villages, both more bicycle trips and longer distances thanks to access to the electric bicycle. Also, people who have had difficulty cycling due to physical impairment have discovered that they can cycle again with an electric bicycle. The project paid attention to horizontal criteria and democracy. Citizens have been involved in workshops on traffic safety, public health and active travel, and new forms of interactive planning in the Region Kronoberg have been developed. Extensive material has been collected via the cycling test, that contribute to local knowledge about problems and opportunities in each location.

Conclusions: The study showed great interest and commitment to cycling issues and a willingness to change travel habits when opportunities arise. The method of distributing 40 electric bicycles in small villages in the region contributed to visibility and attention. The citizen participatory approach created interest and commitment locally for sustainable travel, traffic issues and cycling – and local barriers became more visible for the planners.

Concerning conditions for aging: service provision for older people in remote areas

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Gustav Lopez Svensson[1, 2]
[1] Lunds universitet
[2] K2 - Swedish Knowledge Center for Collective Mobility

Introduction: As most people are less mobile as they age, older rural residents are often faced with the need to move from rural areas. Islands represent a form of remote area faced with mobility restrictions impacting their service provision, encouraging planning norms in opposition to centralization: to place services closer to the users. This study aims to increase the knowledge of the provision of services for rural areas, from local to national level. The following research questions are considered:

- How do actors on different levels of planning reason about the service provision for rural areas?
- How are futures envisioned by the actors in terms of service provision?

Methods: One island was selected to serve as an example of a remote rural area, located in the north of Sweden. Interviews were conducted with residents, officials from the municipality, the region, and the Swedish Transport Administration as well as civil society organizations. In total, 5 interviews and 4 workshops were conducted. The interviews and workshops followed a semi-structured format and were analyzed using a thematic analysis.

Results: The results point to challenges being described in similar ways by the participants, but the higher the level, the narrower the scope becomes. While the residents themselves have a cohesive and holistic perspective on the challenges, on the national level the officials were delimited, and focused on specific aspects. However, the exception to this seems to be the national civil society organizations, perhaps due to the organization around a specific issue (living conditions for rural areas and islands).

Conclusions: The interviews point to the communities on the island acting as a safeguards against declining services. The residents organize a lot of the service they need, sometimes with support from the municipality or the region, but sometimes all by themselves. While digital solutions can alleviate some challenges of service provisions, other services are not so easily replaced. A rethinking is therefore needed concerning care services in rural areas, placing more emphasis on the cooperation between locals and public institutions, for example hiring local health care workers to provide care.

Engaging citizens in deliberating carbon-free mobility transitions

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Heli Saarikoski[1]
[1] Finnish Environment Institute

Introduction: Road transport accounts for one-fifth of greenhouse-gas emissions in Finland and rapid transitions are needed in the transport sector to achieve the national goal of carbon neutrality by 2035. However, the most effective policy measures like taxes and road tolls have distributional impacts and policymakers are often wary of furthering unpopular initiatives. The pressing question is how to put into action ambitious transport policies to reach the carbon-neutrality targets in an effective and socially acceptable manner. Deliberative mini-publics such as citizens' juries are a promising means to increase the legitimacy of climate policies. In this paper we analyze two citizens' jury processes that addressed ways to curb greenhouse-gas emissions from car-based mobility. The first one was organized by the Uusimaa regional council as part of Regional Climate Roadmap in April 2022 (35 participants) and the second one by the City of Helsinki in June 2024 (50 participants) to map out acceptable city level policy instruments for reducing CO2 emissions from transport.

Methods: We used participant observation and pre- and post-jury questionnaires administered to the jurors and carried out document analysis of the jury statements to address the following questions: What are effective and socially acceptable ways to cut down automobile CO2 emissions and how should these measures be implemented?

Results: The results suggest that the jurors adopted a more positive view toward measures to promote fossil-free transport, but the processes did not create wide acceptance of radical climate-policy measures. The Uusimaa jurors emphasized the mobility challenges of people living in sparsely populated areas, with limited access to public transport, while Helsinki jurors drew attention to the needs of vulnerable groups such as elderly, people with disabilities, parents of small children or low-income people. However, both juries provided helpful information for authorities about the practical problems that people encounter when trying to reduce car dependency. The success of several emission-control measures, such as the use of car-sharing, bicycling, and public transport, ultimately depends on how people are willing to, and capable of, altering their daily practices.

Conclusions: Deliberative mini-publics can result in considered and well-balanced recommendations on ways to promote green transport policies.

Impacts of large-scale infrastructure planning projects on diverse values of nature

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Janne Katharina Thomsen[1, 2]
Jarrod Cusens[1, 2], Inger Elisabeth Måren[1, 2, 3], Alicia May Donnellan Barraclough[1, 2]
[1] Department of Biological Sciences, University of Bergen, Norway
[2] Centre for Sustainable Area Management (CeSAM), University of Bergen, Norway
[3] UNESCO Chair on Sustainable Heritage and Environmental Management, University of Bergen, Norway

Introduction: Land-use change is the greatest driver of biodiversity loss worldwide (IPBES 2019). In Norway, growing spatial pressures—such as infrastructure projects linked to the green energy transition—have become central to societal debates on land-use change and just spatial planning approaches. Drawing on the IPBES Values Assessment (2022), this study examines how instrumental, intrinsic, and relational values of nature are affected by proposed infrastructure planning projects. By exploring both held and assigned values at stake, the research contributes to understanding societal conditions that prevent or drive biodiversity loss and offers insights to enhance just policy and practice approaches in spatial planning.

Methods: The research focuses on three cases within Nordhordland UNESCO Biosphere Reserve: (1) a proposed onshore wind farm (terminated after a public vote in April 2025), (2) a road expansion of the coastal highway route E39, and (3) a 420 kV power line development. A mixed-methods approach combines spatial and socio-demographic analysis of a Public Participation Geographic Information System (PPGIS) dataset with qualitative analysis of semi-structured interviews and public hearing inputs. Twenty interviews have been completed with local and regional actors whose values of nature are affected by the proposed infrastructure projects (10 individual respondents, 10 representatives of voluntary organizations). Qualitative content analysis is conducted through thematic coding in NVivo.

Results: Preliminary findings reveal strong interlinkages between value dimensions and the need to account for pluralistic nature valuation in spatial planning. Both intrinsic values (such as nature's right to exist) and relational values of nature (such as care) are foundational for public engagement. These values often shift from held to place-specific when areas are threatened by land-use change, challenging the notion of resistance as merely 'Not-in-my-backyard'. Instead, participants' responses reflect complex reasoning grounded in pluralistic valuation, where intrinsic, relational, and instrumental values intersect.

Conclusions: Ignoring pluralistic nature valuation in spatial planning risks marginalizing intangible values of nature and deepening societal conflict. Recognizing and integrating diverse and interlinked values of nature into planning policy and practice is essential for just and sustainable land-use decision-making, strengthening socio-cultural valuation approaches and enhancing biodiversity governance in practice.

Perception of local public transport deprivation and support for climate change mitigation policies across Europe

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Francesco Visconti[1]
[1] Department of Political Science, Luiss Guido Carli, Rome, Italy

Introduction: Public support is essential for the successful implementation of climate change mitigation policies, yet these measures often face resistance due to their perceived social and economic costs. Transportation policies, in particular, highlight eco-social divides, as they can impose higher costs on individuals with limited mobility options. While research has explored factors such as ideology and environmental concern in shaping policy attitudes, the role of perceived accessibility, the ease with which individuals believe they can reach preferred destinations using available public transport, remains understudied. This study investigates how perceptions of local public transport accessibility shape citizens' willingness to endorse climate mitigation measures, contributing to debates on the social legitimacy of environmental policies.

Methods: The analysis relies on original survey data collected in December 2022 by YouGov in seven European countries (France, Germany, Italy, Spain, Sweden, Poland, and the United Kingdom). National samples of about 1,500 respondents per country (N = 11,000) with quotas for age, gender, education, and region. The key independent variable measures respondents' evaluations of local public transport availability and frequency. Dependent variables capture support for various climate policies, including vehicle efficiency regulations and taxes on fossil fuels. Multivariate regression models control for socio-demographic, ideological, and attitudinal factors, allowing assessment of the independent association between perceived accessibility and policy support.

Results: Preliminary findings show that individuals perceiving their local public transport as poor are significantly less likely to support transportation-related climate policies, particularly vehicle efficiency regulations and fossil-fuel taxes, compared to those rating services as good or excellent. Weakened or no association emerges for non-transport mitigation policies. These effects persist after accounting for income, ideology, and climate concern, suggesting that perceived accessibility itself constitutes a distinct barrier to climate policy acceptance.

Conclusions: The findings highlight the importance of integrating social inclusion into environmental policymaking. Perceived deficiencies in local transport systems undermine public legitimacy for climate action, indicating that mitigation policies should be paired with investments in accessible, reliable public transport. Such integrated approaches could strengthen both social equity and political feasibility in the green transition.

The effects of depoliticisation and context on impacts: The case of the Swedish national citizens' climate assembly

28. Social inclusion in the green transition: How are citizens addressed and involved in transport and community planning?

Thomas Hahn[1]
Tim Daw[1], Laila Mendy[2], Tatiana Sokolova[3], Andrea Herrera[3], Marina Lindell[4], Molly Lundgren[1], Sofia Bernett[1], Stephan Barthel[1, 5]
[1] Stockholm University, Stockholm Resilience Centre, Sweden
[2] Uppsala University, Climate Change Leadership
[3] Södertörn University
[4] Åbo Akademi University, Social Science Research Institute
[5] University of Gävle

Introduction: Climate assemblies (CAs), i.e., citizens' assemblies focusing on climate policies, often aim to enrich public debate, revitalise democracy, or facilitate political decisions by increasing legitimacy of controversial policy making. National CAs have so far only been held in Europe, with diverse outcomes. Despite the European Green Deal placing just transition and the growing experience of citizens' dialogues at the centre of the climate transition, there is limited understanding of the broader impacts of climate assemblies. This article analyses the Swedish national CA, conducted in March-June 2024, with particular focus on the effects of depoliticisation and context on impacts.

Methods: We used several methods and data sources to triangulate results, including stratification methods for selecting assembly members, before/after surveys to members, participatory observations, interviews with members and politicians, public survey and media analysis. Since this CA was organised by a research consortium and not called for by a political organisation, we have no data on the impacts of the CA on climate politics. Our focus is to understand which factors influence the CA's impact on the public debate.

Results: The Swedish CA followed the pattern of European national CAs by asking how, not if, decided climate politics should be implemented. The design focused on collaborative development of proposals, which in itself encourages consensus-seeking rather than critical debate and disagreements. Parts of the agenda (design) encouraged critical thinking but the focus on developing policy recommendations resulted in a bias for depoliticisation, which is common for national CAs. Despite this, preliminary results suggest that the presentation and dissemination of the outcomes in 2024 to the Swedish political landscape had a politicisation effect. This is because the outcomes of the CA challenged the narrative of the government that the ongoing ambitious climate politics lacked public support.

Conclusions: The remit and design of a national CA largely frame the policy recommendations and societal impacts. However, our results suggest that timing and the political context also influence the public debate. Hence, consensus-seeking depoliticisation at the project level resulted in revitalisation and politicisation at the national public debate level.

29. Private diplomacy within global climate governance

One of the most pressing questions regarding the emerging global climate change regime concerns how and under what conditions non-state diplomacy matters. Some of the accredited observers at Conferences of the Parties (COP) related to the United Nations Framework Convention of Climate Change (UNFCCC) are actors such as think tanks, private research institutes, business associations and industry organizations, but also social movements organizations and other forms of civil society organizations. Together they form a large part of attending observers.

Their transnational form – founded in one country but also active in other countries – opens them for functioning as bridgeheads, closing gaps between states, while at the same time suggesting and promoting ideas, interpretations and solutions of their own (Garsten and Sörbom 2021). “Observer”, then, does not fully encapsulate their role within global climate governance. Instead, these actors are private diplomats; acting on the behalf of some agent’s interest, building long-term relationships through strategic communications that create an enabling environment for the policies they advocate.

In this workshop we analyse how such private actors construct and shape non-state climate diplomacy. We invite fully drafted manuscripts that explore e.g. the following questions within the described theme:

- How and by what measures are non-state diplomats partaking in and contributing to the emerging climate change regime?
- How can we understand the social and symbolic forms of capital that non-state diplomat organizations draw upon in their struggles over meaning of key assumptions within global climate change governance?
- What is the role of secrecy, discretion and status for gaining leverage in these governance circles?
- How can we conceptualize the contradictions between transparency and accountability on the one hand, and efficiency of secluded diplomacy on the other?

We welcome theoretical, empirical, and methodological contributions that shed light on these topics.

Convenors
Adrienne Sörbom, Stockholm Centre for Organizational Research, Stockholm University, Sweden
Joanna Mellquist, Stockholm Centre for Organizational Research, Stockholm University, Sweden

A new constituency in the global climate regime? The carbon dioxide removal community in the UNFCCC process from 2015 to 2025

29. Private diplomacy within global climate governance

Jacopo Bencini[1]
[1] European University Institute, School of Transnational Governance

Introduction: At COP30 in Belém, Brazil, the carbon dioxide removal (CDR) community had a dedicated pavilion in the UNFCCC Blue Zone for the first time, alongside established UN agencies, intergovernmental organizations, and participating countries, signalling growing visibility and claims to recognition within the UN climate regime. This paper investigates whether, and under what conditions, this emerging transnational community of experts, investors, and project developers can consolidate into a new non-state constituency, and how it could shape contemporary forms of non-state, science-based, business-driven climate action within the UNFCCC.

Methods: The study employs a mixed qualitative design, combining an online survey of more than 100 organizations and individuals involved in setting up, funding, and programming the COP30 CDR pavilion with an analysis of submissions and side-event agendas from COP21 to COP30. The survey maps organisational profiles, previous UN-level experiences, coordination practices, links with other CDR actors and national delegations, and perceived influence. The longitudinal dataset, on the other hand, traces patterns of participation and issue framing by CDR-related actors over the past decade.

Results: Expected results include evidence of increasing density and coordination among CDR organizations and actors, identification of informal leadership hubs connecting CDR actors, and a preliminary assessment of the group's perceptions on meaningful participation and expectations across the surveyed community.

Conclusions: The paper is expected to conclude that the CDR community functions as a transversal, proto-constituency that blurs boundaries between business, science, and advocacy, leveraging technical and financial capital to gain access to the UNFCCC diplomacy. This raises new questions and opportunities in governing carbon removals at the UNFCCC level, particularly in relation to upcoming update cycles of Nationally Determined Contributions in 2030, 2035, and towards net-zero.

Business Spaces: Influencing the United Nations' Conferences of the Parties on Climate Change

29. Private diplomacy within global climate governance

Ulrik Jennische[1, 2]
[1] Stockholm Centre for Organizational Research, SCORE
[2] Stockholm University

Introduction: As the UNFCCC's annual Conferences of the Parties (COPs) have become central arenas of global climate governance and private diplomacy, the presence and practices of business-affiliated non-state actors (NSAs) have grown in scope and significance. Although formally registered as non-profit organizations rather than lobbyists, these actors -- ranging from transnational think tanks to industry-linked policy advice organizations -- seek to shape negotiations by promoting business-oriented ideas, norms, and policy preferences. Existing research often conceptualizes such actors through insider–outsider lobbying dynamics, yet this framing obscures the spatial, communicative, and ambiguous nature of their influence. This paper investigates how business NSAs construct and use specific spatio-temporal settings at COPs to enact influence as a persuasive practice.

Methods: The paper is based on empirical material collected through participant observation at COP28 in Dubai and COP29 in Baku, as well as at the intermediate meeting in Bonn, and on in-depth interviews with representatives from nearly 100 organizations that participate regularly in the COP process.

Results: Drawing on Massey's relational understanding of space and communicative constitution of organization (CCO) perspectives, we conceptualize COPs as sites where organizational presence, communicative performances, and spatial arrangements co-produce possibilities for influence. We identify five distinct "spaces of influence" -- pavilions, panels, constituency channels, socio-professional events, and in-between spaces -- and show how each is animated by particular communicative practices, including curation, performing, statement-making, convening, and conveying.

Conclusions: Our findings demonstrate that business NSAs' influence is less a matter of direct lobbying than of creating and inhabiting communicative spaces that render their ideas available, visible, and repeatable to others. Their impact is therefore emergent, collective, and often incidental, filtered through the wider polycentric governance regime. We argue that understanding the consequences of business NSA participation requires attending to these spatialized communicative practices, rather than seeking causal attributions or quantifiable measures of influence.

Corporate Private Diplomacy in Global Climate Change Governance

29. Private diplomacy within global climate governance

Adrienne Sörbom[1]
Christina Garsten[2]
[1] Södertörn University
[2] Uppsala University

Introduction: With almost clockwork's predictability, world leaders gather every November for the annual United Nation Climate Conference. Alongside these planet-crucial negotiations between governments, tens of thousands of representatives from numerous organizations strive to influence the outcome. They appear as observers within and outside delegations, at the conference site and beyond, during the summits or throughout the year. Despite their significant role and visible presence, the importance of these non-state actors in climate change diplomacy is often overlooked.

Methods: In this study, we primarily employ ethnographic methods to closely follow a selection of these organizations, aiming to understand their role and importance for global climate governance. We focus on corporate-funded organizations, such as trade associations, think tanks, and business coalitions.

Results: Through the concept of "private climate diplomacy", this paper explores how these organizations exert influence, the strategies, methods and resources they employ, how they position themselves in relation to the negotiations, and how their activities are perceived.

Conclusions: We demonstrate that many of these organizations assume a role in climate governance that is far more vital and significant than that of mere observers. We show that the Climate Conferences aren't just platforms for governments, but complex arenas where private diplomats influence future climate governance.

From Advocacy to Diplomacy: Non-State Policy Advisors in the UNFCCC Arena

29. Private diplomacy within global climate governance

Joanna Mellquist[1]
[1] Malmö Universitet

Introduction: This paper investigates how non-state policy advice organisations—including think tanks, private research institutes, and business associations, predominantly based in the Global North—seek to shape climate governance within and around the United Nations Framework Convention on Climate Change (UNFCCC). Although formally positioned as observers, these actors increasingly take on functions that resemble diplomatic roles by providing negotiation support, agenda-setting, and issue framing. I conceptualise these activities as forms of private climate diplomacy, thereby moving beyond understandings of these organisations as merely advocacy-driven stakeholders. The study aims to clarify how their involvement influences the role of non-state actors in global climate governance.

Methods: The study draws on semi-structured interviews and participant observation at UNFCCC Conferences of the Parties (COPs). A total of 126 interviews with 70 Nordic and transnational policy actors have been conducted, alongside observations at COP28, COP29 and COP30. Interviews are analysed using qualitative thematic coding, focusing on institutional venues, resource mobilisation, and diplomatic practices.

Results: Preliminary analysis indicates that a wide range of institutional and informal venues—such as national and regional pavilions, bilateral meetings, side events, networking receptions, pre-COP consultations, media platforms, and coordinated campaigning activities—create opportunities for non-state advisors to shape negotiation priorities. Early findings suggest that these actors strategically mobilise epistemic authority, transnational networks, and perceived neutrality to influence agenda-setting and negotiation framing. I also expect to identify variation between nationally embedded advisory organisations and transnational actors in terms of access, visibility, and perceived legitimacy across these arenas.

Conclusions: The study is expected to demonstrate that non-state policy advisors increasingly perform diplomatic rather than merely consultative functions within the UNFCCC arena, contributing to a gradual privatisation of climate diplomacy. These findings will advance debates on legitimacy in global climate governance and highlight the need to reconsider the distinction between state and non-state roles in multilateral environmental diplomacy.

International Cooperative Initiatives (ICIs) and Global Climate Cooperation in the Era of Polycrisis: An analysis of the Breakthrough Agenda

29. Private diplomacy within global climate governance

Mishel Mohan[1]
[1] Vrije Universiteit Brussel

Introduction: International Cooperative Initiatives (ICIs) are transboundary voluntary efforts by a group of actors (including non-Party and/or governmental actors) to achieve specific climate-related goals. With objectives ranging from reducing GHG emissions, standard-setting, capacity-building, research and networking, these ICIs aim to further climate action globally. In an era of compounding risks of climate extremes, developmental challenges, rising geopolitical tensions, resurgence of protectionist and conservative policies, the effectiveness of such partnerships is often called into question. With a diverse mix of actors and activities focusing on various objectives, ICIs are ideal microcosms for studying international cooperation and the adaptability of multistakeholder partnerships, while working with both known and unknown unknowns. Given the looming 2030 deadlines for the Paris Agreement and Sustainable Development Goals (SDGs), examining the resilience of ICIs is essential to understand the role of partnerships in furthering collective goals when conventional modes of governance are fragmenting. The paper will examine the framework for global coordination and the adaptability of ICIs, focusing on the Breakthrough Agenda sectors of steel, concrete and cement. Breakthrough Agenda is an ICI convening initiatives and countries by providing a framework to prioritise, coordinate, and enhance collaborative action across seven high-emitting sectors.

Methods: The paper will employ a framework for analysing various aspects of fairness, effectiveness and evolution of the ICI. Additionally, qualitative analysis of existing academic literature, relevant reports (e.g., UNFCCC, IPCC, UNEP), grey literature, and interviews with relevant stakeholders will also be undertaken.

Results: The paper aims to review the effectiveness, fairness and potential trust-deficit due to climate backtracking by large actors and institutions. It will analyse the risks embedded in ICIs that subject them to failure in goal attainment and whether a focus on the self-interests of actors participating in the ICI enables them to continue cooperation and collaboration.

Conclusions: The paper aims to provide recommendations for effective and fair multistakeholder partnerships to ensure just and inclusive transformation despite local, regional or global challenges. It argues for the significance of continued and heightened international climate cooperation by stakeholders across the board to further their respective self-interests, given the reality of the climate crisis and its impacts.

The Rationales Behind Climate-related Financial Disclosure and the Role of UNFCCC COP Side Events

29. Private diplomacy within global climate governance

Hyeyoon Park[1]
Aarti Gupta[2], Jakob Skovgaard[3]
[1] University of Stirling
[2] Wageningen University
[3] Lund University

Introduction: Over recent decades, many climate-related financial disclosure mechanisms, such as the Taskforce on Climate-Related Financial Disclosure (TCFD) and the International Sustainability Standards Board (ISSB), have proliferated rapidly. These frameworks have been developed, standardized, and disseminated not only by states but also by an expanding constellation of non-state actors. Their evolution has unfolded most visibly in the UNFCCC COP side events, where private financial actors increasingly shape the discursive terrain of climate finance. The emerging debate on the climate-related financial disclosure mechanisms aims to mobilize vast flows of capital by steering investment from carbon-intensive activities toward “green” projects. Yet critical political economy perspectives show profound limitations in these standards, noting that dominant mechanisms such as the TCFD and ISSB strengthens an investor-centric logic that privilege shareholder interests over broader principles of public accountability in climate finance. Despite the increasing concerns, there is a lack of research on the political aspects and rationales underpinning climate-related financial disclosure initiatives, particularly in the context of the UNFCCC as the primary climate governance regime. To address this gap, this paper asks: What rationales are developed to justify climate-related financial disclosure initiatives, and how do COP side events shape and promote particular rationales - “for whom” and “to what ends”?

Methods: We conducted ethnographic fieldwork across thirty climate-finance side events at COP28 in Dubai in 2023, employing participant observation and discourse analysis. This approach is complemented by historical process-tracing, allowing us to examine how the evolution of climate-related financial disclosure frameworks has interacted with COP events over time.

Results: Our analysis shows that a privatization and marketization imperative supporting for private financial actors’ interests has become dominant. This rationale behind the key climate-related financial discourse initiatives have been developed through increasing socio-political interactions between powerful elite-groups in global climate governance.

Conclusions: This result presents a “silo collaboration” that empowers finance-related private actors while marginalizing civil-society voices in the landscape of the “mega-COPs”

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Global, regional, and national policy frameworks, such as the UN Sustainable Development Goals, the EU Marine Strategy Framework Directive (MSFD), the Common Fisheries Policy (CFP), and national marine spatial planning initiatives, have set ambitious targets for sustainable marine management. However, implementation of strategic measures often falls short. Marine protected areas are frequently "paper parks," fisheries quotas are regularly exceeded, and efforts to reconcile biodiversity conservation with expanding activities such as offshore wind and shipping struggle to deliver the promised outcomes.

This implementation gap creates frustration and erodes both social-ecological integrity and public trust in marine governance. Fisheries management provides a particularly instructive lens on these issues: despite the CFP and the Baltic Multiannual Management Plan (Baltic MAP), many commercial fish stocks remain below Maximum Sustainable Yield (MSY) levels, and the viability of small-scale fishing communities is increasingly threatened. Addressing these gaps requires understanding how governance structures, institutional arrangements, power relations, and socio-ecological dynamics shape policy outcomes.

This workshop engages directly with the conference theme by exploring how to better align marine governance ambitions with practical outcomes, with a particular focus on fisheries, but open to all implementation gaps in marine governance. We aim to foster an interdisciplinary conversation drawing on governance studies, ecology, political economy, and law to identify the barriers and enablers of effective policy implementation and to highlight innovative governance approaches.

We welcome fully drafted manuscripts that address:

- Institutional and governance challenges in implementing marine sustainability policies
- Interactions between the CFP and other frameworks such as the MSFD
- Power relations, enforcement mechanisms, and stakeholder engagement
- Ecosystem-based fisheries management practices and their effectiveness
- Conflicts and synergies between conservation and economic activities (e.g. fisheries, offshore wind, shipping)
- The role of small-scale fisheries and community livelihoods in sustainable governance
- Case studies of both success and failure in fisheries and marine management.

Key questions for discussion:

- What factors enable or challenge the implementation of marine and fisheries sustainability policies in practice?
- How do institutional and governance arrangements, quota systems, and enforcement mechanisms shape outcomes and implementation of sustainability practices?
- How does the current management system support or undermine ecosystem-based management and sustainable fisheries in the Baltic Sea and beyond?
- What are the effects of Illegal, Unreported and Unregulated (IUU) fisheries and discards on achieving CFP sustainability objectives?

- Are there local examples of successful sustainability policy implementation that could serve as models for the Baltic Sea?
- What lessons can be drawn from successful cases of translating policy ambition into tangible ecological or social benefits?
- How do power dynamics and the decline of small-scale fisheries affect governance legitimacy and equity?
- How can science, policy, and practice be better bridged to foster effective, just, and resilient marine governance?

Convenors

Jamie Jenkins, Department of Economics and Management, University of Helsinki, Finland
Sara Söderström, Baltic Sea Centre, Stockholm University, Sweden
Milena Arias Schreiber, Maritime and Ocean Socioecology, World Maritime University, Malmö, Sweden

Anchoring Sustainability: How fisheries and local governance intersect in coastal development

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Ida Wingren[1]
Sebastian Linke[2]
[1] Lund University, Department of Service Studies, Sweden
[2] University of Gothenburg, School of Global studies, Sweden

Introduction: While EU policies such as the Common Fisheries Policy (CFP) and Marine Strategy Framework Directive (MSFD) emphasize ecological and economic sustainability, local perspectives on fisheries including cultural and socio-economic aspects remain underexplored. This study investigates how Swedish coastal municipalities perceive the role of fisheries in sustainable coastal development and their own responsibilities in fostering sustainable fisheries governance.

Methods: Our paper draws on data from a national survey distributed to all 87 Swedish coastal municipalities targeting officials and elected representatives engaged in development and marine issues and on four workshops conducted in three different regions. Thirty-one responses from the survey were analysed using descriptive statistics and thematic coding of open-ended questions.

Results: The analysis focuses on three dimensions: (1) perceived importance of fisheries for different aspects of sustainability in coastal communities, (2) integration of fisheries into municipal planning, and (3) attitudes towards co-management and stakeholder collaboration. Our findings indicate a sharp decline in commercial fisheries and processing industries, contrasted by growth in tourism-related fishing. Despite this trend, most municipalities consider fisheries as of crucial importance for their cultural heritage, local identity, and food security, even when direct economic contributions are limited. Several important governance problems emerge from our study: fisheries are inconsistently included in municipal planning documents, coastal communities lack capacities and resources to create impacts, while the political will to act varies among municipalities. Respondents highlight ecosystem-based management, regional collaboration, and co-management as key strategies for revitalizing coastal fisheries development and enhancing transparency in decision-making.

Conclusions: The study suggests that aligning top-down regulatory frameworks with bottom-up governance approaches is essential for a long-term sustainable marine resource management. Municipalities can play a pivotal role in such strategies by bridging ecological objectives with socio-economic and cultural priorities, but require clearer mandates, resources, and institutional support. By identifying opportunities for inclusive governance and regional co-management, our research contributes to debates on how to include coastal municipalities' will and capacity to act for combining sustainable rural development and fisheries-dependent communities' development in Sweden and elsewhere.

Bridging Spatial Risk and Marine Governance: Joint Impacts of Offshore Wind Farm Development and Shipping Activities in Finland's EEZ

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Avianto Nugroho[1]
[1] Faculty of Biological and Environmental Sciences, University of Helsinki

Introduction: Ambitious marine policies in the Baltic Sea aim to expand offshore renewable energy, ensure safe and efficient shipping, and protect sensitive coastal ecosystems. However, the implementation of these goals is complicated by limited integration of sectoral risk knowledge, particularly where offshore wind development intersects with dense shipping activities. This study examines how cumulative maritime risks arising from these joint pressures are currently understood in the literature and assesses their implications for marine governance in Finland's Exclusive Economic Zone.

Methods: A systematic literature review was conducted across peer-reviewed research in marine ecology, maritime safety, environmental risk assessment, and spatial planning. Studies were screened and synthesised to identify established risk pathways, uncertainties, and governance-relevant insights. Special attention was given to how existing research addresses cumulative impacts, navigational risks, operational interactions, traffic displacement, and spatial use conflicts.

Results: The review reveals a persistent gap between available spatial risk evidence and its practical uptake in marine spatial planning processes. While ecological and navigational risk mechanisms are well documented, cumulative impacts and scenario-based assessments remain underdeveloped. The findings highlight several governance bottlenecks, including fragmented sectoral knowledge, limited cross-agency integration, and a lack of anticipatory tools to support MSP 2030 and related national strategies.

Conclusions: Preliminary conclusions suggest that bridging the ambition–implementation divide in Baltic Sea governance requires stronger integration of spatial risk evidence, improved cross-sector coordination, and the development of dynamic, multi-driver assessment frameworks. As the research progresses, it aims to provide more detailed pathways for enhancing risk-informed decision-making in Finland's marine governance system.

Deadly numbers: The Baltic Herring in the EU fishery politics

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Monica Tennberg[1]
[1] University of Lapland

Introduction: There is growing concern over overfishing, declining fish stocks, and the smaller size of the Baltic Herring, one of the commercially important fish species in the Baltic Sea. The paper focuses on the 2023 EU process to set the 2024 quota for fisheries in the Bothnian Bay and the related debate in Finland and Sweden.

Methods: The analysis draws on biopolitical analytics, situational analysis, and ecological justification, and is based on publicly available documents, debate in the social and print media, and interviews. The focus of the study is on how numbers matter in evidence-based policy-making and how they are argued, contested, and justified in the EU fishery governance. The analysis follows the travel of these critical numbers in fisheries (the total allowable catch, maximum sustainable yield, and biomass limit) in the EU decision-making process from scientific advice provided by the ICES, International Council for the Exploration of the Seas, to policy-making in the different stages in the EU fishery governance, namely the EU Commission and the Council of Agriculture and Forestry, and debate in Finland and Sweden about the decisions.

Results: The paper focuses on how the agency of the fish is stripped away in the quota-setting process. Instead, the fish becomes a number with power and agency in the Latourian sense, as an actant that makes a difference in EU fishery governance.

Conclusions: The analysis shows how the quota-setting process results in “deadly numbers” for Baltic Herring, leading to continued authorization to kill the fish beyond sustainable limits and allowing conditions that endanger the future survival of the stock.

How Ecosystem-Based Management Reconfigures Environmental Expertise: A Comparative Study of Forestry and Marine Policy in Sweden

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Hogne Sataøen[1]
Monika Berg[1], Gisle Andersen[2, 3]
[1] Örebro University
[2] Norce research
[3] Centre for Climate and Energy Transformation (CET), University of Bergen

Introduction: This paper examines how the introduction of ecosystem-based management (EBM) generates different forms of environmental expertise in Swedish forestry and marine policy. EBM has emerged as a central yet contested concept in environmental governance (Delacámara et al., 2020). Originally conceived in the 1990s as an ecological framework for maintaining ecosystem integrity, it has since evolved into a socio-ecological approach that integrates governance, scientific knowledge, and different sectoral practices. As Grumbine (1994) argues, EBM requires combining scientific understanding of ecological relationships with the sociopolitical and value-laden contexts in which decisions unfold.Thus, we treat EBM not only as policy concept being translated and implemented, but as a contested arena in which emerging forms of environmental and transition expertise are produced and mobilized, making it an epistemological prism for examining how expert authority is being reconfigured in the green transition.

Methods: The analysis draws on 30 semi-structured interviews with representatives from government agencies, civic organizations, consultancy actors, and researchers in the forestry (N=16) and marine (N=14) domains. Treating EBM as a boundary concept (Star & Griesemer, 1989), we examine how sectoral institutions generate distinct science–policy–society interfaces and thereby define who counts as an expert and what is recognized as actionable environmental knowledge.

Results: In forestry, EBM is interpreted through an existing production-oriented system, meaning that expertise remains defined by established professional groups and long-standing industrial interests. Socio-ecological knowledge is acknowledged but typically fitted into existing routines rather than reshaping them. In marine governance, by contrast, EBM encourages more integrative and cross-sectoral expertise. Scientific knowledge, administrative practice, and local experience are combined, and experts often work through collaborative structures, producing a broader understanding of relevant knowledge.

Conclusions: The two cases show that EBM functions as an arena where different forms of environmental expertise are produced and negotiated. The comparison demonstrates that who gets to be an expert, what knowledge is considered useful, and how authority is exercised depend strongly on the institutional/sectoral setting. The study contributes to debates on emerging "transition expertise" by showing that such expertise does not develop uniformly across policy areas but is shaped by existing structures and governance traditions.

Remedial measures to aid the recovery of declined fish stocks – a review of spawning closures for pelagic fish in the Baltic Sea fisheries management

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Sara Söderström[1]
Åsa Nilsson Austin[1], Charles Berkow[1]
[1] Baltic Sea Centre, Stockholm University

Introduction: The commercial fish stocks in the Baltic Sea show persistently negative trends, with few exceptions. Over the past decade, both cod stocks and the western spring-spawning herring have collapsed, while herring in the central Baltic and Bothnian Seas remain below levels capable of producing Maximum Sustainable Yield (MSY) — the production target of the EU Common Fisheries Policy. This study examines the safeguards within Baltic Sea fisheries management intended to restore declining stocks to productive levels. Fishing opportunities are decided annually by the Council of Ministers, which sets Total Allowable Catches and determines remedial measures to support recovery. The aim of this study is to assess the effectiveness of these remedial measures, focusing on forage fish. Specifically, we (i) identify measures implemented to improve forage fish stocks, and (ii) evaluate whether these measures are appropriate for achieving a rapid return to MSY levels.

Methods: We conducted a systematic, deductive review of Council decisions on fishing opportunities and related policy documents, focusing on remedial measures. For forage fish, these primarily consist of seasonal spawning closures across different areas and times. To evaluate their effectiveness, we obtained spatial and temporal fishing data from all member states, detailing when and where fishing occurs.

Results: Our results show that the closures do not coincide with actual fishing activity and are therefore poorly designed to promote stock recovery. Furthermore, it was difficult to obtain spatial data from the member states, highlighting a concern about the compliance of the closures.

Conclusions: We conclude that, although remedial measures formally are in place, they are not effectively structured to support recovery.

Staying afloat: How Swedish small-scale fishers navigate decline and transition

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Sieglind Wallner-Hahn[1]
Emma Björkvik[1]
[1] Department of Earth Sciences, Uppsala University

Introduction: Small-scale fisheries (SSF) are known for their multiple contributions and values, and generally for having a lower environmental impact in comparison to industrial fisheries. In Sweden, SSF are therefore often highlighted in both media and policy for their potential of making fisheries more sustainable. A main aim of the national strategy for Swedish Fisheries and aquaculture for the years 2021-2026 is that Swedish Fisheries should e.g. contribute to an increased provision of food, employment and social values all over the country, and the development of a sustainable fishing sector is an outspoken political ambition (Jordbruksverket & Havs- och vattenmyndigheten, 2021). Further, “an ocean in balance and a living coast and archipelago”, is an environmental quality objective in Sweden which viable SSF would greatly contribute to. These ambitions stand in stark contrast to the SSF sector’s persistent decline, which makes transitions towards increased socio-ecological sustainability critical. It is therefore highly relevant to investigate how to escape this decline, and to identify successful strategies and opportunities for a long-term persistence and development of SSF. The broad objective of this study is to empirically investigate how, despite challenges such as declines in fish stocks and being disadvantaged in policy and management, commercial small-scale fishers have managed to remain in this sector until today. The specific aims of the study were to gain a deeper understanding of fishers’ own perceptions on: 1) significant changes and adaptations the fishers had to undergo and how they were able to realize them; 2) the social and economic implications of these adaptations for the fishers’ livelihoods; and 3) how fishers themselves envision the future of SSF, and pathways thereto.

Methods: Data was collected through semi-structured interviews with commercial small-scale fishers on the Swedish East- and Westcoast between July 2024 and October 2025.

Results: This study contributes a synthesis of key factors that enable realized and future transitions in small-scale fisheries (SSF) from a fishers’ perspective and identifies conditions for fishers’ social and economic viability.

Conclusions: The results will inform policy recommendations aimed at supporting Swedish SSF toward increased socio-economic and ecological sustainability, but also other fishers in their future transitions.

Tensions and opportunities in fisheries governance: Mapping stakeholder perspectives on Gotland, Sweden

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Emma Björkvik[1]
Sieglind Wallner Hahn[1], Patrik Rönnbäck[1]
[1] Uppsala University, Department of Earth Sciences

Introduction: Achieving the ambitions of European fisheries governance frameworks, such as the Marine Strategic Framework Directive and Common Fisheries Policy, requires a transformative change in how we view, use, and depend on marine environments. Research increasingly highlights that such transformation depends not only on ecological or economic considerations but also on understanding how decision-making processes navigate power relations and involve trade-offs among competing values and perspectives. Despite this recognition, there remains a need for empirical studies that examine the political and social dynamics of fisheries governance in local contexts.

Methods: We address this gap by mapping stakeholder perspectives on Gotland, Sweden, an island with diverse fisheries interests and strong cultural ties to the sea. This mapping is based on semi-structured interviews with commercial and recreational fishers, civil servants working at governmental authorities, and local politicians. We analyze the interviews using the framework of ecosystem services combined with a narrative approach, highlighting points of convergence and divergence across stakeholder groups.

Results: Preliminary findings indicate substantial variation in how fisheries are understood and valued. Stakeholders emphasize dimensions such as local food provision, cultural heritage, community identity, ecological stewardship, and recreational opportunities. These differences are not merely descriptive: they reflect politically charged perspectives that complicate decision-making and illustrate conflicts over priorities, resource use, and the definition of sustainable management. While this diversity offers opportunities for more pluralistic, place-sensitive management, it also highlights the challenges of realizing governance ambitions in a local context.

Conclusions: In conclusion, the study is expected to empirically demonstrate that transformative change in fisheries governance requires explicit attention to the political dimensions. The Gotland case illustrates how participatory approaches that recognize trade-offs and navigate various values and perspectives are necessary to support resilience and sustainability of local livelihoods as well as marine environments.

The role of local knowledge and citizen science in conflicted governance context: the cormorant–fisheries case

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Suvi Vikström[1]
[1] Finnish Environment Institute

Introduction: Integrating the practice- and place-based knowledge of local actors into scientific processes has been pursued in various ways. However, in many approaches the focus on crowdsourced data collection and the absence of genuinely collaborative elements undermine the credibility, relevance, and legitimacy of the process. Moreover, in approaches that emphasise collaboration, limited attention has been paid to the role of knowledge co-production in conflicted governance contexts. This study addresses one of the most persistent conservation disputes in Europe: the cormorant–fisheries conflict. This conflict is characterised by factual disputes and contested claims regarding the impacts of cormorants on fisheries, which have long hindered attempts to implement partnership-based cormorant management.

Methods: As a spin-off from a joint fact-finding (JFF) initiative, this study examines the co-production of knowledge between researchers and local actors to address one particularly contested knowledge gap in Finnish context: the distribution, abundance, and movements of cormorants outside the breeding season. The data collection was designed and implemented transdisciplinarily, with the aim of systematically incorporating observations from ornithologists, local fishers and other citizens. Stakeholders involved in partnership-based management efforts were interviewed before and after the process to explore their perceptions of the joint data-collection initiative. Particular attention was paid to how different actors ascribe meaning to this type of knowledge, its interpretations, applications, and conclusions drawn from it, and, ultimately, how the stakeholders perceive the importance and influence of place-based knowledge on the interactions between actors in a conflicted governance context.

Results: Stakeholders responded positively to the project and the data was seen as relevant from the perspectives of biological understanding, fisheries management decisions, exemption derogation, and broader public administration. The process also offered new insights into the root causes of the conflict and possible solutions. Stakeholders widely trusted all actors involved as providers of reliable data, and the interpretations of the results were largely coherent, even though actors simultaneously remained sceptical of other's underlying motives.

Conclusions: The process enhanced understanding of the data practices within knowledge co-production that can support the development of a more comprehensive and shared situational awareness, thereby contributing to more effective partnership-based governance efforts.

Wild cards in the Baltic Sea – are we ready for the unexpected?

30. Bridging the gap between ambition and implementation in marine governance and fisheries management

Jamie Jenkins[1]
[1] University of Helsinki

Introduction: Real-world changes often unfold abruptly, driven by unexpected events—so-called wild card events. These are low-probability, high impact occurrences that are difficult to predict but can have disruptive and lasting consequences for ecosystems, societies, or economies. We are interested in plausible wild card events, and how such discontinuities could be meaningfully accounted for in mitigation scenarios. The aim of this work is to assess the capacities of currently available modelling tools to assess the potential consequences and mitigation possibilities of various wild card events.

Methods: As a first step, we organized a knowledge co-creation process during the Baltic Sea Science Conference in May 2025. This shared thought experiment engaged participants in identifying a broad set of plausible wild card events, which were then grouped into meaningful clusters based on their type or the severity of their potential impacts. In the second step, we will assess the consequences of these event clusters and evaluate how existing models can assess their impacts and support management responses, and identify "model readiness" to plausible wild card events. This step will be undertaken as expert elicitation via survey, workshops and iterative consensus-building, and is an ongoing process.

Results: This research is ongoing and focuses on the Baltic Sea and its catchment area as a case study. We obtained in total 340 responses from more than 100 individual respondents collected and visualised in real-time during the session. The results of the workshop and survey are being analysed.

Conclusions: The aim is twofold: first, to develop a holistic understanding of weak signals and different types of wild card events that are currently unexpected but plausible, and that could significantly affect the Baltic Sea ecosystem—either positively or negatively. Second, the research evaluates the capacity of existing modelling frameworks (such as biogeochemical, ecological, and agentbased models) to assess the consequences of such low-probability but high-impact events – in case they occur – on the state of the marine ecosystem and understand their capacity for providing management advice.

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Contemporary conditions of crisis, uncertainty, and disruption demand new ways of knowing, imagining, and enacting change. Established political imaginaries of control, linear progress, and technocratic problem-solving have proven inadequate to address the complexities and affective dimensions of environmental and social transformations. In the gaps left by institutional and policy failures, diverse practices of imagination, storytelling, and micro-political engagement emerge, generating alternative ways of relating, knowing, and making futures.

This workshop explores how imaginative and narrative practices such as storytelling, speculative methods, and participatory approaches can serve as both conceptual and methodological tools for rethinking transformation. Storytelling, in particular, is not merely a medium of communication but a mode of inquiry and world-making: it creates knowledge, challenges dominant narratives, and allows communities and researchers alike to negotiate meanings, values, and futures. Future-making, similarly, is approached here as a distributed, affective, and more-than-human process that unfolds across scales, from the everyday to the institutional.

We invite contributions that critically and creatively engage with the intersections of imagination, affect, and method in sustainability transformations. We are especially interested in fully drafted manuscripts that examine how stories, imaginaries, and speculative practices can:

- Reframe the relationship between knowledge and action beyond linear models of science–policy–practice;
- Expose and unsettle dominant logics of governance, expertise, and development;
- Articulate alternative epistemologies and methodologies for understanding transformation “from within the ruins”;
- Bridge experiential, embodied, and institutional forms of knowing;
- Engage with more-than-human and relational approaches to narrative and imagination.

Our guiding concerns are conceptual and methodological: How can future-making be studied as a micro-political and affective process? What are the epistemic and ethical implications of using storytelling as method and theory? How might these approaches enrich sustainability and transformation research by foregrounding relational, situated, and imaginative ways of knowing?

By bringing together scholars and practitioners working across disciplines, this workshop seeks to advance a deeper methodological conversation about how we think with stories and imagine futures in the context of ongoing crisis and transformation.

Convenors
Sara Holmgren, Division of Environmental Communication, Swedish University of Agricultural Sciences, Sweden
Tatiana Sokolova, Department of Environment, Development and Sustainability Studies, Södertörn University, Sweden
Ayşem Mert, Department of Political Science, Stockholm University, Sweden

A place in limbo – how clashing temporalities shifted the imagined sustainability in Frihamnen.

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Hannah Saldert[1]
[1] Högskolan Väst, Institutionen för ekonomi och IT, Sweden

Introduction: Despite ambitious policy frameworks, global agreements on sustainable development, and attempts to implement them locally, predictions most often show a dystopian future rather than a utopian one. Urban planning is an important tool to imagine sustainable futures and to manage conflicting interests. However, previous research has shown challenges when implementing sustainability visions in practice. In this paper, I will explore the role of temporalities when imagining sustainable futures and how clashing temporalities can disrupt their implementation.

Methods: Methodologically, the study was carried out as an interpretative case study of the regeneration project Frihamnen in Gothenburg, Sweden. Frihamnen was envisioned to become a new sustainable city center in Gothenburg. However, in 2018, the planning process stopped after goal conflicts emerged. Now the area is in limbo, partly being developed and partly waiting for a new planning programme. The empirical material consists of policy and planning documents between the years 2010 and 2021 and 37 semi-structured interviews with planners, policy makers, and stakeholders involved in the regeneration project. The empirical material will be analyzed by applying a conceptual framework of temporalities drawing from utopian studies and the interdisciplinary literature on temporal literacy, to further develop the conceptualization of sustainability imaginaries. The paper is guided by the research questions: which different temporalities affected the shifting imaginary of a sustainable Frihamnen? How were policy-makers', the local community's, and planners' narratives of a desirable future negotiated during the planning process?

Results: The expected result from this analysis is that there are different temporal perspectives clashing when planning for sustainable futures. Not only in terms of short-term and long-term planning, but also in terms of backcasting and forecasting; the everyday life of a community and the urgency of climate adaptation; as well as non-human temporal perspectives.

Conclusions: If this is true, the conclusion drawn is that when planning sustainable communities, clashing temporalities are as important to acknowledge as conflicting interests and wicked problems. Therefore, there needs to be practical and methodological tools to identify and acknowledge diverse temporalities when envisioning and planning for sustainable futures.

A Political Theory from Somewhere: Storytelling and Situated Theorizing for the Anthropocene

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Mads Ejsing[1]
[1] Stockholm Resilience Centre, Stockholm University

Introduction: This paper argues that in the context of increasing planetary turbulence, political theory must (finally) shift away from the abstractions that have previously grounded its authority and toward more situated and relational modes of inquiry. Building on feminist epistemologies, posthumanist theory, and multispecies scholarship, I propose a "political theory from somewhere" that treats theorizing not as a detached exercise but as a practice emerging from embodied, ecological, and narrative entanglements.

Methods: The arguments draw on extended ethnographic fieldwork in Lemvig, a small rural municipality on the Danish west coast, where storms, windmills, soils, and local political practices continually unsettle the boundaries between the social and the natural. The methodological framework I outline draws on three interlinked practices: *thinking-from*, which situates theorizing within specific ecological and material conditions; *thinking-with*, which treats human and more-than-human actors as co-participants in conceptual formation; and *storytelling as method*, which traces how political life is composed through affective relations, situated imaginaries, and multispecies encounters.

Results: Through these practices, the paper examines how concepts arise from frictional encounters rather than from abstract deduction; how sensory and affective experience shape political judgment; and how generality emerges as a material and relational achievement rather than as the product of detachment. The analysis suggests that ethnographic storytelling does not merely illustrate theoretical claims but also *generates* them, enabling political theory to better register the textures of life amid ecological volatility and to engage with the 'sensorial micro-politics' of future-making that unfold in mundane settings.

Conclusions: The paper suggests that by attending to winds, soils, infrastructures, and narratives as co-theorists, political theory is transformed into a practice of responsiveness attuned to the shifting grounds of collective life. In conclusion, I argue that a situated and relational political theory offers conceptual and methodological resources for studying imagination, affect, and transformation from within the ruins of the Anthropocene, and that it enriches research on climate governance by foregrounding the narrative, embodied, and more-than-human dimensions of how communities negotiate meaning, responsibility, and possibility in times of planetary turbulence.

A Research Agenda for Climate Policy Imaginaries

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Helge Jörgens[1]
[1] CIES – Centre for Research and Studies in Sociology, Iscte – University Institute of Lisbon, Portugal

Introduction: How societies imagine their climate futures matters profoundly for what becomes politically possible. Yet dominant approaches to envisioning climate policy – particularly Integrated Assessment Models and expert-driven scenario-building – privilege techno-economic feasibility while marginalizing the socio-cultural and political dimensions that ultimately determine whether transformative policies gain societal traction. This narrowing of imaginable futures reinforces what the workshop call identifies as inadequate "political imaginaries of control, linear progress and technocratic problem-solving". This conceptual paper develops the contours of a research agenda that reframes climate policy futures as sites of distributed imagination and contestation among diverse societal actors. Rather than treating the desirability and feasibility of climate policy alternatives as technical properties assessed by experts, this agenda focuses on how governments, civil society organizations, business actors, and communities collectively construct, negotiate, and contest visions of climate governance. Such an approach unsettles the assumed hierarchy between knowledge producers and policy recipients, recognizing that future-making unfolds through multiple, often competing imaginative practices.

Methods: The paper proposes a mixed-methods approach that combines computational text analysis (topic modelling, named entity recognition, sentiment analysis etc.) with qualitative case study analysis. It develops a forward-looking analytical framework that shifts attention from explaining current policy choices through past determinants to understanding how societies collectively imagine climate policy alternatives.

Results: I propose a typology distinguishing four climate policy paradigms along two dimensions: worldview (anthropocentric versus ecocentric) and intervention logic (technological versus behavioural). *Technological anthropocentrism* has dominated climate policy since the late 1980s through ecological modernization, more recently expanding to include carbon removal and geoengineering. *Behavioural anthropocentrism* emphasizes infrastructural changes encouraging climate-friendly consumption while remaining compatible with economic growth. *Behavioural ecocentrism* prioritizes sufficiency and reduced consumption, encompassing degrowth and post-growth perspectives. *Technological ecocentrism* combines innovation with nature-based approaches. This framework ensures analytical openness to futures beyond current policy corridors while revealing the deeper normative commitments underlying different climate imaginaries. The usefulness of the typology and methods will be illustrated through an analysis of climate policy imaginaries in Portugal.

Conclusions: The proposed research agenda will enable researchers to gain a comprehensive understanding of how societies envision climate policy futures and assess their desirability and political feasibility.

Between imagined and enacted futures: grounded imaginaries and subjectivities in eco communities

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Diana Eriksson Lagerqvist[1]
[1] Department of Political Science, Lund University

Introduction: Times of climate crisis require new ways of imagining climate futures. Where is this already being done, and what is the role of affect and identity for people living in such places? Attending to these questions, this paper turns to eco-communities – bottom-up projects striving for socio-ecological transformation through sustainable ways of living and producing. While eco-communities might not offer scalable ways of living through the climate crisis, they can open up imagination, demonstrate, and test collective, sustainable ways of living. These communities have, however, also been critiqued for reinforcing neoliberal logics through private ownership or developing eco hotels. The core questions here become: what are eco communities able to reimagine and enact differently, what is politically constrained, and what forms of subjectivity emerge in this process?

Methods: Theoretically, this paper uses a conceptual pair of imaginaries and subjectivities to explore not only how eco-communities imagine and enact climate futures, but also the roles of identity, affect, and desire in doing so. While much attention has been paid to dominant ways of imagining climate futures, recent scholarship has turned to the concept of *grounded imaginaries* to explore how communities can reshape the way climate futures are imagined. However, less attention has been placed here on the role of subjectivities in this process. Methodologically, this paper combines ethnographic and discourse-theoretical approaches to trace grounded imaginaries in eco-communities and the subjectivities taking shape in this process. It is based on a smaller set of fieldwork interviews (~5-7) conducted in a Danish eco-community, representing the first part of a larger fieldwork study to be conducted late 2026–Spring 2027.

Results: We can (tentatively) see that while eco-communities reimagine futures through collective ways of living, self-production of food and energy, and participatory decision-making, these communities also struggle with enacting new forms of land ownership. Eco-community members pivot between multiple subjectivities within and outside the community, appearing as *caretakers* (within) managing the community, but also *as entrepreneurs* (outside), attracting external support and funding.

Conclusions: This reveals the importance of approaching grounded future-making as a politically constrained process that can both reinforce and contest dominant futures and that shape multiple subjectivities.

Beyond the Crisis of Imagination: Reconceptualizing Technē for Alternative Climate Futures

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Szabolcs D. Fabian[1]
[1] University of Southern Denmark

Introduction: Climate change is increasingly characterized as not (only) a political crisis but a *crisis of the imagination*: a lack of vision for viable and (un)desirable futures (Reynante et al., 2025). Existing scholarship on the phenomenon often foregrounds capitalism/capitalist realism, the Anthropocene, binary oppositions stemming from modernity, etc.—the difficulty of envisioning alternatives to a system attributed to the aforesaid notions (e.g., Ghosh, 2016). While these diagnoses are vital, they lack another pervasive constraint: directly addressing and confronting the question of technology (e.g., Hui, 2016). Here, technology is not understood in the narrow instrumental and anthropological sense (Heidegger, 1977), but as shaping modes of thought and being. Modern technology's essence lies in enframing (Gestell)—a reconfiguration of the human-world relation that reduces all entities to 'standing-reserve', resources to be measured and exploited (ibid.). Yet this view, Hui (2016) argues, risks assuming a single, universal form of technics and technology. In fact, the dominant Western conception of technology, rooted in 'technē' (i.e. poiesis or bringing forth)/'a Promethean myth' and a culturally specific metaphysical order, has become globalized and homogenizing—and, as this paper argues therefore, can be the reason for the aforesaid imaginary crisis. To break this logic, this study reconceptualizes technē as an *effectuated imaginary technics* to develop, through intra-actions of human and other-than-human bodies, alternative epistemes capable of overcoming the current crisis of imagination.

Methods: Around 200 Danish and German (from the border region) high school students aged 16 – 18. Art-based methods:
- Climate-Fiction writing playshop—creating 300-word far-future narratives under time pressure (Yazell & Wolf, 2023; Wolf et al., 2023). (Done–analysis in January)
- Improvisational theatre playshop—acting out far-future life worlds. (To be done in April 2026)
- Focus groups, participant observation

Results: Arriving at a terrain of non-thinking and non-doing: it is not about not-thinking and not-doing, but suspending habitual patterns of functioning.
Beyond this, I do not intend to speculate since my work is grounded in the-yet-to-come empirical data.

Conclusions: The same applies. Maybe I can say:
Through this reconceptualization, the study seeks to generate new resonances—practices and forms of knowledge no longer constrained by modernity's temporal axis, thereby opening pathways beyond the current crisis of imagination.

Black ecofeminist storytelling and the affective labour of environmental future-making

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Anesu Matanda Mambingo[1]
[1] University of Glasgow

Introduction: This paper explores how Black ecofeminist storytelling reconfigures who is allowed to imagine environmental futures, and on what terms. Conventional environmental futures are often narrated through technocratic scenarios or heroic activist figures, leaving little room for the slow, distributed labours of survival and care that structure many Black lives. In contrast, this study centres creative accounts by Black women and non-binary people whose everyday relations with land, weather, food and more-than-human kin are rarely recognised as environmental work, let alone as future-making.

Methods: A non-extractive call-out invited existing creative pieces on more-than-human relations, which brought forward six contributions (a zine, a reflective essay, a painting, a short film, a song and a poem) that formed the empirical core of this work. Drawing on Black feminist and ecofeminist theory, and adopting an autoethnographic orientation, I respond to each piece with a letter that treats correspondence as speculative method.

Results: This epistolary approach allows attention to ambivalence, fear and hope, tracing how contributors grapple with whether to bring children into an overheating world, how to sustain joy when environmental and racial violence feel relentless, and how to remain in relation with land and water that are also sites of harm. Across the archive, time is figured as layered and relational rather than linear, contributors write as descendants and "future ancestors" at once, and futures are imagined as fragile, ongoing practices of tending, resting, organising and creating with more-than-human companions.

Conclusions: I argue that these story-practices assemble a mode of environmental futurism in which expertise is located in situated, affective, often unnamed practices, and suggest that accounts of environmental transformation that ignore such work reproduce narrow answers to the question of who is an environmentalist and who gets to speak about the future.

Climate Imaginaries and Democratic Experimentation

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

David Schlosberg[1, 2]
[1] University of Sydney
[2] University of Helsinki

Introduction: Climate change is deeply unsettling—both ecologically, as reflected in the rise of climate disasters and biodiversity loss, and materially, as seen in the widespread disruptions and displacements it causes (Connolly 2024). The continuous upheaval of connections to place and deeply intertwined environments creates a growing sense of turbulence, an experience of being unmoored, disconnected from attachments, both human and environmental (Schlosberg 2023). In response, the standard roster of future imaginaries – continuing business as usual, counting on new technologies to carry us forward, or capitulating to doomism and defeat – has been criticized as woefully inadequate to the task at hand, and, crucially, not reflective of the creativity, imaginaries, and material responses on the ground in many communities (Celermajer 2021, Celermajer et al. 2024). Numerous forms of democratic imagination, innovation, and experimentation have been developed and/or implemented in communities at risk (Celermajer et al. 2024; Celermajer et al. 2025; Tønder 2025). From deliberative climate citizens' assemblies, to community-based disaster and resilience response and planning, to reworked local food and energy systems, to arts-based reflections and laments, democratic innovations and community experimentations are responding to and reworking the unsettled experiences of climate change (Marquardt et al. 2025; Weber et al. 2024). While there is much work on the value of utopian visions and storytelling as a way to orient in the midst of climate turbulence (Thaler 2022), this paper focuses specifically on examples of climate imagining and storytelling *already being lived and told in communities across the globe.* The focus is on the imaginaries and practices that are realistic about climate turbulence, but recognize, embrace, and instigate the possibility of collective transformative action. More broadly, the focus of my larger project is on how to uncover, understand, elevate, engage, nourish, communicate, and replicate this broad range of climate imaginaries and democratic practices, already in place across the globe, to better understand and support just action in the face of a climate changing world.

Methods: This is a preliminary paper, laying out the theoretical underpinnings and methods for a larger project to be undertaken starting in late 2026.

Results: N/A

Conclusions: N/A

Corporate storytelling and eco-governmentality: The discourses and rationalities of corporate environmental pacts

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Samuel Toscano[1]
[1] University of Manchester, Politics Department, United Kingdom

Introduction: There is burgeoning environmental social science interest in how radical imaginaries chart new modes of being beyond ecocidal, capitalist and colonial structures. This scholarship increasingly carves out a compelling role for storytelling in cultivating emancipatory, utopian visions of the future. Taking this impulse in a new direction, I investigate efforts by businesses to develop their own techniques of storytelling and future-making.

Methods: This research is part of a broader project studying a specific type of non-state actor, which I term *corporate environmental pacts*. Pacts are initiatives that encourage business members to 'take action' to address environmental crises, certify those actions, market those actions and build virtual communities. I investigate two pacts – 1% for the Planet (co-founded by Patagonia) and The Climate Pledge (co-founded by Amazon). An 'analytics of government' discourse analysis has been conducted on 14 interviews held with pact actors and all online content produced by the two pacts between 2019 and 2024. Specifically, I examine the discourses and rationalities used in pact storytelling practices employed in documentaries they produce, creatives they fund, and narratives disseminated through social media and blogs.

Results: Staff from both pacts emphasise their commitment to storytelling as a marketing strategy. I find also that both pacts engage in storytelling that embeds business in environmental imaginaries. However, they utilise storytelling in differing ways. 1% for the Planet encourages its businesses to credibly donate to nonprofit organisations, allowing them to tell value-based stories about their brand. The Climate Pledge tells stories in which its businesses provide techno-solutions to the environmental crises they themselves contribute to.

Conclusions: I conclude by arguing that these storytelling practices are a legitimation strategy adopted by corporate actors seeking to govern the conduct of their stakeholders, such as businesses, non-profits, investors and consumers. Business actors develop imaginative and creative ways to produce futures that align with their interests. They employ the discourses and imagery of change, futurism, and even activism, to argue for the further entrenchment of business in global political economy.

Farmers' visions of fossil free farm and food systems in Sweden, and plural pathways for sociotechnical transformations

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Emma Johansson[1]
Tilde Krusberg[1], Sara Brogaars[1], Henner Busch[1]
[1] LUCSUS, Lund University Centre for Sustainability Studies

Introduction: For inclusive agricultural development, management, and planning towards fossil-free farm and food systems, it is imperative to develop visions that can disrupt dominant imaginaries that continue to shape our collective futures and pay attention to counter-hegemonic imaginaries that represent marginal stakeholders. Mapping plural and diverse visions can reveal partialities, exclusions, and sociopolitical dimensions, and offer a more humble, reflexive and responsible foundation for practices of future making and sociotechnical transformations.

Methods: Through a workshop with 29 farmers that represent a wide range of farm systems, we aimed to understand farmers' values and lived experiences related to fossil use in agriculture and develop plural visions of fossil free farm and food systems. We reached these aims by asking: What are the main challenges related to fossil energy use, and for transitioning to fossil-free farm systems? What existing ideas and innovations are central for fossil-free farms? How should costs and benefits be distributed along the food system to enable a just transition? Visions were created for year 2050, partly because this is when Sweden needs to be fossil-free, but also for imagining futures that are tangible yet different from status quo. Visions of fossil-free farm and food systems were developed with guiding questions influenced by the seeds approach, three-horizons framework, and multi-level perspective. The visions were illustrated during the workshop by an artist tasked to capture their main elements and storylines.

Results: The co-created visions differ from imaginaries articulated by political initiatives and big agribusiness. Whilst dominant actors emphasise scale, export, and increased use of fossil-free inputs like mineral fertilisers and electrical heavy machines, the farmers' visions generally emphasised circularity and soil heath, farmer-to-farmer cooperation, and a changed value system where farmers and farming have a higher status in broader society. We find that the farmers' visions have similar traits but differ in how they describe a range of pathways to get there.

Conclusions: This study shows how bottom-up approaches can inform transition pathways different than dominant ideas and agendas, and that the involvement of marginal stakeholders is crucial. Yet, we also need to find ways to go from visions to actions.

From national visions to local practices - the dynamics of climate adaptation imaginaries in Norway

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Laurien de Korte[1]
Marte Lange Vik[2], Ingjerd Davøen[1]
[1] UiT The Arctic University of Norway
[2] Western Norway University of Applied Sciences

Introduction: In a world increasingly shaped by climate change, the need for transformative adaptation is ever more urgent. We understand climate adaptation as an imaginative, socially embedded process through which particular futures become actionable (Eriksen et al., 2015). Transformative adaptation requires fundamental changes in systems and practices to address the root causes of climate risk and vulnerability, aiming for long-term resilience and sustainability (Leal Filho et al., 2023). As climate impacts become increasingly tangible in Norway, national-level visions of adaptation shape how municipalities, networks, and practitioners understand what adaptation entails and how it should be implemented. We examine how the national white paper on adaptation articulates specific adaptation imaginaries and how these imaginaries materialize -or fail to materialize- into practice. We will draw on Kanarp et al.'s (2025) taxonomy of adaptation imaginaries, which conceptualizes how narratives of risk, responsibilities, temporality, and agency shapes adaptation pathways. To compliment the national-level analysis we examine two Norwegian climate adaptation networks, that provide insight into the everyday practices through which adaptation is interpreted, negotiated and enacted.

Methods: Our analytical approach employs critical discourse analysis (Dryzek, 2022), identifying imaginaries by proxy - those made visible through text, organizational plans and practices. We focus on three practice spaces; the national white paper on climate adaptation, and two climate adaptation networks that facilitate knowledge exchange and coordination among local and regional actors. Across these spaces, we examine how adaptation is narrated, which actors are positioned as responsible and capable, and what kind of futures are made plausible and inconceivable.

Results: We anticipate findings that reveal a divide between the national imaginary of adaptation and the practices emerging within the networks - similar to the Swedish case (Kanarp et al., 2025). Our discussion will explore which imaginaries become hegemonic, which remain marginalized, and how tensions between national and practice-level narratives shape possibilities for transformative adaptation.

Conclusions: We expect to characterize Norwegian adaptation narratives both at policy and practice level. The study underscores the need for broader understanding of adaptation, showing the value of uncovering assumptions embedded in current paradigms and the importance of allowing marginalized futures to enter adaptation debates.

Future-making through grassroot food citizenship practices

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Riikka Aro[1]
[1] University of Jyväskylä

Introduction: Local small-scale food provisioning is often discredited as marginal, anti-modern or peripheral, but it has in recent years emerged as a strategy to address the shortcomings of industrial food system and recognized as holding underutilised potential for the development of sustainable food systems, responding to securities, and supporting mental and physical health and wellbeing. Within this frame, *food citizenship* (FC) as consumers' active agency in the food system is promoted in national and international programs and strategies. I look at FC as routine, negotiated, and situational practices with potential of creating pluriversal strategies.

Methods: The paper is based on participatory ethnographic research process with home and CSA gardeners (25) in Finland. Through interviews, photos and field notes I look at how the current dystopian agri-food imaginaries with experienced uncertainties, insecurities and injustices, and real utopian imaginaries are negotiated among the gardeners and how the future is made in their grassroot (agri)food citizenship practices. The intertwined *"imaginaries, emotions and actions"* are viewed as strategic tools for world-making*"* (Santos et al. 2025).

Results: Gardeners are envisioning diverse relocalised ecological food ecosystems and setting a practical example of 'doing better' with alternative set of values. While *"embedded in socioeconomic capitalist relations"* (Homs et al. 2021), their practices and experiences of de-alienation, meaningfulness, (re)skilling, and various forms of connectivity and relationality build trust and articulate positive visions (hope) of food provisioning and food (citizenship) skills as meaningful and significant work in the world. Besides the proximate connectivity with and within, gardeners experience being part of something bigger via multispecies co-habiting and interconnectedness and appreciation of all life as a way of being in the world, and via *'solidarity networks'* (Pungas 2023): knowing that there are others with shared objectives creates understanding of their visions and doings as connected and feelings of belonging and empowerment.

Conclusions: The multitude of envisioned and practiced responsibilities towards and care for self, community, others, and the more-than-human nature are integral elements of gardeners' *food citizenship* practices, through which they are articulating hope, expanding the horizon of possibilities and devising a new way of being in the world (Webb, 2024).

Going visiting - land stories of diverse economies

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Sanna Barrineau[1]
[1] Uppsala University

Introduction: Transformation of agri-food systems for food security and ecosystem health has long been argued for by scholars (and more). The focus of change has been predominantly on ecological improvements, for example, land management changes to more regenerative or carbon-sequestrating practices, which work from technoscientific approaches to agricultural regeneration informed predominantly by natural sciences and economic growth imperatives. This paper focuses on the less discussed elements of sustainability transformations in agri-food systems in taking its starting point in the everyday experiences of small-scale food producers who work for change in agri-food systems. The aim of this alternative preoccupation with everyday realities is to foreground interconnectedness with local ecologies – including human and more-than-human communities – and bring diverse rhythms of local practices, experiences with the land, and attention to the different pioneering practices to the fore.

Methods: This paper draws on interviews with small-scale Swedish farmers (two interviews have been carried out and at least five more are planned for the winter) inspired by approaches that work with deep conversations and storytelling (Dahl, Helin & Ubbe, 2023), walking dialogues (Evans & Jones, 2011; Stoddard, 2025), and listening as interbeing (Lipari, 2014). I work with storytelling as a way to practice the ability “go visiting” (Arendt, 1989), being open to multiple ways of seeing small-scale farming working for transformation, and “revealing meaning without committing the error of defining it” (Arendt, 1968). Such a methodological exploration contributes to diverse economics approaches by 1) producing grounds for possibility through ontological reframing, 2) re-reading for possibility, and 3) creatively generating possibilities in new places (Gibson-Graham 2008, p.8).

Results: The first aim of this paper is to provide empirical examples that contribute to the diverse economies scholarship (Gibson-Graham, 2008; Miller & Gibson-Graham, 2019; Kallio & Houtbeckers, 2025) concerned with foregrounding alternatives rather than overemphasizing, and therefore solidifying, the power of dominant logics surrounding how the mainstream economic system is organized.

Conclusions: Ultimately, and the second aim of this paper, this study hopes to further contribute insight into methodological approaches that enrich and challenge transformation research to go visiting.

I cannot go back to what I was…": Reading and Writing Speculative Fiction as Methodology for Interdisciplinary Understandings of the More-Than-Human.

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Elisa A. Viteri Marquez[1]
Miguel Tofiño Vian[2], Hannah Sackett, Andrew Jones[3]
[1] Department of Asian and Middle Eastern Studies, Stockholm University, Sweden
[2] Fiction Writer, Stockholm University, Sweden
[3] Department of Archaeology, Stockholm University, Sweden

Introduction: Since February 2025, members of Stockholm University's Environmental Humanities and Speculative Fiction Reading Group have constituted a space to explore key concepts in Environmental Humanities. Employing monthly hybrid meetings, the group crosses geographical/institutional, research experience and discipline boundaries. This paper explores the group's ongoing articulation of reading and writing speculative fiction as a method of inquiry into the more-than-human, and examines the potential benefits and uses of this emergent art-based methodology.

Methods: As well as discussing the collaborative process through which the content and material for these meetings is created, the paper also aims to detail the ways in which the group's writing activities have been designed to encourage researchers to step outside their disciplinary boundaries and conventions since its inception. Discussion of the results of the group's methodological approach includes an overview of the range of readings covered by the group (fictional and academic, a total of over 60 texts), as well as extracts from writing created by group members (over 7 different writing exercises). It will also examine the formation and dynamics of the group, and the contributions made by researchers and group members from different disciplinary backgrounds.

Results: The article will conclude by examining the impact of the reading group's activities on group members' relation to the more-than-human and to their own disciplinary perspectives. By examining the bridging process between the group's members reading and writing in relation to their own discipline, this article will shed light on the epistemic and ethical implications of using speculative fiction as a method of inquiry in interdisciplinary settings. Furthermore, the group has become a collective forum for alternative ways of relating, knowing, and future-making in academia. As a community-of-practice, it offers researchers and artists a haven from where to inquire into the more-than-human from different epistemological and affective perspectives. In an academic industry dominated by competition and precarity (especially for young researchers), the project challenges reified academic structures, aiming to include the playful and the affective into the study of socioecological transformations.

Conclusions: Finally, this paper will suggest possible avenues to develop the group's methodology in other interdisciplinary projects and in settings beyond academia.

Imagining future homes: The prefiguration of (un)sustainable homes in everyday practices

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Emmelina Eriksson[1]
Christian Fuentes[1]
[1] Lund University, Department of Service Studies

Introduction: In affluent countries, housing and housing-related consumption constitute major sources of environmental impact. Dwelling size, materials, housing type, and household energy and water use all contribute substantially (Ivanova et al., 2015; Lorek & Spangenberg, 2019). Reducing per-person living space is a key measure for decreasing housing-related environmental impacts that requires challenging existing housing norms and exploring alternative housing forms (Hagbert, 2016; Sandberg, 2018). Transitions towards more sustainable homes must account for the socio-material functions of homes. Homes, previous research has shown, provide practical services and fulfil emotional, social, and cultural needs, all connected to prevailing ideals of "the good home". However, housing research largely focuses on technical solutions related to construction and energy use, giving limited attention to how reducing dwelling size or alternative forms of housing align with consumers' expectations and future housing aspirations. Little is known about how consumers imagine "a good home," which socio-material functions they prioritise, and how sustainability figures within these imaginaries. This paper addresses these issues. Drawing on practice theory and the concept of social imaginaries, we examine how imaginaries of present and future homes are shaped by, and in turn shape, everyday household practices. We argue that these imaginaries partly determine which housing options are considered possible and desirable, now and in the future.

Methods: Based on 15 in-depth household interviews and 3 focus group interviews with residents in Helsingborg, Sweden, the study explores residents current housing experiences, visions of their own home in 2035, and imaginaries of housing in 2075, with particular attention to sustainable future homes.

Results: Our results suggest that already established practices structure imaginaries of future living. Homes function as social nodes, workplaces, leisure spaces, and sites of safety and belonging. These socio-material functions anchor expectations about housing size, location, and composition and shape imaginaries of future homes. Consequently, present-day practices and material arrangements prefigure the future, reproducing and stabilising unsustainable standards and expectations.

Conclusions: Current practices prefigure future housing imaginaries and constrain consumers' perceived fields of possibility. To enable more radical futures, these unsustainable imaginaries must be challenged through methods that specify concrete practices and materialise them via models or experimental housing.

Journeys to the futures with environmental policymakers

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Satu Aavanranta[1]
Teea Kortetmäki[2], Josephine Gillespie[3], Corinna Casi[2], Christopher Raymond[1]
[1] University of Helsinki
[2] University of Jyväskylä
[3] University of Sydney

Introduction: Ambitious global biodiversity targets demand transformative visioning for nature restoration, however current visioning remains limited and lacks ambition. With visioning in policymaking and transformation design still operating in silos, substantial potential for sustainability transformation remains unrealised. We addressed this gap by designing a *Journey to the Futures* intervention that integrates imagination, futures thinking and multispecies perspective with policymaking, combining regulatory feasibility with transformative ambition.

Methods: We ran six interventions with policymakers (n=31) including city council and board members, and civil servants working on environment, biodiversity, and sustainable development. The interventions took place in an audiovisual dome theatre and consisted of storytelling, guided imagination, embodiment exercises, Nature Futures Framework led co-creation and facilitated group conversations. Interviews and interventions were recorded and analysed using reflexive thematic analysis.

Results: Participants reported that imagining transformative desirable futures was difficult within standard policymaking. The experiential setting and methods of the intervention enabled affective engagement, collective sensemaking, and speculative experimentation.

Conclusions: Our intervention strengthens transformative visioning for nature restoration by fostering ambition and centring more-than-human relations. Embodied, affect-driven methods can expand policy imagination, advance multispecies justice, and enhance the transformative creativity of biodiversity restoration visions.

Mining futures: Narrating 'the green transition' through exhibitions and visual art

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Ekaterina Tarasova[1]
Josefina Marklund[1], Sara Persson[2], Tatiana Sokolova[1]
[1] Södertörn University
[2] Mälardalen University

Introduction: Cultural and artistic practices, such as museum exhibitions and visual art, can create powerful narratives about green transitions, from mining and renewable energy infrastructure to the use of natural resources. These narratives, going beyond the linguistic dimension, may engage the wider public by appealing to different senses, leaving lasting impressions that shape public understanding and engagement with green transitions. However, they remain underexplored in the research about imaginaries and narratives of green transitions which often focus on public discourses and perceptions of stakeholders and specific social groups. In this paper we aim to explore hegemonic and counter-hegemonic narratives of the role of mining in green transitions in Swedish museums and contemporary visual art through multimodal discourse analysis: focusing on how narratives are created not only linguistically, but also through sight and sound, spatial arrangement, and choice of geographic location. We will first analyze how a narrative about pasts and futures of contemporary mining is constructed and communicated in "The mine" (Gruvan) exhibition at the National Museum of Science and Technology in Stockholm, Sweden's flagman technology museum that attracts hundreds of thousands of visitors annually. We will then juxtapose this narrative against the stories about mining told by Swedish contemporary visual artists which seem to offer critical counter-narratives about the role of mining in green transitions in public discourse.

Methods: Multimodal discourse analysis.

Results: The results will present narratives of the role of mining in green transitions in Swedish museums and contemporary visual art.

Conclusions: It is too early to present conclusions but one of the aims that can become part of the conclusions is about exploring museum exhibitions and visual art as sites of meaning making about mining and green transitions.

Modellers as storytellers: 'What's the problem represented to be' in Integrated Assessment Models?

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Karel Zwetsloot[1]
David Collste[1]
[1] Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden

Introduction: Models are more than numbers—they tell stories about the future. Integrated Assessment Models (IAMs) play a key role in climate and sustainability policy by exploring potential pathways and outcomes. However, they are not neutral representations of reality: they embed explicit or implicit assumptions, values, and worldviews of the modellers, which can shape what is seen as possible or desirable. They often emphasize techno-economic solutions and may underrepresent transformative or post-growth futures. In this study, we use the FRIDA system dynamics IAM as a case study to explore how these assumptions and narratives can be examined critically using participatory and reflective approaches.

Methods: We examine the FRIDA model interface using Carol Bacchi's "What's the Problem Represented to be?" (WPR) approach. The FRIDA interface guides users through the model and allows them to explore different policy scenarios. We use a survey, directed at users and modellers, to probe how climate change is framed in the model, what assumptions are embedded, which perspectives are missing, and what effects these representations produce. Feedback from students, citizens, modellers and researchers further informs understanding of how FRIDA constructs and communicates possible futures.

Results: FRIDA demonstrates the potential of IAMs to engage with complex systems in a more transparent and reflective way. However, limitations remain: it tends to highlight growth-oriented, techno-economic pathways by explicitly suggesting economic growth as a target, and underlying assumptions are not always explicit. The WPR approach helps uncover hidden assumptions and silences, highlighting the normative and political dimensions of modelled futures and revealing opportunities to represent alternative, transformative pathways.

Conclusions: Integrated Assessment Models, and models in general, function as storytellers: they do not just simulate futures, they shape how we think about possibilities and priorities. Being explicit about assumptions, limitations, and normative choices can enhance the critical use of models. The FRIDA case study illustrates how these models can move toward more transparent, reflective, and imaginative representations of the future, opening space for alternative narratives that go beyond conventional economic growth and technical pathways.

Narrating conflictive worldviews of climate risk management in Madagascar

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Francisco Orozco-Melendez[1]
[1] University of Bergen, Norway

Introduction: Weather prediction technologies have reached remarkable accuracy, yet their use for decision-making in climate risk management remains limited. Dominant explanations for this usability gap—lack of access to forecasts, institutional barriers, and unclear guidelines—have inspired co-production approaches that integrate scientific and local knowledge. However, these approaches often assume that integration is both possible and desirable. My research challenges this assumption by arguing that climate risk preparedness is grounded in diverse, sometimes irreconcilable, worldviews and ethical paradigms that do not lend themselves to integration. Drawing on ethnographic fieldwork within an EU-funded project co-producing sub-seasonal forecasts with at-risk communities and institutions in Madagascar, I explore how actors imagine and practice climate risk management grounded in conflictive worldviews.

Methods: To address these tensions, I develop and test a narrative approach to climate risk management. Rather than seeking consensus, this method co-creates risk management plans through storytelling, making value diversity explicit without subordinating it to a dominant rationality. Storytelling becomes a tool to articulate multiple forms of risk management—practices that coexist rather than converge—thus resisting the imperative of integration. This approach will be tested in Madagascar in April 2026.

Results: The empirical work will generate narrative climate risk management plans that capture how participants' value frameworks align and diverge without forcing agreement. These plans will serve as methodological prototypes for working with value diversity in climate services co-production. Through co-created climate risk management narratives, this research will illustrate how storytelling can function as a participatory tool for negotiating difference but resisting integration.

Conclusions: This paper contributes to debates on participatory science and environmental governance by reframing co-production as a space for negotiating difference rather than producing uniformity. It offers methodological insights for dealing with conflictive meanings in climate services and reflects on the ethical implications of climate risk management practices. The paper will present narrative climate risk management plans as a methodological proposal for working with value diversity and imagining futures that coexist rather than converge.

Narrative anchors to digital waves: The influence of strategic narratives and ontological security on technology adoption in smart ports

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Maitrayee Mullick[1]
Carolijn van Noort[1], Nelson F. Coelho[1]
[1] Centre for Blue Governance, Department of Sustainability & Planning, Aalborg University, Aalborg, Denmark

Introduction: The digitalization and AI transition drive sustainable development in European ports by supporting vital environmental goals and green transition strategies. However, this technological transition poses a discursive and organizational challenge, as it disrupts the routines and workflows of port stakeholders, threatening their ontological security and sense of workplace agency. In this context, recent literature highlights the value of storytelling and strategic narratives in mediating the success of digitalization and AI adoption in organizations. However, there is scant empirical research on the influence of strategic narratives on ontological security and AI adoption in existing smart ports. To address this gap, this study explores the roles of strategic narratives on the ontological security of port stakeholders in the processes of AI adoption in smart ports in Denmark and the Netherlands, through a comparative assessment of their digitalization and AI adoption interventions.

Methods: This study uses a curated theoretical framework—the Strategic Narratives Alignment for Ontological Security (STRANAOS), combining the theoretical lenses of ontological security, strategic narratives, and technology adoption to address the objective. We utilize an empirical, mixed-methods comparative assessment in selected Dutch and Danish ports through semi-structured and structured, in-depth interviews of managerial leaders to capture the narratives of change. We use the deductive thematic content analysis technique for the investigation.

Results: The comparative exploration highlights that the strategic narratives adopted by port organisations tend to bridge the gap between the disruptive forces of digitalisation and AI and the workforce's fundamental sense of order and agency, functioning as a micro-political tool for ‘future making.’ The research illustrates the effectiveness of the STRANAOS framework within decision-making processes regarding digitalisation and AI adoption in the cases of Dutch and Danish smart ports.

Conclusions: Hence, the study broadly paves the way for guiding practitioners, researchers, and port management in crafting narratives to ease anxiety, secure stakeholder buy-in, and support port organizations in transitioning sustainably into the digitalization and AI era.

Opening up Futures through Play: A Conceptual Exploration in Environmental and Sustainability Education.

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Karin Nordh[1]
[1] Department of Education, Uppsala University

Introduction: Environmental and sustainability education (ESE) plays a crucial role in addressing future perspectives of sustainability issues. However, there is a tension within the ESE-research field, between on the one hand a closed or narrow framing of the future, where the future is knowable and used as a means to plan and prepare for this future (be it desirable or not), and on the other hand an open framing of the future, where the future is unknowable, full of uncertainty and with an orientation towards opening up possibilities for novelty. It is in this tension this paper takes its starting point and it aligns with the latter position by arguing that there is a seemingly playful element to a radical openness of future.

Methods: This paper adopts a theoretical and conceptual approach to explore the possibilities of play as part of environmental and sustainability education that is receptive or attentive to the future as radically open. Drawing on insights from anticipation studies and the notion of the 'thick present', the future is understood as inherently uncertain and unpredictable, holding endless possibilities.

Results: Education is proposed as an emergent and experimental site, where students can engage in imaginative practices and explore multiple, evolving possibilities. The paper argues that a notion of play can contribute to an attentiveness towards the radical openness of the future within ESE, without rendering it empty or paralyzing.

Conclusions: In conclusion, play makes possible a space/time in education to move into imaginary worlds, and experimenting with futures, as well as enabling a room for freedom, for a diversity of emotions and for the nonsensical aspects of the future. The paper proposes the concept of the playfulness of the future as a vocabulary for ESE-research and practice to relate to the future as open, moving away from dichotomies and linear, causal understandings of past-present-future. As such, embracing the playfulness of the future in ESE may open up possibilities for creative and imaginative negotiations between different visions of the future in the present.

Poetry workshop as a modality of documenting climate injustice and visioning transformative futures

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

mirko nikolić[1]
[1] Aesthetics, School of Culture and Education, Södertörn University

Introduction: The draft paper shares insights from an ongoing arts-led environmental humanities project, which experiments with learning and sharing documentary poetry as a form of intersectional climate justice education. The projects sheds light on the planetary impacts of private and public savings in the global North, with focus on Sweden. The central method includes organising poetry-writing workshops, mainly in education and cultural settings. In Sweden, the state-run pension funds invest more than 350 billion USD into bonds and shares in thousands of enterprises across the world. These investments cause millions of tonnes of GHG emissions, as well as other eco-social impacts on communities and natural environments. Alongside the more tangible climate mitigation and adaptation, savings are thus also an important area for climate action. How can an art-research practice address this "uncomfortable" reality for transformative learning experiences, acknowledging the gravity, yet igniting creativity? What kind of futures are being made, or could be made through our collective savings? Rather than a standard academic paper, I would like to submit a workshop script with additional commentary. The paper thus shares the methodology, provides an opportunity to share interim findings, and to discuss future development.

Methods: The poetry workshop create spaces of collective learning about the transnational pathways of "our" savings, as well as on a meta-level introducing and discussing the relevant concepts from political ecology, e.g. "ecologically unequal exchange," (green/grey) extractivism, ecological debt etc. At the stage of the conference, a number of single workshops, and the first complete term of a longer engagement will be completed, which will be the focus of the draft paper.

Results: One of the project's results is to create a platform for publishing and sharing the poems to the wider public. This becomes a sort of critical memory practice around the specific question.

Conclusions: The results can be understood from a range of viewpoints, quantitatively (e.g. workshops participants numbers), qualitatively (e.g. feedback from participants). The key interest for me would be the discoursive analysis of the poems themselves, the stories they tell, the words used. Mapping longer-term outcomes, such as potential transformations in undertstanding, may present interesting challenges.

Rising Sea Levels & Rising Emotions: Local storylines building resistance towards technocratic geoengineering in Venice and the Dutch Wadden islands

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Henna Kakko[1]
Geerke Visser[1]
[1] LUT University

Introduction: Sea level rise is expected to have fundamental effects on the coastal areas globally. Within climate change adaptation research, the impact of sea level rise on island communities has been extensively studied (see e.g., Esteban et al. 2019; Thomas and Benjamin 2018). Previous scholarships have emphasized low-income nations and communities that are acutely vulnerable to the impacts of changing sea levels (Rigaud et al. 2018). However, Europe as a context for the impacts of sea level rise often neglected. Previous studies have focused on the loss of, or changes in identity, sense of belonging and place due to sea-level rise in low-income countries (see Roberts and Andrei 2015). We aim to understand how these phenomena are perceived in resource-rich Europe, where climate geo-engineering can create complex emotions.

Methods: This paper challenges the dominance of technocratic approaches to climate adaptation by foregrounding the emotional politics surrounding responses to sea-level rise in Venice, Italy and the Dutch Wadden Islands. Emotions are not peripheral to policymaking—they actively shape public acceptance or resistance to environmental strategies. To explore this, we examine local storylines that help communities interpret and respond to the profound changes brought by rising seas. These storylines function as narratives of social reality, influencing how moral and political orders are constructed and contested**.** In Europe, adaptation strategies often prioritize large-scale technological solutions. Drawing on interviews conducted with diverse stakeholders in Venice, Italy (in total 34 conducted in-depth interviews), and the Dutch Wadden Islands (in total 53 conducted in-depth interviews), we uncover local narratives that question these technocratic frameworks.

Results: Specifically, we identify three storylines around geoengineering projects designed to combat sea-level rise and ultimately, how these storylines construct emotion-laden resistance by local populations.

Conclusions: Our findings reveal that governance models frequently marginalize local perspectives, despite their critical role in shaping public engagement and resistance. By foregrounding these emotional and narrative dimensions, we offer a deeper understanding of environmental politics and the tensions embedded in climate adaptation strategies.

Socio-technical imaginaries of the future in Swedish municipal water infrastructure Planning

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Timos Karpouzoglou[1]
Linus Ekman Burgman[1], David Nilsson[2]
[1] Department of Thematic Studies - Technology and Social Change, Linköping University, Linköping, Sweden
[2] Framverket Utveckling AB, Stockholm, Sweden

Introduction: Sweden is set to experience much more extreme weather conditions, and this is already affecting water infrastructure in often unpredictable ways. Extreme incidents of both flooding and acute water scarcity are in recent years regularly being lifted in the mainstream Swedish media and popular discourse. While the material effects of these changes are becoming better understood, what is less studied is how climate change is also destabilising established socio-technical imaginaries of the future in Sweden's municipalities.

Methods: Drawing on an empirical study that includes qualitative methods such as semi-structured interviews and document analysis, we explore the imaginaries of the future of what we term 'middle ground' water professionals. We have conducted 39 interviews with mid-level professionals in 7 municipalities in Sweden that have been identified in previous studies as 'forerunners' of climate adaptation. In analysing the interview material, we place particular focus on the connections between narratives and socio-technical imaginaries using a thematic analysis.

Results: Our analysis results thus far suggest that in the work of municipalities with infrastructure planning, an imaginary of a stable socio-technical future is being destabilised, which in turn signals a shift away from only focusing on long-term planning horizons (often in terms of 100 - 150 year time horizons). The narratives of the actors bring forward the importance of more flexible infrastructural configurations and the need to think in shorter time horizons as well as emphasising new forms of collaboration in the public sector. This reframing of the relationship between present and future in turn has a central role for opening up new mechanisms for accelerating climate action as well as enabling organisational innovation.

Conclusions: As long-term horizons lose stability, middle-ground professionals emphasise flexibility, shorter planning cycles, and planning approaches that include water in the built environment, rather than excluding or controlling it. We argue that such socio-technical imaginaries forebode a huge paradigm shift in not just planning practices, but also in the public organisation and decision-making structures around infrastructure and city building and are therefore central to understanding how to align Swedish cities to a path of increased climate resilience.

Speculative Landscapes: Embodied practices for Intergenerational Futures.

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Ingrid Helene Brandt[1]
Ulrikka Skovdal[1]
[1] Department of Political Science, University of Copenhagen

Introduction: Climate governance often assumes that long-term solutions hinge on including recognised stakeholders such as agricultural associations, conservation organisations, labour market parties. Yet privileging these interests and rights constrain future-oriented outcomes and reinforces status quo. Drawing on fieldwork with *The Committee for Speculative Landscapes* and informed by democratic theory and debates on representation, this paper examines how governance might move beyond fixed stakeholder frameworks to enable transformative approaches to landscape futures.

Methods: We follow and co-create *The Committee for Speculative Landscapes*, a youth-led process in the Danish muncipality of Køge designed to relocate negotiation on landscape transformations from institutional spaces into lived landscapes. The committee will convene in Spring 2026 and employs speculative methods and situated storytelling to reconfigure who and what counts as recognised stakeholders in climate governance. Our research combines ethnographic observation with co-creation in the committee's design and facilitation, enabling a dual perspective. Data is generated from a series of participatory sessions where members engage in practices that foregrounds embodied, affective, and sensory attunements to more-than-human agencies. Through these sessions, we trace how speculative techniques and narrative interventions generate alternative imaginaries and site-specific proposals that challenge dominant governance scripts.

Results: We expect that practices of storying places from a youth-perspective will activate affective and sensory attunements to more-than-human agencies, fostering deeper relational awareness of landscapes as active participants in governance. These engagements are expected to reframe obligations to future generations, moving beyond abstract sustainability toward situated, place-specific responsibilities. Through speculative exercises, the committee aims to generate site-specific proposals that exceed conventional governance logics—foregrounding alliances across generations and species and challenging key stakeholder frameworks. In doing so, we expect to demonstrate how speculative and embodied practices can open imaginative and practical pathways for climate governance beyond fixed stakeholder hierarchies.

Conclusions: We argue for pushing landscape governance beyond established stakeholder interests. *The Committee for Speculative Landscapes* demonstrates how speculative and embodied practices can unsettle dominant governance assumptions and enact transformations that open democratic space for intergenerational and multispecies futures.

Storytelling Across Scales: Political Imaginaries and Stories of Survival in Sustainability Transformations

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Jens Marquardt[1]
[1] Technical University of Darmstadt

Introduction: Powerful stories about progress, technological advancements and innovations profoundly shape sustainability transformations. Political actors mobilize dominant imaginaries of techno-optimism and ecological modernization to guide how sustainability efforts are debated and governed. These imaginaries do not merely reflect possible futures; they actively configure what appears feasible, legitimate, and desirable. This paper examines the linkages between sociotechnical imaginaries and storytelling as a methodological entry point for studying how globalized visions of change intersect with situated practices of survival. This is illustrated by experiences from India and Indonesia, where national energy transition imaginaries of progress marginalize locally grounded resistance against green energy projects.

Methods: Methodologically, this contribution reflects on the limitations of established qualitative approaches for capturing the multi-scalar dynamics of sustainability transformations. It advances storytelling as a promising tool for studying future-making across scales. By combining STS scholarship with work on narrative politics and political storytelling, the paper proposes an analytical bridge between macro-level political visions and the micro-level stories through which communities, civil society groups, and marginalized actors interpret, contest, or reimagine futures. Through empirical illustrations, the paper offers a methodological reflection on how storytelling workshops and co-creation stories should enrich and challenge narrative interviews and interpretive text analysis.

Results: The paper makes three main contributions. First, it illustrates through experiences from India and Indonesia how dominant national energy transition imaginaries collide with marginalized local stories of survival. Second, it reflects on how storytelling methods help render these narrative gaps, tensions, and silences visible. Third, it proposes a conceptual lens for analyzing how such multi-scalar narrative frictions shape the possibilities, constraints, and contested meanings of sustainability transformations.

Conclusions: Integrating storytelling into sustainability transformation research enables a more reflexive, plural, and relational understanding of how futures are imagined and enacted. Researchers can engage with what remains unseen in transformation research, foregrounding sustainability transformations as contested environments rather than linear science–policy pathways. Examining narratives from above and below makes visible the tensions between abstract sustainability transformation imaginaries and the situated stories of survival that emerge from their enactment.

The lake under the lake

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Lucia Pagano[1]
Eva Sidén[1]
[1] Gamla stan Music & Prod.

Introduction: There are concerns about the potential consequences of alum shale mining in Oviken with its proximity to the lake Storsjön, an important water source for the surrounding municipalities. The increased risks of spreading pollution via the river Indalsälven towards Sundsvall city are alarming. We, composer Eva Sidén and filmmaker Lucia Pagano are making a cinematic and musical piece, in unison with a poem by the writer Emma Warg, on the theme.

"Unobjectionable and sustainable extraction of metals,

including uranium from alum shale has never been proven possible

anywhere in the world."

The Royal Swedish Academy of Sciences

Link with an excerpt from a work in progress edit of the film *The Lake under the lake*:

https://vimeo.com/1144505141/1f7561bf1d?share=copy&fl=sv&fe=ci

Methods: Film, music, poem

We have been filming in the environment surrounding the prospected mining area, and depicted residents with portraits, the material will be composed as a dialogue between text, images, music and sound.

Results: Videopiece: The film will be a cinematic contemplation where the viewer is invited to freely reflect on the consequences mining in the area could bring.

Conclusions: Creating discussion

Trails and tales – From (re)interpreting pilgrimage walking to mediating human-landscape relations in patchy Anthropocene

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Jasmine Zhang[1]
Marcus Bussey[2], Eva Sandberg[1], Hazel Tucker[3]
[1] Swedish Center for Nature Interpretation, Swedish University of Agricultural Sciences
[2] University of the Sunshine Coast, Australia
[3] University of Otago, New Zealand

Introduction: The landscape we inhabit is patchy – and in that patchiness lies our shared histories that are inherently more-than-human. Though our imaginaries are limited by the desire for neat structure, the patchy landscape of Anthropocene demands constant remediation and reinterpretation that go beyond a linear narrative. In this landscape, trails and tails play important roles to connect, converse, and remember, but also they are there to fragmentalise, normalise, and erase. The question is which trail are we tracing and whose (hi)stories we are telling and interpreting? This paper attempts to explore what trails and tales have in common and what we can learn from the emergent knowledge they offer when weaved together. In particular we focus on the embodied practices that involve walking trails and place-based interpretation.

Methods: As a researcher at an organisation that is in-between University and governmental authority, the first author is positioned in the ambiguously productive space of everyday practicing and theorising; second, this position has enabled her to follow an ongoing collaboration between the center and Pilgrimcentrum in Linköping Stift where a nature interpretation plan was developed (largely by the third author) for two sites on the St. Birgittas Way, which is currently the main case of this paper; and third, the recent growing interests for pilgrimage walking that go beyond religious practice and emphasise on transformation have urged the authors (especially the first and second authors) to stay open and curious about possibilities to reinterpret the concept "pilgrimage" in various secular contexts. While largely leaning against the documentation done through the center's collaboration with Pilgrimcentrum, we have also conducted and will complete with semi-structured interviews with other actors involved in the case.

Results: By describing the process of which stories of these two sites were chosen and reinterpreted, which human and nonhuman actors were involved and how multi-temporal senses were evoked through speculative methods, we wish to open the discussion about pilgrimage walking against the context of Patchy Anthropocene.

Conclusions: As a study emerged from practice-based research we also contribute to reflective practice for those who practice communication and interpretation human-landscape relations in general.

UnWorlding and reWorlding: re-imagining 'the human' in a multispecies world

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Corinna Casi[1]
[1] University of Jyväskylä, Finland

Introduction: In a fast-changing world with polycrises, taking place at the same historical moment on our planet, it is time to re-think and re-envision what does it mean to be human in a multispecies world. How can we be part of the world without reproducing binary structures (nature/culture; dominant/dominated; humans/non-humans etc.) or without mainly prioritizing human benefits at the cost of non-humans?
How can humans be actors without (or at least with less) anthropocentric goals?
Is this type of world even possible?

Methods: This calls for a methodological and theoretical paradigm shift, which I refer to as a "worlding (or world-making) process" (Haraway 2016; Heidegger 1929), understood as change within the theoretical apparatus with its values and categories. In my paper I divide this process into two stages: the unWorlding (Haraway 2016; Escobar 2020) and then reWorlding process. In this context, UnWorlding means to de-construct and de-learnt the theoretical apparatus, which I call 'world'. This refers to the letting go of the modern ideas about: ourselves, the humans, as dominant species, our habits and human-centered perceptions, as well as the modern values and categories. This is followed by a reworlding process, which means to re-think, re-imagine and re-construct the world. It focuses mainly on the "human being". In the activity of re-imagining what does it mean to be human in a world cohabitated by various species, we should first start to pay attention to how the descriptions of natural and sustainability science are made. Since, I argue, descriptions are not neutral as we have been thinking, they rather carry normative and justice implications which, at times, are hidden or not analyzed sufficiently.

Results: In this paper, while presenting the unWorlding and reWorlding process, I attempt to identify knowledge productions, activities, practices and spaces of knowing that disrupt seemingly hegemonic anthropocentric regimes, binary thinking and those who prioritize the economic aspects over all others.

Conclusions: Those spaces and practices are rather relational, embodied and aim at re-imagining a human who is not the superior specie but rather one species among other.

Visual Narratives for the Future: Producing speculative fiction short films to act upon planetary transformations

31. Future-making and storytelling: Imagining, narrating, and acting upon a changing environment

Isabel Löfgren[1]
Anna Göthe[2]
[1] Senior Lecturer in Media and Communication Studies, Södertörn University
[2] MA candidate in Media, Communications, and Cultural Analysis, Södertörn University

Introduction: This paper examines how speculative fiction short films produced in a media education context can function as sites for imagining techno-ecological futures and negotiating the affective dimensions of contemporary crises. Based on the thematic analysis of 25 short films created by students in the course Media Production: Visual Narratives at Södertörn University between 2019 and 2025, the study explores how visual storytelling becomes a way of thinking with and through environmental and technological transformations from the perspective of young adults.

Methods: Premised on Erich Hörl's understanding of media as constitutive of a "general ecology," we draw on Donna Haraway's notion of speculative fabulation as a practice of *worlding otherwise* to situate these films within wider debates on technoculture, ecology, and more-than-human relations. By using thematic analysis, we were able to trace recurring concerns with technological skepticism, ecological anxiety, overconsumption, and governance based on social control. Moreover, the films use a variety of visual and narrative strategies to stage the young filmmakers' existential experience regarding planetary concerns, while foregrounding experiences of vulnerability, complicity, and resistance.

Results: Our preliminary results show that the speculative fiction genre allowed the students to test and trouble dominant imaginaries of progress, control, climate collapse, and technological salvation, opening space for ambivalence, uncertainty, and hope through alternative modes of cultural and existential attachment to polycrisis—in a time span of six years marked historically by ecological concerns, the pandemic, war, the rise of European and Swedish conservatism, and increasing digital automation of everyday life.

Conclusions: These types of experimental productions created in a learning environment using transformative film pedagogies can be understood as micro-political acts of future-making, where storytelling is not merely illustrative but actively participates in shaping how planetary issues are sensed, narrated, and contested. By reading the films as speculative fabulations embedded in a dense techno-ecological milieu, the study proposes that sustainability in media education should engage with storytelling practices as a way of reconfiguring relations between knowledge and action, and of cultivating a critical visual language for living "within the ruins" of existing socio-technical orders—in order to help build futures *otherwise*.

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Contemporary food systems face complex and coinciding emergencies, and the need for their substantive transformation is widely recognized. Ecological crises, such as climate change, biodiversity loss, and soil degradation, amplify social and economic adversities related to food insecurity, malnutrition, and rural livelihoods. These environmental, social, and economic problems are closely entangled with imbalances of economic and political power in the current functioning of food systems. Recently, calls for disruptive and transformative research have been put forward to address the persistent food system challenges. Importantly, transformative research is needed to address the systemic lock-ins in the functioning of food systems. With a focus on agriculture and food — from mega-scale industrial farms to small-scale, self-sufficient holdings and urban container farms and local, national and global food systems — we invite fully drafted manuscripts that, through the lens of food systems, examine scientific divides between economic imperatives and environmental sustainability that widen, rather than close the gap between a prosperous and disastrous future. Themes include:

- Theories: What social scientific theories can assist in the understanding of transformation and breaking the lock-ins in food systems?
- Global over and underproduction in the Anthropocene: How to interpret why overproduction persists while starvation increases? Are there geographical explanations, or is this primarily a result of dysfunctional economics, lack of proper institutions or political resistance? What are the characteristics for Nordic food systems in this regard?
- Agrifood trade and self-reliance strategies: In what ways does the current geopolitical context of heightened trade tensions drive states' policies regarding food security and how can the current shift to greater self-reliance support ecological resilience?
- Territorial markets: What are the social and environmental benefits, challenges, and opportunities of organising food systems along territorial lines?
- Institutions and stewardship: Does the growing divide between economics and sustainable futures hinder public and state agencies from caring for human–soil relationships and long-term welfare?
- Governance: How can food system organisations be held accountable for achieving sustainability goals and justice in the production and consumption of food?
- Pathways to long-term food security for all: Can food security be achieved through increased competition, or by prioritising the creation of institutions which serve the public interest and care for the future?

Convenors

Minna Kaljonen, Societal Change, Justice and Agency, Finnish Environment Institute, Finland
Anders Wästfelt, Department of Human Geography, Stockholm University, Sweden
Hilde Björkhuag, Department of Sociology and Political Science, Norwegian University of Science and Technology, Norway
Jennifer Clapp, School of Environment, Resources and Sustainability, University of Waterloo, Canada
Annika Lonkila, Department of Social Sciences and Philosophy, University of Jyväskylä; Finnish Environment Institute, Finland
Rachel Mazac, Stockholm Resilience Center, Sweden

Actor power to change dietary patterns: a case study of the grain legume system in Sweden

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Mary Scheuermann[1]
Jacob Hileman[2], Line Gordon[1], Ulf Sonesson[3], Lisen Schultz[1]
[1] Stockholm University, Stockholm Resilience Centre, Sweden
[2] West Virginia University, Department of Geology and Geography, United States
[3] Research Institutes of Sweden (RISE), Department of Food and Agriculture, Sweden

Introduction: An important reason to identify powerful actors in a social-ecological system is to more clearly assign responsibility to actors for enacting change.[1,2] Who has influence over changing food systems for sustainability is often assumed to depend on actor characteristics such as size or market share. [3–6] However, less research has focused on the particular types of power that actors have and how they conceptualize change happening for more sustainable food systems. This paper focuses on one part of a regional food system, the grain legume agricultural knowledge and innovation system (AKIS) in Sweden to examine power types and perceptions of change processes to better understand potential roles for actors in changing dietary patterns.

Methods: First, types of power are identified in transformation and transitions literature related to sustainability challenges - power to, power over, and power with.[2,7,8] Next, semi-structured interviews with food actors elicit how they perceive influence over specific actions with transformative potential and how they believe system change happens. Lastly, social network analysis and interview results identify who has what type of power and how these align with actor roles and ideas about system change. To frame actor conceptualizations of change within a larger process the Multi-Level Perspective for consumption and production systems[9] is used as a reference point.

Results: Initial results reveal that several actors hold multiple types of power and that most actors emphasize the role of individuals in system change. Several actors that have 'power with', theorized to enable transformative change,[10] focus on similar grain legume products and share an emphasis on innovation in change processes, suggesting potential to shift production demand and consumer preferences.

Conclusions: Given the potential of *power with*, it is relevant to consider how it can be built within the grain legume AKIS and the wider food system. Food policy councils could foster this development and contribute to ongoing policy processes, fostering collective action. Identifying actors with different types of power may help show their potential to facilitate or hinder changes to dietary patterns as individual actors and as actor groups, and broaden conceptions of influence beyond size and market share.

An overview of food systems injustices experienced by marginalised groups: A rapid scoping review of reviews

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Amar Laila[1, 2]
Costanza Conti[1, 3], Christina Hicks[2], Nitya Rao[4], James Robinson[5], Shakuntala Thilsted[6], Anne Barnhill[7], Line Gordon[1], Jennifer Clapp[2]
[1] Stockholm Resilience Centre
[2] Environment, Resources & Sustainability, University of Waterloo
[3] M.S. Swaminathan Research Foundation
[4] School of Global Development, University of East Anglia
[5] Lancaster Environment Centre, Lancaster University
[6] Consultative Group on International Agricultural Research (CGIAR)
[7] Berman Institute of Bioethics, John Hopkins University

Introduction: Recent and growing attention to the social, economic, and ecological harms of the global food system highlight the need for transformation. Increasingly apparent in these calls is the need to recognise and address injustices, and focus on most marginalised groups and geographies.
Methods: To support these efforts, we reviewed the literature on three food system outcomes: food security and nutrition, environmental burdens, and labour conditions, to establish the extent to which eight population groups (women in general, pregnant and lactating women, children and adolescents, elderly, migrant and informal workers, urban and rural, low-income, ethnic minorities/indigenous).
Results: In Web of Science and Scopus, we identified 100 reviews and 136 case studies on food or nutrition (54), environment (43), and labour (39). Studies representing low-income groups were the most common, followed by those representing ethnic minorities or Indigenous groups, women, pregnant and lactating women, and children and adolescents in descending order. The USA, followed by India, and Kenya were the most referred to geographies. We created three interrelated themes to describe the identified reviews: *Distributional injustice* – U*nequal access to healthy food, clean environment, and labour protections*, which includes food insecurity and poor diet quality, air pollution, and low wages or lack of access to land; *Representational injustices – The systematic maintenance of marginalization*, including exclusion from decision-making and training in new agricultural technology as well as lack of regulations or lack of enforcement of regulations for migrant workers resulting in low wages and poor working conditions; *Recognitional injustice and the intersectional nature of injustice,* including gender-ethnicity and rural/urban-poverty intersections, as well as limited review evidence on Middle East and North Africa and some low-income countries.
Conclusions: Marginalised groups are more likely than their counterparts to experience nutritional, environmental, and labour injustices, which are a result of structural injustice that entrenches marginalisation, recognitional injustice that devalues certain identities, and intersectional nature of injustice that increases likelihood and severity of injustice. Food system transformation must embed all dimensions of justice and ensure that all three outcomes are addressed.

Between commitment and constraint: biodiversity-friendly farming and biodiversity-degrading institutional logics

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Irene Kuhmonen[1]
Sirpa Kortelainen[1], Annukka Näyhä[1]
[1] University of Jyväskylä, School of Business and Economics

Introduction: Food systems are major drivers of biodiversity loss. At the same time, food production is also very dependent on biological diversity through the variety of ecosystem services that biodiversity supports. Especially in the Global North, intensification of agricultural practices is a major threat to the ecological integrity of agroecosystems, due to the use of pesticides and herbicides, monoculturalisation, decline of landscape diversity and loss of soil fertility. Farmers have been identified as central actors in combating biodiversity loss on farmlands. Whereas extant research on farmers adopting biodiversity-friendly farming practices appreciates the complexity of factors contributing to land-use decisions, the role of structural forces is captured mostly via fragmented accounts of agricultural policies, farming cultures and market forces. However, biodiversity loss is strongly coupled with the prevailing institutional logics of food system, characterised by a focus on economies of scale. This observation, we argue, calls for stronger integration of analysis of farmer behaviour, motivations and values in promoting biodiversity with the prevailing institutional settings of food system.

Methods: In this study, we have conducted interviews with 18 Finnish farmers with biodiversity-friendly farming systems, accompanied by six expert interviews. By engaging with the experiences of such farmers who are already committed to a variety of biodiversity-friendly farming methods, we aimed at teasing out the friction prevailing between them and the institutional logics of the contemporary food system, and also their position in relation to the transition pressures that the food system is facing.

Results: Even though promoting biodiversity is one of the key targets of EU's Common Agricultural Policy, in practice, the logics related to promoting biodiversity are overruled by other, more powerful and impactful institutional logics, specifically the market logic of productivism, growth and increasing efficiency. The mainstream sustainability initiatives align with these logics, which are in stark contrast with the needs of biodiversity-friendly farming. As a result, many of the studied farmers are tired, struggling financially and feel a lack of legitimacy.

Conclusions: Overall, our analysis indicates that biodiversity-friendly farming receives little support either from the side of the contemporary food regime or from the prevailing transition discourses.

Can democratic innovations foster care and bridge economics and sustainable futures in the food system? Case youth citizen jury in Finland

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Minna Kaljonen[1]
Suvi Huttunen[1], Juuli Närhi[1]
[1] Finnish Environment Institute

Introduction: Nordic countries are often regarded as leaders in sustainability governance. However, transitions within food systems remain contested and challenging to achieve. These difficulties stem largely from persistent tensions between economic growth imperatives, broader wellbeing goals, and ecological limits. Democratic innovations—such as citizen juries—offer deliberative spaces where ordinary citizens can engage with these tensions. This paper examines whether, and in what ways, such innovations can help mediate these tensions. As our analytical lens, we draw on feminist political ecology and care ethics. Care ethics has been proposed as a transformative framework that challenges the economic growth agenda while fostering broader wellbeing. Yet, care relations can both enable and constrain change, making care a compelling analytical perspective. Reconceptualising governance through the lens of care redirects attention from individual actors to relational dynamics, foregrounding attentiveness, reciprocity, and the practices of maintenance and repair as key elements. We also interrogate the extent to which a care-oriented perspective offers analytical leverage in addressing the tensions inherent in sustainability governance.

Methods: We present findings from a youth citizen jury in Finland, designed to deliberate on sustainable food systems as input for national food strategy preparation. The jury gathered 39 participants aged 18-24 in in-person and online sessions in November 2025. Data includes deliberation recordings, pre- and post-surveys, jury recommendations, thematic interviews, and reflexive facilitation notes. Our analysis assesses how diverse forms of care were enacted and discussed.

Results: Preliminary findings suggest that youth juries can articulate care-based values—such as fairness, interdependence, and responsibility—that challenge economic framings. Participants proposed solutions emphasising local food systems, equity, and ecological resilience rather than growth-oriented strategies. The deliberative setting empowered young voices, yet the practical arrangements constrained participation opportunities and the uptake of the jury's recommendations remains to be seen.

Conclusions: We argue that citizen juries can strengthen legitimacy and inclusivity in sustainability transitions by suggesting solutions that matter for wellbeing, bridging gaps between economic rationalities and socio-ecological well-being. Thus, they can provide a mechanism for integrating care back into food system transformation. However, a relational focus can also reveal unexpected tensions, underscoring the complexity of embedding care in governance.

Digital empowerment of alternative agrifood spaces: An ethnographic exploration of digital practices on Swedish small-scale organic farms

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Qian Zhang[1, 2]
[1] Department of Environment, Development and Sustainability Studies, Södertörn University
[2] Department of Human Geography, Stockholm University

Introduction: Digitalisation is a significant driving force changing agrifood systems but the forms, processes and effects on sustainability are still under researched. Dominant technocratic approaches underlying the umbrella terms of smart farming, precision agriculture and agriculture 4.0 promise optimisation, efficiency and productivity, which go along well with the directions of large-scale industrial farms. Despite this digitalisation claims to address climate change issues and environmental sustainability, emerging research warns the risk of extending colonial structures of agricultural modernisation in the global south as well as of reinforcing racialized and gendered exploitations on farms in the global north. Yet, existing studies have mainly focused on large-scale farms. Both what digital means on small farms and how digitalisation unfolds on small-scale farms is unknown. As argued by recent literature, digitalisation is likely to bring to agroecological transition through responsible innovation. This study aims to explore the tensions between economic imperatives and environmental sustainability through the lens of digitalisation on small-scale farms. The leading question asked is: how does digitalisation facilitate alternative agrifood systems serving territorial markets? The specific questions include: 1) What are the specific digital forms on small-scale farms? 2) How do digital practices embed themselves in the management of small-scale farms, especially in terms of time and space organisation? 3) What are the benefits of digitalisation for economic, social and environmental sustainability? Drawing on theories of everyday life and rhythms, the study approaches the digital as mundane and transforming, embodied, intimate and emotional, and uncertain and entangled.

Methods: This study focuses on 10 small-scale organic farms in Sweden and relies on participant observation, semi-structured interviews, digital ethnography and digital content analysis to explore agrifood situated in multiple linked layered of space.

Results: Through investigating microprocesses, small moments, and routines with rhythms in organizing everyday agrifood, engagement and resistance of digital practices are analysed as part of experiments in cultivating plural forms of social-ecological knowledge and relations through reordering the time and space of agricultural production.

Conclusions: By bringing together digital geography and political ecology, this paper further discussions on how digitalisation can potentially empower transforming and alternative agrifood spaces that are economically and environmentally sustainable.

From Words to Action: Governing Food Security in the Era of Climate Change

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Hilde Bjørkhaug[1]
Andrea Barland[1]
[1] Norwegian University of Science and Technology

Introduction: Food security has re-emerged as a critical component of national preparedness strategies, prominently featured in Norway's security and contingency planning. Climate change intensifies this challenge by disrupting agricultural production, increasing volatility in global food markets, and amplifying systemic vulnerabilities. Despite global commitments to eradicate hunger, current food systems are widely considered "broken," with governance mechanisms struggling to address these compounded risks. This study investigates how national food security policies are operationalized within broader food system governance frameworks and their alignment with global norms.

Methods: The research employs a mixed-method approach combining a systematic literature review with qualitative policy analysis. The review synthesizes findings on food system governance and climate adaptation, focusing on theoretical frameworks, governance models, and transformation pathways. Analytical tools include discourse analysis and regime theory to examine how food security is framed.

Results: Preliminary findings suggest that Norwegian policies exhibit a strong rhetorical link between food security and self-sufficiency, reflecting broader tensions between protectionist strategies, global trade liberalization, and sustainability and climate risk management. The study anticipates identifying critical lock-ins and path dependencies that hinder systemic transformation.

Conclusions: Although the goal of achieving sustainable and climate-resilient food systems has gained a more prominent role in food security policy, the study indicates that rhetorical policy instruments have received greater emphasis than the necessary concrete measures. The research highlights the need for alternative and adaptive governance tools to accelerate transitions toward resilient food systems aligned with global goals.

Governing by consensus: Legitimacy and the limits of agri-food transformation in Wales

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Georgie Hurst[1, 2]
[1] Natural Resources Institute, University of Greenwich
[2] Pwllpeiran Upland Research Centre, Aberystwyth University

Introduction: Contemporary food systems face interrelated environmental and social crises that demand deep and rapid transformations, in which governments are expected to play a central role. Yet state-led sustainability transitions increasingly invoke the rhetoric of participation and just transition in ways that can obscure the political-economic limits to what governments can achieve. In Wales, post-Brexit agricultural reform was framed as a participatory transformation of the sector, informed by its *Well-being of Future Generations Act* and directed towards climate and nature goals. However, the protracted co-design of the new national farming scheme became mired in contestation, revealing tensions between environmental targets and the realities of sustaining precarious agrarian economies entrenched in wider food-system dynamics. This paper examines how ambitious proposals in state-led agri-environmental governance become progressively diluted in pursuit of consensus, and how strategies of legitimation can reproduce existing structural constraints within agri-food systems.

Methods: The analysis draws on qualitative research conducted between 2023-2025, including 31 semi-structured interviews with farmers, Welsh Government officials, and civil-society organisations; observations at farming and policy events; and documentary analysis of policy papers and consultation outputs. Thematic coding and abductive interpretation were used to analyse experiences with the transition process and how just transition imaginaries were negotiated and translated into policy design.

Results: Preliminary findings suggest that tensions within the co-design process reflect not only ideological divisions but also the structural pressures of a system built on cheap food, efficiency and competition. State efforts to reorient a predominantly livestock-based sector toward environmental objectives were constrained by the same economic pressures driving ecological harm and precarious rural livelihoods. Consequently, government attempts at transformation were foreclosed, with co-design reduced to symbolic inclusion and transition pathways shaped by what was considered economically tolerable rather than socially or ecologically just.

Conclusions: The Welsh case illustrates how state-led just transitions can be curtailed when participation is prioritised over substantive redistribution, thereby depoliticising transformation and normalising inequality as necessary for sustainability. Meaningfully just agri-food transitions will require confronting the political economy of food that limits state capacity to intervene, rather than assuming that participation alone can overcome systemic lock-ins.

Levers for change: sustainable niche for livestock production and consumption in Finland

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Annika Lonkila[1, 2]
Minna Kaljonen[1], Rachel Mazac[3, 4], Irina Herzon[3]
[1] Finnish Environment Institute
[2] University of Jyväskylä
[3] University of Helsinki
[4] Stockholm Resilience Centre

Introduction: We are facing an urgent need to transform food systems to fit within the planetary boundaries while securing good nutrition for all. Although there is a broadening consensus on the need for change, the pathways for action are all but clear. This is especially the case with respect to sustainable niche for livestock production and consumption. Thus, transformative research agendas are needed. In this article we investigate pathways to sustainable niche for livestock animal production and consumption in Finland by evaluating the transformative potential of leverages identified by food system actors in Finland. We have developed the conceptualization of a sustainable niche for livestock, considering environmental ceiling and social foundations, based on the principles of environmental capacity, nutritional sufficiency, and socio-cultural acceptability.

Methods: Building on the leverage points framework introduced by Donella Meadows, we identify actions and interventions that address deepest system structures, such as system goals and intent, with the capacity to break persistent lock-ins. Further, we examine how the system design would shift according to novel system intent. In other words, we examine which rules, norms, forms of agency, relations of power are needed to support sustainable livestock production and consumption. The data is based on a series of co-creation workshops conducted together with Finnish food system actors in 2024. Based on transcribed discussions, written workshop materials, and observational notes, we have categorized and evaluated the levers for change identified by the food system stakeholders in relation to their transformative potential. This analysis has been iterated further within a interdisciplinary group of researchers.

Results: For assessing the transformative potential of levers we evaluate how they reform, reconfigure or disrupt the key characteristics of paradigms guiding the livestock production and consumption system in Finland. As a result, we identify potential pathways towards the sustainable niche.

Conclusions: The results raise awareness of the paradigmatic intent that guides livestock production and consumption systems, and how it could be redesigned in a sustainable system. Such a redesign does not concern only mindsets but must address the whole system structure, including actors' power to transcend existing paradigms.

More-than-capitalist economies of wild plant and mushroom gathering in Norway

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Elaina Jacqulene Wiljanen Weber[1]
[1] Norwegian University of Science and Technology

Introduction: An estimated 3.5 to 5.8 billion people globally use wild products for food, medicine, and culture. In Norwegian media and research, foraged foods are purported as sustainable sources of important nutrients. An estimated half of the population forages for recreation and household use, and media and research call for upscaling the industrial bioeconomy of wild products to match that of Norway's Nordic neighbors. Yet the industrial-capitalist model has generated conflicts over migrant labor, human rights violations, and overharvesting endangered species in Sweden, Finland, and recently Norway.

Methods: This paper takes an ethnographic approach to foreground economic diversity and challenge capitalist imperatives of wild foods. Preliminary participant observation at a Nordic wild products conference and document analysis of news media revealed that Norway is positioned as lagging behind industrially and thus ripe for exploitation. Employing the strategy of "reading for difference" from Community Economies theory, I identified foragers who were "doing commerciality differently" through 2.5 years of participant observation within the Norwegian Association of Mycology and Foraging. I conducted semi-structured interviews with 20 such foragers.

Results: The result is an inventory of diverse economic practices analyzed by types of enterprise, markets, and transactions. These foragers participate in non-monetary flows such as gifting, swapping, and self-provisioning. They also engage in direct trade, alternative markets, and underground economies. One participant was a black-market forager out of necessity, but all others intentionally created social enterprises aimed at sufficiency, well-being, and caring for nature. Interestingly, almost all participants wove non-capitalist practices with capitalist ones, and true solidarity economies were not represented. I plan to discuss this finding in relation to Norway's strong welfare state and cultural tendencies toward egalitarianism, collective individualism, and work centrality.

Conclusions: Through inventorying foragers' diverse economic practices, I illuminate heterogeneity and legitimize more-than-capitalist practices while critiquing the imperative of industrial-capitalist enterprises. Perhaps Norway is not lagging behind on a linear trajectory toward capitalist totality, but instead sits at an inflection point of economic possibility and contingency. If so, the economic practices of foragers, and the projects that support or undermine them, could ultimately determine the sustainability of the food system's wild sector.

Re-thinking food systems transformation: A theoretical integration of assemblage thinking and systems thinking approaches

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Richard Helliwell[1]
Jefferson K. Rajah[2], Roberta Sonnino[3], Jérémie Forney[4], Hector M. Menendez[5], Birgit Kopainsky[2]
[1] Ruralis - Institute for Rural and Regional Institute, Norway
[2] Department of Geography, University of Bergen, Norway
[3] Centre for Environment and Sustainability, University of Surrey, United Kingdom
[4] Anthropology Institute, University of Neuchâtel, Switzerland
[5] College of Agriculture, Food and Environmental Sciences, South Dakota State University, USA

Introduction: Despite decades of sustainability initiatives, food system transformation remains elusive. There is a need to develop novel theoretical and analytical approaches that can contribute to realising sustainability transformations in practice. We elaborate an approach that integrates assemblage thinking (AT) and system thinking (ST) as an alternative to mainstream approaches to sustainability transitions.

Methods: ST provides a mental heuristic for holism, which, coupled with system dynamics modelling bounds complexity around clear problem definitions and feedback structures, enables scenario experimentation, and provides managerial tools for action. AT offers a critical perspective for problematising entrenched assumptions and categorisations, grappling with the distributed nature of agency, uncertainty and unpredictability, and the role of power shaping system affordances and change processes.

Results: Both converge on key constructs (flows, stocks, and relationality) but diverge in addressing power and governance. AT emphasises the normative and political, and the lines of flight that open possibilities for transformation. ST provides structured tools for modelling feedback processes to identify interventions for altering the system dynamics. Integrating these approaches helps navigate the complexity of food systems and transformation, whilst not being overwhelmed analytically by it.

Conclusions: We propose operationalising this through three points: (1) mapping assemblages and systems to identify key actors, socio-material relations, feedback structures, and discourses, to elucidate the desires and decision rules, critical agencies, and the causal dynamics unfolding within the system; (2) tension between STs predilection for managerialist interventions and ATs focus on the uncertain and the disruptive. Integration creates opportunities to find a balance between sustaining the desired and transforming undesirable functions and outcomes; and (3) iterative, participatory governance and experimentation, using system dynamics modelling as a low-risk test bed while applying assemblage-informed reflexivity to challenge dominant paradigms and imagine alternative futures. This recognises that governance and decision making is not merely technical, but political and ethical. Our approach, therefore, offers a foundation for re-thinking food systems transformation by embracing uncertainty and power, while providing actionable insights for systemic change.

Restructuring of Food Aid in Finland: Expectations and Outcomes

32. Bridging beyond the prosperous or disastrous future? Exploring the links between economic imperatives and environmental sustainability in food systems

Vera Kauppinen[1]
[1] University of Jyväskylä

Introduction: Food aid based on charity and volunteerism has stabilized as an extension of Finnish social security since 90´s, although being against the ethos of the Nordic welfare state: equality, universalism, and strong democracy. Since 2015, the field has been reorganized from individual, independently operating food banks into networks of centralized food waste terminals and local food delivery sites operating around them. My PhD dissertation is an ethnographic case study with a focus on structures and resources. The first article (Kauppinen & Silvasti, 2025, https://doi.org/10.1108/JOE-01-2025-0002) is focused on the effects of restructuring through the utilization of waste. We conclude that due to several reasons, only a small proportion of the food distributed is food waste, contrary to the common perception of food aid as a win-win situation in which poverty is reduced simultaneously with food waste utilization.

Methods: Extensive ethnographic data collected since 2021 is analysed via Giddens´ structuration theory, and the concepts of domination, legitimation, and signification.

Results: In the second article, I examine the operational goals set by the terminal and how they are met in local delivery sites, when available resources and infrastructure are scarce. Attention is again focused on food as a critical resource to understand how the set objectives promote or hinder the equitable and effective distribution of food aid. Extensive ethnographic data collected since 2021 is analysed via Giddens´ structuration theory, and the concepts of domination, legitimation, and signification. Results show that the terminal`s norms successfully diminish unwanted fringe effects dominating the food charity before the restructuring. Unfortunately, restructuring has challenged the power relations with donors, causing several donors to quit the collaboration. Eventually notable amount of donations are slipping out of the terminal's grasp to food aid providers operating outside the centralized network.

Conclusions: With the restructuring, third sector actors providing food aid are becoming part of Finnish social security and social policy in a new way, as many food aid actors also provide other social services. Although there are already around 10 centralized food waste terminals in Finland, little research has been done on the effects of the restructuring and its response to the set objectives.

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

In this workshop we address the urgent challenge of reducing material use as a core element in bridging the gap between environmental goals and implementation. While climate policy has gained considerable attention, the material dimension of sustainability and its link to climate remains underexplored in policy and practice. Resource extraction and material throughput drive not only greenhouse gas emissions but also biodiversity loss, pollution, and socio-economic risks.

Neoclassical environmental economics tends to prioritise efficiency improvements and pricing mechanisms. However, in order to achieve a less material-intensive economy, policies must also tackle structural lock-ins, address inequalities, and foster societal acceptance. Sufficiency-oriented measures, redistribution, and investments in care- and knowledge-intensive services may offer ways forward, but require new policy thinking and institutional arrangements.

We invite fully drafted manuscripts that engage with concepts such as sufficiency, doughnut economics, consumption corridors, and care economy, and with a focus on systemic structural perspectives on transitioning to a sustainable level of resource use. Examples of structural challenges may be the Baumol effect, rebound effects and work time reduction.

This workshop calls for empirical, conceptual, and methodological contributions that explore:

- Economy-wide strategies to reduce material use.
- Socio-economic implications of sufficiency strategies.
- Governance innovations for bridging the gap between ambitious environmental targets and real-world implementation.

We especially welcome interdisciplinary perspectives and fully drafted manuscripts that explore tensions and trade-offs, as well as proposals for transformative pathways towards a sustainable and less material-intensive economy.

Convenors
Eva Alfredsson, Climate Change Leadership, Uppsala University, Sweden
Mikael Malmaeus, IVL, Svenska MIljöinstitutet, Sweden

A healthcare system running in circles to be circular: Sociotechnical barriers to a circular economy transition

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Nikoline Oturai[1]
Nadia Vestergaard Pedersen[2], Gwen Freja Fox[1], Thomas Budde[3], Kristian Syberg[1], Susanne Pedersen[2]
[1] Department of Science and Environment, Roskilde University
[2] Department of Management, Aarhus University
[3] Department of People and Technology, Roskilde University

Introduction: Circular economy efforts face hardship in the healthcare sector, where care practices typically entail large volumes of single-use materials and excessive resource use. Hospitals are complex yet structured systems that are made up of people, leadership, and culture on one side, and technical elements such as products/devices, physical environment, and policies on the other. Single-use examination gloves compose a hotspot for healthcare plastic consumption, and the reduction potential is evident. Literature shows that, under the same regulatory settings at national, regional, local, and even departmental levels, glove consumption varies significantly.

Methods: To better grasp the challenges circular strategies/initiatives meet in practice, this study presents an analysis of the care professionals' experiences of the socio-technical context for the reduction of glove use across medical specialties at six Danish hospitals. We designed a mixed-methods study consisting of approximately 60 hours of structured observations combined with 40 semi-structured interviews at hospital units in different locations. Establishing qualitative rigor in our thematic analysis was achieved by referencing the systematic approach of Gioia et al. while simultaneously drawing on Timmermans & Tavory for the abductive analysis.

Results: The tentative results found barriers for reduction that related to *protection, self-organization,* the tabooed *ick factor*, *unpredictability* in procedure-planning, *stockpiling* at various levels and persistant *habits* and work routines. Meanwhile, drivers for reduction include ; A general *interest* and *receptiveness* toward adapting to circular interventions to existing workflows; that circular initiatives originate from *local "green ambassadors";* and, an emerging - yet highly debatable - narrative of a *trade-off* between sustainability and hygiene.

Conclusions: Using sociotechnical systems theory as a framework, the results will be discussed in a circular economy context to highlight how circular economy strategies, such as *reduction* of material-use, need to take into account a holistic perspective of the healthcare sectors as complex systems. The results underline the overriding necessity of viewing overconsumption/excessive consumption as practices rooted in and dependent on systems thinking and organizational drivers to reach the full circular potential.

Addressing Environmental and Social Injustices in Housing – A Consumption Corridors Approach

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Doris Fuchs[1, 2]
Paula Berendt[1]
[1] RIFS Potsdam
[2] University of Münster

Introduction: The interaction between questions of environmental, social, and political justice becomes increasingly apparent when observing trends in housing, particularly in the various rising inequalities. At the same time, a focus on housing allows the identification of intervention points for an eco-social transformation that may well be more promising than in other sectors and fields. Existing injustices in housing are linked to differences in a broad range of environmental impacts from household energy and resource consumption to the loss of habitat and biodiversity as well as social dimensions. They involve questions of global justice (e.g. regarding the extraction of resources) and of asymmetries in the consumption of space. These injustices point to a severe need, but also opportunities for reorganizing consumption in housing: to tackle needs satisfier escalation (Brand-Correa et al. 2020), set up participatory modes for establishing lower and upper limits to enable a good life for all (Fuchs et al. 2021), and identify business models for more sustainability in provisioning (Baldassarre et al. 2017).

Methods: We analyze quantitative data on energy and resource consumption, broader economic trends, as well as qualitative data, based both on relevant literature as well as on citizen and stakeholder dialogues conducted in five European countries.

Results: We will delineate how different justice dimensions interact, map potential futures for the organization of consumption and provisioning in the housing sector, and identify strategies for the pursuit of environmentally and socially sustainable futures in housing. These will involve among others new participatory formats for the development of consumption corridors in housing.

Conclusions: With this contribution, we will show how housing serves as critical intervention point for the joint pursuit of social and environmental justice that requires deep societal negotiation and has the potential to move societies towards a reduction in persistent economic, political and infrastructural barriers. We will conclude by outlining concrete ways forward in times of socio-economic and political asymmetries.

Bridging the Emissions Gap: The Baumol Effect

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Eva Alfredsson[1]
Mikael Malmaeus[2]
[1] Uppsala University, Sweden
[2] IVL, Swedish Environmental Research Institute, Sweden

Introduction: Despite technological progress and, to some extent, strong climate policies resource use and carbon dioxide emissions continue to increase. We believe that one reason lies in the structural mechanics of our economies, driven by the so-called Baumol effect – the "cost disease" caused by unbalanced productivity growth. While political debates celebrate the rise of the service sector as a path towards decoupling economic activity from environmental impact, the reality is inconvenient. Productivity gains in capital-intensive sectors are driving down prices and fueling expanding material consumption, while labor-intensive services are increasingly squeezed by rising relative costs and by being, by definition, less "profitable". Our hypothesis is that this unbalanced growth is negative from an environmental perspective, primarily because increased productivity in the capital-intensive sector leads to sharply increased resource use and carbon dioxide emissions, and that the labor-intensive service sector is held back by increased relative prices. The study addresses a potentially important cause of the gap between climate ambitions and the insufficient real emission reductions. By addressing these structural challenges, we can identify policies that bridge the gap.

Methods: Focusing on Sweden and the EU since 2015, we investigate how the Baumol Effect has affected resource use and carbon emissions, and how this effect can be addressed through policies to protect labor-intensive sectors and reduce environmental impacts. The project combines a literature review, sector-specific data analysis, and a conceptual model to explore these dynamics and potential policy interventions. We argue that climate and resource policies must go beyond increased efficiency and incorporate structural measures that actively support labor-intensive, low-emission services.

Results: We aim to provide a quantitative measure of how much relative prices, in line with Baumol's theory, have contributed to increased resource use and CO2 emissions since 1990 and estimated importance since the Paris Agreement. We also aim to provide policy recommendation for how to handle this structural effect.

Conclusions: Capital intensive sectors, with high resource and CO2 intensity have increased their output in real terms, although this has largely been masked by decreasing prices. This price effect is likely contributing to increased resource use and CO2 emissions.

Caring for Circularity: Grassroots Value Creation and the Governance Tensions of Low-Material Transitions

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Patrik Zapata[1]
María José Zapata Campos[1]
[1] University of Gothenburg

Introduction: Grassroots circular initiatives, such as repair hubs, sharing schemes, and reuse collectives, are emerging as important contributors to a less material-intensive economy. Yet their role in shaping policy and governance remains poorly understood. This paper examines how low-material value is created in practice and how it is supported, or constrained, by local governance in a major Swedish city.

Methods: The analysis draws on twenty interviews with municipal officials, politicians, and grassroots actors, complemented by longitudinal studies of circular grassroots initiatives. Together, these materials provide insight into both the everyday organising of grassroots circularity and the institutional conditions that shape their development over time.

Results: The study identifies three co-existing governance logics. An administrative logic centred on rules and responsibility. A result logic focused on measurability and visible outputs. And a care logic grounded in trust, recognition, and relational value creation. Grassroots initiatives operate primarily within the care logic, while municipal systems tend to be structured around administrative and result-oriented rationalities. Across cases, three organising tensions influence the potential of grassroots circularity. A spatial tension, since grassroots initiatives require modest, non-commercial, and accessible spaces that are increasingly scarce in contemporary cities. A co-option tension, as municipal partnership may stabilise initiatives but risks bureaucratisation and loss of autonomy. A marketisation tension, as collaboration with businesses may provide resources but can also enable greenwashing or legitimise continued material throughput.

Conclusions: Cities seeking to reduce material use should recognise grassroots initiatives as co-producers of policy and public value rather than passive recipients of support. This requires new forms of governance that prioritise care, accessible urban space, and long-term partnership. Such an approach can strengthen the relational and low-material forms of value that grassroots initiatives contribute to wider sufficiency transitions.

Contrasting Outcomes Across Three Macroeconomic Models: Tax Policy Scenarios for Sustainability and Equality in Sweden

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

David Collste[1], Eva Alfredsson[2], Jens Ergon[2], Markus Larsson[3], Mikael Malmaeus[4], DAniel Pettersson[3], Matteo Pedercini[5], Karel Zwetsloot[1]
[1] Stockholm Resilience Centre, Stockholm University
[2] Uppsala University
[3] Kungliga Tekniska Högskolan
[4] IVL, Svenska Miljöinstitutet
[5] Millennium Institute

Introduction: Fiscal policy has been discussed as a lever for both reducing environmental pressures and improving social equity, yet the macroeconomic and biophysical consequences of such policies remain deeply sensitive to model assumptions. This study compares three contrasting macroeconomic modelling frameworks when the same tax policies are applied: a classical economics-inspired Small Macroeconomic Model (SMM), the system-dynamics-based iSDG Sweden model, and the post-Keynesian macroeconometric model E3ME.
Methods: We compare the three models' baselines 2025-2040 for Sweden with three policy scenarios:

1. A scenario with significantly higher taxes (distribution unchanged)
2. A scenario with significantly more progressive taxes (total tax revenue unchanged)
3. A scenario combining 1. And 2.

We evaluate the outcomes of the three scenarios by examining effects on GDP, CO_2 emissions, domestic material consumption (DMC), and income inequality.
Results: The results diverge markedly for environmental and economic outcomes due to each model's distinct causal structure. We illustrate the causal differences between the models in the form of influence diagrams. For GDP, the SMM shows no change because taxation just shifts production between sectors; iSDG shows reduced output (GDP) from all three scenarios comparing to the baseline through lower savings and thereby investments; and E3ME shows higher output in the three scenarios through the increased aggregate demand, including increased public spending and wages as unemployed are getting jobs. Emissions and material use similarly diverge: SMM shifts activity away from emission- and material-intensive production causing reductions, iSDG reduces impacts through lower output (partly offset by higher CO2 and material intensities – reversed decoupling), while E3ME increases both emissions and material use through higher output, despite relative decoupling effects. By contrast, all three models consistently show reduced inequality: both Gini and Palma ratios decline across all scenarios.
Conclusions: These findings demonstrate that macroeconomic, environmental, and distributional assessments of tax policy depend crucially on model structure. Such structures include demand versus supply determination of output, treatment of savings and investment, and assumptions about emissions and material intensities. We suggest that robust policy evaluation requires a pluralistic modelling approach and explicit attention to the "unavoidable a priori" assumptions embedded in macroeconomic models.

Cooperative Economies as Sufficiency Infrastructures: Linking Housing, Food, and Mobility for a Low-Material Future

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Line Kryger Aagaard[1]
[1] Aalborg University

Introduction: Reducing material throughput is central to meeting ecological limits, yet current policy remains dominated by efficiency-oriented and market-based solutions. Such approaches do not address the structural lock-ins and social relations that reproduce high-consumption lifestyles. This paper examines cooperative and community-based economic models - rooted in the Danish "andel" tradition - as infrastructures for sufficiency. By linking practices of shared housing, community-supported agriculture (CSA), and collective mobility, the paper explores how cooperative economies can reduce material use while generating social cohesion, local resilience, and democratic control over provisioning systems. This perspective aligns with calls in sufficiency research to consider economic domains holistically, rather than as isolated sectors.

Methods: The analysis draws on a focus group study involving 52 professional stakeholders across food, housing, and mobility in Denmark, representing both mainstream institutions and grassroots initiatives. I identify sufficiency-oriented practices and examine how cooperative models reorganize consumption-production relationships. The analysis synthesizes these findings with conceptual insights from sufficiency scholarship, solidarity economy research, and material sustainability debates.

Results: Across domains, cooperative initiatives - such as CSAs, tiny house co-ops, and intentionally shared mobility practices - operate through collective ownership, shared risk, and relational modes of exchange that reduce demand for material-intensive infrastructures. When viewed together rather than in isolation, these cases illustrate how small-scale collective governance can reconfigure entire provisioning systems: shared housing clusters reduce per-capita living space and energy use; CSAs shorten supply chains and anchor seasonal, low-impact diets; and community-based mobility practices lower dependence on private cars. This not only implies reduced material use, but also a cultivation of community norms that prioritize sufficiency, localized care, and mutual responsibility. However, structural barriers - zoning regimes, procurement rules, and financial institutions - limit their scaling.

Conclusions: Cooperative economies offer a promising systemic pathway toward a low-material, sufficiency-oriented society. By integrating housing, food, and mobility into mutually reinforcing cooperative infrastructures, they challenge consumption-intensive norms and circumvent efficiency rebound effects. The paper argues that governance innovations - such as access to land, supportive zoning, and procurement reforms - are needed to embed cooperative models into broader sustainability transitions. This systemic, cross-domain perspective advances current debates on how to achieve sustainable, less material-intensive economies in practice.

Examining just waste transitions: community-based approaches and grassroots green skills in the UK

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Helen Holmes[1]
Torik Holmes[1]
[1] Sustainable Consumption Institute, University of Manchester

Introduction: This paper explores waste inequalities within the UK and asks what we can learn from overlooked everyday forms of alternative disposal. Recognition of the need for a just waste transition is gaining traction. The UN Plastics Treaty, alongside other literature, have documented the catastrophic impact of waste colonialism, from the working conditions of waste pickers in countries in the Global South, to the environmental impacts of waste's movement around the globe and its often hazardous treatment. However, whilst nowhere near as catastrophic, little attention has been paid to waste inequalities within Global North countries and how tackling them can play a role in moving towards a global just waste transition.

Methods: This paper draws on a UK case study examining barriers to household recycling to explore the role of alternative routes of disposal in helping to move towards a just waste transition. This interdisciplinary project used qualitative approaches working with 30 participant households of varying levels of deprivation to examine the minutiae of everyday household disposal. This included semi-structured interviews, observations and a two-week trial of an additional bin to disrupt existing practices.

Results: Our findings illuminate the anxieties and inequalities everyday waste disposal can create, but also the care and attention people give to waste. This questions existing tropes of consumers as greedy, selfish and wasteful, while also highlighting the hidden role of waste inequalities in Global North countries. In turn we demonstrate the numerous innovative and creative alternative routes of disposal that households use to be more materially aware and environmentally sustainable.

Conclusions: We make three key arguments. Firstly, we illuminate the potential of collaborative community-based forms of waste management in enabling a less material intensive economy. Secondly, we contend that these grassroots community-based approaches are everyday forms of green skills. Green skills which move beyond the technocentricity and employability focus of policy-led green skills agendas and instead consider the importance of everyday knowledges, care and competence in the move to low-carbon, less material intensive forms of living. Thirdly, we demonstrate the role these locally-led initiatives may play in the global just waste transition.

Is idleness the answer?

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Tullia Jack[1]
Mikael Linnell[1], Maja Hoffmann[1]
[1] Lund University

Introduction: Despite - or perhaps driven by - efficiency measures, persistent increases in production and consumption continue to drive climate change, biodiversity loss and socio-economic stress. Relative sustainability climate and resource policies have not reduced material throughput to sustainable levels, and leave intact growth-oriented norms around productivity, work, and consumption. This paper explores the potential of idleness in tackling the climate crisis.

Methods: Empirically, we focus on five groups that diverge from full-time work norms: “reprievers” (post-school gap years), “respiters” (career breaks), “retreaters” (early retirement), “reducers” (participants in reduced working time initiatives) and “refusers” (non-participating in the paid labour market) in Sweden, the Netherlands and Finland. Methods include: (1) a macro-level mapping of policies, demographic trends and cultural expectations around work, leisure and free time in our three countries; and (2) in-depth qualitative interviews tracing how reductions in work time reshape everyday practices, consumption patterns and perceptions of a good life.

Results: The paper will present early comparative findings on: preconditions for idleness; how reduced working time reorganises practices towards more time-intensive, less material-intensive activities; and how class, gender and life course position mediate access to doing less. We will relate these findings to debates on sufficiency, consumption corridors and care- and knowledge-intensive services, highlighting where doing less aligns with or challenges existing decoupling and growth narratives.

Conclusions: We are open to the data, however some very early analysis suggest that idleness goes beyond efficiency, by directly questioning productivity norms and opening space for low-material forms of well-being. We may argue that doing less is a politically salient pathway towards a sustainable, less material-intensive economy. We may also discuss policy implications for work-time, basic service provisioning and labour-market steering.

Material Intensity of Lithium-Ion Batteries: Future Trends and Explanatory Models Based on Historical Data

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Oscar Gustafsson[1]
André Månberger[1], Björn Nykvist[1, 2]
[1] Lund University
[2] Stockholm Environment Institute

Introduction: During the last 15 years, electric vehicle sales have increased immensely in response to the demand for a less CO_2-intensive transport sector. This increases demand for raw materials used to produce batteries, such as lithium and graphite. The greatly increasing demand has caused price hikes and concerns about future availability of several minerals. Research has followed suit, with widely ranging studies predicting future supply and demand for battery materials, largely based on the battery technology landscape at their time of publication. Conversely, the battery efficiency research has not been stagnant, with batteries today featuring significantly lower material content per unit of energy stored than 5-10 years ago. How this decreasing trend is incorporated into material demand scenarios varies, from being outright ignored, to yearly percentual decreases or exponential functions approaching a theoretical minimum. This article aims to investigate different models for explaining temporal changes in material intensity of lithium-ion batteries (LIBs) using historical data.

Methods: The data was collected through a literature search, excluding any secondary sources. The material intensity values were noted and mapped to the relevant year, i.e. the publication year of the study unless otherwise stated. This historical dataset was subjected to statistical analysis in the form of linear regression, learning curves based on both Moore's law and Wright's law, as well as clustering to assess the fitness, merits and limitations of each explanatory model.

Results: The approaches are expected to excel in different areas but the necessity of incorporating a theoretical minimum material intensity is clear for long-term forecasting, due to physical limitations of LIBs. As such, change in material intensity should always be included in future demand predictions to avoid overestimation and subsequent inordinate responses regarding e.g. extraction and recycling capacity.

Conclusions: However, technology development should not be perceived as a panacea but rather be recognized as one of many parameters affecting future demand. As a long-term demand reduction strategy, material intensity improvement is limited by physical constraints and diminishing learning effects over time. It should therefore be complemented by sufficiency, circular economy and substitution measures.

Mobilising values in municipal governance? Exploring sustainable consumption transitions in the case of Gothenburg

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Hanna Eggestrand[1]
[1] KTH Royal Institute of Technology, Department of Urban Planning and Environment

Introduction: Growing attention to the role of values in sustainability transformations highlights the need to advance sustainability-aligned values (SAVs) such as collectivism, care, and justice for less material-intensive economies. A recent theoretical framework, yet with limited empirical application, identifies four modes through which SAVs may be mobilised: enabling, including, shifting, and reflecting. This study examines how these modes take shape within Gothenburg municipality's pioneering governance for sustainable lifestyles and consumption-based emission reductions, and assesses the heuristic's usefulness for understanding value mobilisation in sustainability transitions.

Methods: The study adopts a qualitative, abductive case study of Gothenburg's sustainable lifestyles strategy, situated within Sweden's highly autonomous municipal governance system. Developed in response to the complexity of lifestyle-related change, the strategy's exploratory implementation generates a broad and heterogeneous empirical basis. Material was generated over two years (Sept 2023–Sept 2025), consisting of:
(1) participant observation at twice-yearly Arena for Sustainable Lifestyles gatherings and an autumn 2023 innovation speed programme;
(2) analysis of key policy documents, notably the task description and an overview report synthesising current research compiled by the strategy coordinator; and
(3) three semi-structured group interviews (Dec 2024) with ten public officials from multiple departments, focused on values, implementation, and cross-sectoral collaboration.

Results: The analysis (in its final stages) indicates that Gothenburg's sustainable lifestyles strategy mobilises SAVs across all four modes. *Enabling* appears through shared orientation, legitimacy, and organisational conditions that support cross-departmental collaboration and broaden access to low-consumption, shared, and non-material resources. *Including* is reflected in efforts to recognise and collaborate with diverse civil-society actors and to incorporate alternative perspectives into municipal processes. *Shifting* emerges in the strategy's emphasis on care, justice, and nature, which subtly reorients organisational priorities despite tensions with commercial interests and "freedom of choice." *Reflecting* is visible in attempts to create spaces for dialogue, both internally and in society more broadly, exemplified by the citizen assembly and partnerships.

Conclusions: Conclusions will provide pertinent examples of how SAVs are mobilised across the four modes in Gothenburg's governance, indicate where mobilisation is less evident, and reflect on the usefulness of the modes in light of the empirical material and their possible explanatory and practical implications.

Re-defining our relations to overconsumption – the case of the Finnish junk trade initiative

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Senja Laakso[1]
[1] Centre for Consumer Society Research, University of Helsinki, Finland

Introduction:
This study focuses on the escalating consumption of material goods from ultra-fast e-commerce platforms. This development and the public debate surrounding it have culminated in the Chinese online marketplace Temu becoming one of the most popular shopping apps in Europe and globally, raising unprecedented attention among media, policy, and businesses. For example, the Finnish media has highlighted the poor quality and safety of their goods, and the Finnish Commerce Federation has described the recent development as a "significant societal problem". Finnish businesses and citizens have called for putting a stop to "junk trade" via citizens' initiative (Krääsätalous kuriin, n.d.). Citizens' initiative is a tool for direct democracy which enables a minimum of 50,000 Finnish citizens to submit an initiative to the Parliament of Finland to enact an act. The 'junk trade' initiative reached the needed number of statements of support and was submitted to the Parliament in October 2025. This current public and political attention of escalating 'junk trade' (as titled in the Finnish citizens' initiative) provides a unique moment to analyse our relationship to overconsumption as a society, asking *what kind of future with consumption and material goods are being anticipated and by whom?*

Methods: We analyse the communications of the citizens' initiative campaign in media and in social media (images and written content). We also follow the parliamentary processing of the initiative as it takes place in 2026, by analysing the documentary data (e.g. committee reports and plenary session minutes).

Results: We aim to capture the anticipatory discourses (Alvial-Palavicino 2015) in relation to low-value goods bought from e-commerce platforms in the context of the citizens' initiative: what should be done to 'junk trade', by whom, and why, and how meanings such as safety, durability, sufficiency, and sustainability are being presented in these discourses.

Conclusions: The study aims to contribute to discussions on sustainable consumption of material goods and the policy options to mitigate overconsumption.

References
Alvial-Palavicino, C. (2015). The future as practice. A framework to understand anticipation in science and technology. *Tecnoscienza*, *6*(2), 135-172.
Krääsätalous kuriin (n.d.) www.kraasatalouskuriin.fi/ (27.11.2025).

What is the role of intermediaries in circular urban transitions towards? Towards a typology.

33. Towards a less material intensive economy: Strategies and practices for bridging the gap

Gavin McCrory[1]
Hege Hofstad[1], Gro Sandkjær Hanssen[1], Marie Harbo Dahle[2], Mette Øinæs Habberstad[2], Cathrine Skar[2]
[1] NIBR, Oslo Metropolitan University, Oslo, Norway
[2] SoCentral, Oslo, Norway

Introduction: A transition to a circular economy represents a tremendous governance challenge, given that it spans from systemic change at policy level to everyday, end-of-pipe measures implemented on the ground. The crux of a circular transition is that it requires cities to re-orient multiple sectors simultaneously and at speed, alongside ambitious climate agendas and ongoing social and environmental change. Circular, climate-friendly cities therefore call for new forms of boundary knowledge and collaborative capacity, capable of accelerating new social relations and ways of linking knowledge to action. Within this knowledge-action space, there is growing interest in the primacy of intermediaries in driving innovation (Kivimaa et al., 2019), accelerating climate transitions (Howells, 2011), and enhancing network governance (Ansell et al., 2024). This has resulted in a wave of frames for categorising intermediaries to better understand their roles and multiple functions (Howells, 2011). We argue, however, that the heightened complexity of circular transitions requires novel knowledge on how circular intermediaries mediate processes, broker knowledge and build capacity.

Methods: In this article we ask: what types of intermediaries are found in the circular economy field, compared to other fields? How can the circular intermediaries be categorized? What factors in the governance-ecosystem of circular economy can explain the special role of intermediaries here? This study is based upon an interdisciplinary research project studying cooperation for circular transition in five cities in three countries (Asker, Oslo, Trondheim, Utrecht and Cape Town). We conducted 74 qualitative interviews, including interviews with intermediaries in all cities.

Results: Our analysis, to be completed in early 2026, will result in a typology of circular intermediaries based on their various roles within circular city-based transitions. This typology emphasises how such boundary work involves not mobilizing, brokering and building from within one specific domain or sector, but encompasses “multi-system” boundary work, bringing discrete sectors in contact with one another in the aim of aligning multiple unsustainabilities of a linear system simultaneously.

Conclusions: This investigation is crucial in building scholarly and practical understanding of intermediation fit for circular transitions, for identifying nascent gaps and challenges, and for advancing knowledge on how intermediation can be institutionally designed and fostered.

List of authors

A

Aagaard, Line Kryger

Aavanranta, Satu

Accogli, Alessandra

Aggeli, Aggeliki

Agneman, Gustav

Agramont Akiyama, Afnan

Ahlemann, Frederik

Ahokas, Jussi

Alfredsson, Eva

Alkan-Olsson, Johanna

Amann, Jennifer

Andel, Kia

Andersen, Allan Dahl

Andersen, Gisle

Andersson, Johnn

Aro, Riikka

Arponen, Anni

Arteaga, Paul

Athuman, Amaniel

Aubié, Hermann

Averchenkova, Alina

Axelsson, Sofia

B

Bach, Hanna

Bachmann, Jan

Barbrook-Johnson, Pete

Barland, Andrea

Barnhill, Anne

Barraclough, Alicia May Donnellan

Barrineau, Sanna

Barthel, Stephan

Bell, Chris
Bellanca, Margherita
Bemelmans, Janne
Bencini, Jacopo
Benoist, Lise
Benyamina, Yahia
Berendt, Paula
Berg Grimstad, Anna
Berg, Monika
Bergmans, Anne
Bergquist, Parrish
Berkow, Charles
Bernett, Sofia
Berning, Laila
Betsill, Michele
Bexell, Magdalena
Bjärstig, Therese
Björkvik, Emma
Bjørkhaug, Hilde
Blicharska, Malgorzata
Blix Huseby, Vilde
Blyler, Jenna
Bogner, Lukas
Boonaert, Eva
Boonstra, Wynand
Boréus, Kristina
Bozok, Mehmet
Bozok, Nihan
Bradley, Karin
Brandstedt, Eric
Brandt, Ingrid Helene
Broberg, Lisa
Brogaard, Sara
Brogaars, Sara
Brückmann, Gracia
Budde, Thomas

Budryte, Paulina
Bugge Hunt, Oliver
Bulkeley, Harriet
Burgman, Linus Ekman
Burns, Charlotte
Busch, Henner
Bussey, Marcus
Bäckstrand, Karin
Bühler, Joël
Bülow, Franca Angela

C

Cannon, Clare
Casi, Corinna
Chan, Sander
Chang, Elvi
Chapman, Melissa
Christensen, Søren
Christley, Emily
Citi, Manuele
Clapp, Jennifer
Clarke, Edward
Coenen, Johanna
Collste, David
Comar, Dave-Inder
Compernolle, Tine
Conti, Costanza
Cronin, Tom
Crowther, Ami
Cusens, Jarrod

D

Dahl Andersen, Allan
Dale, Ragnhild Freng
Dalhammar, Carl
Dalén, Pär
Dannevig, Halvor
Davøen, Ingjerd

Daw, Tim
de Boon, Auvikki
De Donà, Matteo
De Korte, Kyra
de Korte, Laurien
de Leeuw, Georgia
de Lima Sales, Luís Gustavo
Debizet, Gilles
Deutsch, Lisa
Dılek, Gökhan
Dodsworth, Jennifer
Donner-Amnell, Jakob
Dupont, Claire
Durá-Alemañ, Carlos J.

E

Easton-Calabria, Lena
Ebert, Lauren
Edberg, Karin
Edelman, Kristel
Eggestrand, Hanna
Egilsson, Nils Ólafur
Eikeland, Per Ove
Ejelöv, Emma
Ejsing, Mads
Ekdahl, Marianne
Ekström Pigot, Hanna
Ekström, Björn
Elsässer, Joshua Philipp
Emilsson, Kajsa
Envall, Fredrik
Ergon, Jens
Eriksson Lagerqvist, Diana
Eriksson, Emmelina
Eriksson, Linnea
Espinoza, Maria
Etherden, Nicholas

Evers, Kathleen

F

F. Coelho, Nelson

Fabian, Szabolcs D.

Fagerholm, Nora

Fazal, Tanisha

Feldman, Jonathan

Figueroa, Maria

Firman Fjellså, Ingvild

Fischer, Anke

Fjellså, Ingvild Firman

Fornana, Ferdinando

Forney, Jérémie

Foulds, Chris

Fox, Gwen Freja

Franca, Buelow

Francisco, Marie

Frandsen, Søren Lund

Fransala, Jasmiini

Fransen, Luc

Fraser, Dr James Angus

Frolova, Marina

Fuchs, Doris

Fuentes, Christian

Förell, Nora

G

Galvany Gómez, Nona

Game, Chloe

Garsten, Christina

Gillespie, Josephine

Gilliland-Wiström, Dana

Giordano, Charles

Gordon, Line

Grahn, Elvira

Gray, Ian

Green, Martin

Gregersen, Thea
Gulbrandsen, Lars
Gulbrandsen, Lars H.
Gupta, Aarti
Gustafsson, Karin M
Gustafsson, Oscar
Gustafsson, Sara
Göransson, Gunnel
Göthe, Anna

H

Hagbert, Pernilla
Hahn, Thomas
Haider, Jutta
Hakala, Oskari
Halbwachs, Max
Hallin, Hanna
Halpern, Charlotte
Hansen, Teis
Harbo Dahle, Marie
Harring, Niklas
Harrison, Luis
Hasselbalch, Jacob
Hayman, Rachel
Hedegaard, Troels
Hedelin, Beatrice
Heinisch, Barbara
Hellberg, Sofie
Helliwell, Richard
Hellsmark, Hans
Henke, Michael
Henning, Wilma
Henriks, Sofia
Herdlitschka, Theresa
Hermansen, Erlend A. T.
Hermansen, Erlend A.T.
Herrera, Andrea

Herzon, Irina
Hey, Maya
Hickmann, Thomas
Hicks, Christina
Hiedanpää, Juha
Hilding-Rydevik, Tuija
Hileman, Jacob
Hirons, Mark
Hjelm, Anna
Hjort Warlenius, Rikard
Hoekstra, Femke
Hoffmann, Maja
Hofstad, Hege
Holmes, Helen
Holmes, Torik
Honneland, Geir
Hourcade, Renaud
Hrechaniuk, Yelyzaveta
Hsu, Angel
Huisman, Chelsey Jo
Hukkinen, Janne I.
Hurst, Georgie
Huttunen, Suvi
Hytönen, Jonne
Højrup Gustafsson, Cathrine

I

Iliopoulos, Spilios
Im, Zhen
Inderberg, Tor Håkon Jackson
Isaksson, Karolina
Ishihara, Sachiko

J

Jack, Tullia
Jagers, Sverker
Jaiteh, Vanessa
James, Dr Annie

Janasik, Nina
Jenkins, Jamie
Jennische, Ulrik
Jernnäs, Maria
Jiménez-Aceituno, Amanda
Johansson, Emma
Johansson, Håkan
Jokiaho, Julia
Jones, Andrew
Jones, Michael
Jost, Henrike
Juhola, Sirkku
Jylhä, Kirsti
Järvensivu, Paavo
Jääskeläinen, Tiina
Jörgens, Helge

K

Kachi, Aya
Kadfak, Alin
Kaffrell-Lindahl, Angelika
Kaikkonen, Harri
Kakko, Henna
Kaljonen, Minna
Kallbekken, Steffen
Kamlage, Jan-Hendrik
Karlsson, Marianne
Karlsson, Mikael
Karpouzoglou, Timos
Kaufmann, Maria
Kauppinen, Vera
Khan, Jamil
Kim, Yoonsoo
King, Lewis Carl
Kirch Kirkegaard, Julia
Kirk, Jacqueline
Kirkedam, Marie

Kivimaa, Paula
Kivinen, Mari
Kjellberg, Hans
Kleinschmit, Daniela
Klingler, Michael
KLuvankova, Tatiana
Klöcker Larsen, Rasmus
Koa, Sebastian
Kob, Julius
Koch, Max
Kojo, Matti
Kollia, Eleni
Konc, Théo
Kongshøj, Kristian
Kopainsky, Birgit
Koren, Ingrid Knutsdotter
Korppoo, Anna
Kortelainen, Sirpa
Kortetmäki, Teea
Koskela-Huotari, Kaisa
Krabbe, Niels
Kramer, Niklas
Krange, Olve
Krumme, Klaus
Krusberg, Tilde
Kuch, Tilla Gwendolin
Kuhmonen, Irene
Kulin, Joakim
Kumaran, Akhila
Kurki, Katja
Kurko, Antti

L

Laakso, Senja
Lagendijk, Arnoud
Lahtinen, Viena
Laila, Amar

Lange Vik, Marte
Langlet, David
Lapuente Tiana, Pablo
Larssen, Marianne Friisberg
Larsson, Jörgen
Larsson, Markus
Lechtenböhmer, Stefan
Lee, Jayeon
Lehtilä, Kari
Lehtiniemi, Heidi
Leino, Mikko
Lenninger, Paula
Lenschow, Andrea
Leporini, Nino
Lesdos, Alison
Levin, Lena
Li, Lan
Li, Zhenxi
Lidskog, Rolf
Lin-Siedler, Lixue
Linde, Stefan
Lindell, Marina
Lindgren, Oskar
Lindhé, Ruth
Lindvall, Daniel
Linke, Sebastian
Linnell, Mikael
Linnér, Björn-Ola
Lizarazo-Rodríguez, Liliana
Londono- Escudero, Carolina
Lonkila, Annika
Lopez Svensson, Gustav
Lubicz-Zaorski, Carly
Lundgren, Molly
Luth Richter, Jessika
Lutz, Kathrin

Lynch, John
Löf, Annette
Löfgren, Isabel
Löfgren, Åsa
Löther, Niklas
Lövbrand, Eva

M

MacBride-Stewart, Sara
Machani, Aishwarya
Machen, Ruth
Machin, Amanda M
Maertens, Miet
Majerbi, Basma
Majić Skrbinšek, Aleksandra
Makris, Jelto
Malmaeus, Mikael
Mancusi, Simona
Mandelli, Matteo
Marcos, Aitor
Marinho Sales, Ricélia Maria
Marino, Filippo
Marklund, Josefina
Maro, Aristarik
Marouli, Christina
Marquardt, Jens
Marsden, Katrina
Martín-Collado, Daniel
Masterson, Vanessa
Matanda Mambingo, Anesu
Matero, Risto-Matti
Mathis, Okka Lou
Mauerhofer, Volker
Mazac, Rachel
McCauley, Darren
McCrory, Gavin
McDermott, Constance

Meissner, Luise
Mellquist, Joanna
Mendy, Laila
Menendez, Hector M.
Meng, Xiaoxuan Sophie
Mervaala, Erkki
Meyersson, Rut
Mezei, Réka Sára
Moberg, Karen R.
Mohan, Mishel
Montana, Jasper
Moore, Brendan
Moore, Michele-Lee
Moraitopoulos Arljung, Miron
Morf, Andrea
Mosca, Oriana
Mullick, Maitrayee
Mundó Olivé, Joana
Mustalahti, Irmeli
Mustikkamaa, Sami
Månberger, André
Måren, Inger Elisabeth
Mårtensson, Moa
Mölgen, Maxine

N

Nasiritousi, Naghmeh
Nemeth, Malin J.
Nemeth, Paul A.
Nenonen, Suvi
Neset, Tina-Simone
Nesterinen, Niko
Newig, Jens
Niemeyer, Simon
Nieminen, Ari
nikolić, mirko
Nilsson Austin, Åsa

Nilsson, David
Nilsson, Lars J
Nordbrandt Bergström, Maria
Nordh, Karin
Nordt, Alexander
Nozawa, Atsushi
Nugroho, Avianto
Numminen, Sini
Nuñez Valadez, Ivonne Aimee
Nykvist, Björn
Nyukuri, Elvin
Närhi, Juuli
Nässén, Jonas
Nässén, Nessica
Näyhä, Annukka

O

Oberthür, Sebastian
Odote, Collins
Ohren, Arild
OLOFSSON, EMIL
Olsen, Tara
Olszańska, Agnieszka
Opsahl, Gustav
Orozco-Melendez, Francisco
Ortland, Michel
Osberg, Gustav
Osorio-Aravena, Juan Carlos
Otto, Simon
Oturai, Nikoline
Ozoliņš, Jānis

P

Pabreja, Himanshu
Pagano, Lucia
Palmer, James
Parguel, Camille
Park, Hyeyoon

Parker, Charles
Partzsch, Lena
Pas, Berber
Patashnik, Eric
Pedercini, Matteo
Pedersen, Nadia Vestergaard
Pedersen, Susanne
Pellicano, Francesco
Peltonen, Lasse
Perkiömäki, Mika
Persson, Martin
Persson, Sara
Peterson, Lauri
Petersson, Mona
Pettersson Fürst, Johanna
Pettersson, DAniel
Pfeiffer, Frederik
Pietiläinen, Sonja
Pietrzyk-Kaszyńska, Agata
Pigeon, Jonas
Planting Mollaoglu, Emil
Plöchl, Jana
Poli, Elena
Ponte, Stefano
Pop, Mihai
Porsani, Juliana
Portinson Hylander, Jens
Poulsen, René Taudal
Proisy-Lesnik, Tatiana
Prutzer, Madeleine
Psaralexi, Maria
Psiuk, Kinga
Pérez-Pérez, Belen

R

Raft, Benedikte
Rahikainen, Eedla Sofia

Raitio, Kaisa
Rajah, Jefferson K.
Ramirez Zubillaga, Sara
Rantanen, Rosa
Rao, Nitya
Rapeli, Lauri
Raymond, Christopher
Reimerson, Elsa
Resare Sahlin, Kajsa
Rhodes, Ekaterina
Rhodes, Katya
Richter, Eva
Rieder, Gernot
Rigg, Robin
Rinkinen, Jenny
Rivera, Priscila
Robinson, James
Robison, Rosie
Robles Ustariz, Martha Isabel
Rommetveit, Kjetil
Rosamond, Jeffrey
Rosignoli, Francesca
Royston, Sarah
Ruggiero, Salvatore
Rumo, Delphine
Runko, Panu
Ruser, Alexander
Ryan, Jean
Rödl, Malte
Rönnbäck, Patrik
Rönnerstrand, Björn

S

Saarenaho, Inkeri
Saarikoski, Heli
Saastamoinen, Uula
Sackett, Hannah

Saldert, Hannah
Salomaa, Anna
Sanas, Aishwarya
Sanchez, Maria
Sandberg, Eva
Sandin, Leonard
Sandkjær Hanssen, Gro
Sandström, Camilla
Sandén, Björn
Sareen, Siddharth
Sarkii, Simo
Sarkki, Simo
Sataøen, Hogne
Satishbahai Raval, Saumya
Saviolidis, Nína María
Savulescu, Vera
Scherhaufer, Patrick
Scheuermann, Mary
Schewe, Lea
Schill, Caroline
Schleifer, Philip
Schlosberg, David
Schneider, Clemens
Schramkowski, Barbara
Schultz, Lisen
Sciullo, Alessandro
Seddon, Nathalie
Selin, Henrik
Selin, Noelle
Seppälä, Tuija
Serafimova, Silviya
Sevä, Ingemar
Shmidt, Mayya
Shreya, Shivangi
Shyriaieva, Natalia
Sidén, Eva

Sinare, Hanna
Singh, Nandita
Singh, O.P.
Sipinen, Sanni
Sivonen, Matias
Sjöberg, Stefan
Skar, Cathrine
Skjeflo, Sofie Waage
Skogen, Marte S.
Skovdal, Ulrikka
Skovgaard, Jakob
Skyrman, Viktor
Smilikis, Megan
Sobol, Agnieszka
Sognnaes, Ida
Sokolova, Tatiana
Sollund, Kjersti
Soneryd, Linda
Sonesson, Ulf
Sonetti González, Taís
Sonnino, Roberta
Soriano-Hernandez, Pavel
Sousa Viera, Stephanie Christina
Spacek, Martin
SS Franca, Caroline
Stas, Lara
Staňková, Nicol
Steckel, Jan
Stenseke, Marie
Strassheim, Holger
Sulaiman Qureshi, Babra
Suleiman, Lina
Sundqvist, Göran
Svanberg, Maja
Svidró, Orsolya
Syberg, Kristian

Söderberg, Johan
Söderholm, Patrik
Söderström, Sara
Sörbom, Adrienne

T

Tangnäs, Johanna
Tarasova, Ekaterina
Tegel, Sanna
Tennberg, Monica
Theodosiadis, Evangelos
Thilsted, Shakuntala
Thom, Elizabeth
Thomsen, Janne Katharina
Tilsted, Joachim
Tobin, Paul
Tofiño Vian, Miguel
Toivanen, Tero
Toiviainen, Anni
Tong Thi, Hanh Hai
Torpman, Olle
Torres, Eduardo
Toscano, Samuel
Treacy, Samantha
Truong, Minh-Xuan
Tucker, Hazel
Tudó-Cisquella, Julià
Tumaini, Ubaldus
Tuomala, Misa
Turunen, Topi
Tvinnereim, Endre
Tynkkynen, Nina
Törnberg, Anton

U

U. Persson, Martin
Uba, Katrin

V

Vaarakallio, Teemu
Vahnberg, Jack
Vainio, Kaisa K.
Vallström, Victoria
van den Bergh, Jeroen
Van Der Jeugt, Lotte
Van Der Vlist, Deborah
Van der Wal, René
van Gastel, Bernard
van Noort, Carolijn
Van Wieringen, Simone
van Zandvoort, Kerstie
VanDeveer, Stacy
Varumo, Liisa
Vasström, Mikaela
Veenman, Sietske
Verbruggen, Kyra
Viitala, Jenni
Vik, Marte Lange
Vikström, Suvi
Vikøren Andersen, Ida
Villamayor-Tomas, Dr Sergio
Villamizar Ariza, María Isabela
Villanueva Legler, Lucas
Ville, Alizée
Visconti, Francesco
Visser, Geerke
Viteri Marquez, Elisa A.
Vivier, Elme
von der Heide, Kim
Von Platten, Jenny
Vowles, Kjell
Völker, Thomas

W

Wallner-Hahn, Sieglind
Walther, Laura

Warlenius, Rikard
Warlenius, Rikard H
Weber, Elaina Jacqulene Wiljanen
Weitz, Nina
Wendler, Frank
Werner Sellbjer, Filippa
Wernersson, Hanna
West, Simon
Westberg, Nina Bruvik
Westeson, Johanna
Westholm, Aron
Westling Öhman, Noomi
Wettestad, Jørgen
Wibeck, Victoria
Widengård, Marie
Widerberg, Oscar
Wieczorek, Florian
Wijayarathna, Anudini
Wikman, Anna
Wingren, Ida
Winter, Karin
Wokuri, Pierre
Wuttke, Tobias

X

Xafenias, Nikolaos

Y

Yang, Yuru
Young, Juliette

Z

Zapata Campos, María José
Zapata, Patrik
Zengerling, Cathrin
Zhang, Jasmine
Zhang, Qian
Ziegert, Rafaella Ferraz
Zissis Makris, Jelto

Zwetsloot, Karel

Á

Árvai, Joseph

Å

Ågren, Åsa

Ö

Öhman, Frida

Öhman, May-Britt

Österlin, Carl

Ø

Øinæs Habberstad, Mette

Š

Šatienė, Vilija