

# Cooperation

between

Faculty of Science, Stockholm University,  
Stockholm, Sweden

and the

International Science Programme (ISP),  
Uppsala University, Uppsala, Sweden

2016-2020

Dnr ISP 2015/55:1

## Overview and Results Summary January 2016 – December 2019

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## 1 Summary

According to the second Agreement of Cooperation, signed in December 2015, the Faculty of Science, Stockholm University (SU) has continued contributing 1 million SEK yearly to the International Science Programme (ISP) at Uppsala University (UU) 2016- 2020. A Management Committee, established 2011 under the first cooperation period (2011-2015), has monitored the cooperation.

The SU funding has been used for:

- 1) Continued attempts to develop the Pan African Centre for Mathematics.
- 2) Support to research groups in chemistry and physics at the Faculty of Science, National University of Laos, Vientiane, Laos.
- 3) Support to a chemistry research group in biochemical ecotoxicology at National University of Science and Technology, Bulawayo, Zimbabwe.
- 4) A start-up of physics support in Myanmar.
- 5) The Asian Network for research on Food and Environmental Contaminants.
- 6) Evaluation of two scientific networks, one in mathematics, one in physics.
- 7) The “book project” together with the American Institute of Physics.
- 8) Gender equality promotion among mathematics and physics participants.
- 9) Costs for arranging a European mathematics meeting and participation in an international mathematics congress.
- 10) Coordination of the cooperation and of the activities.
- 11) Indirect costs, regarding administrative support and premises.

Until 31 December 2019, 91% of the contribution 2015-2019 (i.e. the first four years of the second agreement period) have been used. The contribution is acknowledged on ISP’s website and yearly in ISP’s Annual Reports. Acknowledgement has also been given in 25 external presentations 2015-2019.

During the agreement period, 20 Stockholm University staff members have to various extents been engaged in ISP collaboration, 12 of them serving as host supervisors to students from ISP partners in Africa and Asia.

The contribution has been a very important factor in negotiating the current UU agreement with Sida, demonstrating that ISP has attracted additional financial support for the core program, besides from UU and Sida.

ISP hopes for a favorable evaluation by Faculty of Science at Stockholm University, allowing for an agreement of a next period of Stockholm University contribution to the ISP core program, after 2020.

## 2 Overview

This is the second report on the contribution by the Faculty of Science, Stockholm University (SU), to the International Science Programme (ISP) at Uppsala University. A first report, regarding the agreement period 2011-2015 (ISP Dnr 2010/46) was submitted in August 2015 (ISP, 2015). The current report accounts for the cooperation 2016- 2019, and covers the management, use, activities and results of the contribution in the period 1 January 2016 to 30 December 2019, in accordance with the agreement signed in December 2015 (Appendix 2). The SU contribution to ISP amounts to 1 million SEK per year during the five-year agreement period. According to an excerpt of the minutes of the meeting 16 September 2015 of the Board of the Faculty of Science (Appendix 3), a possibly continued cooperation is to be considered after evaluation of the activities. The current report is intended to provide information useful for the evaluation.

### 2.1 Management of the contribution

According to the initial agreement (2011-2015), “*A Management Committee comprising two members of each of the Parties shall be responsible for the implementation of the collaboration and ensuring accomplishment of the activities envisaged.*” The management committee was established 29 April 2011, in the first agreement period, and was comprised of Anders Karlhede (SU), Leif Abrahamsson (ISP), Peter Sundin (ISP), and Stefan Nordlund (SU). The same committee continued in the second agreement period, and one meeting was held each year 2016-2019. (Appendix 4)

### 2.2 Use of the contribution

The funding has been used for:

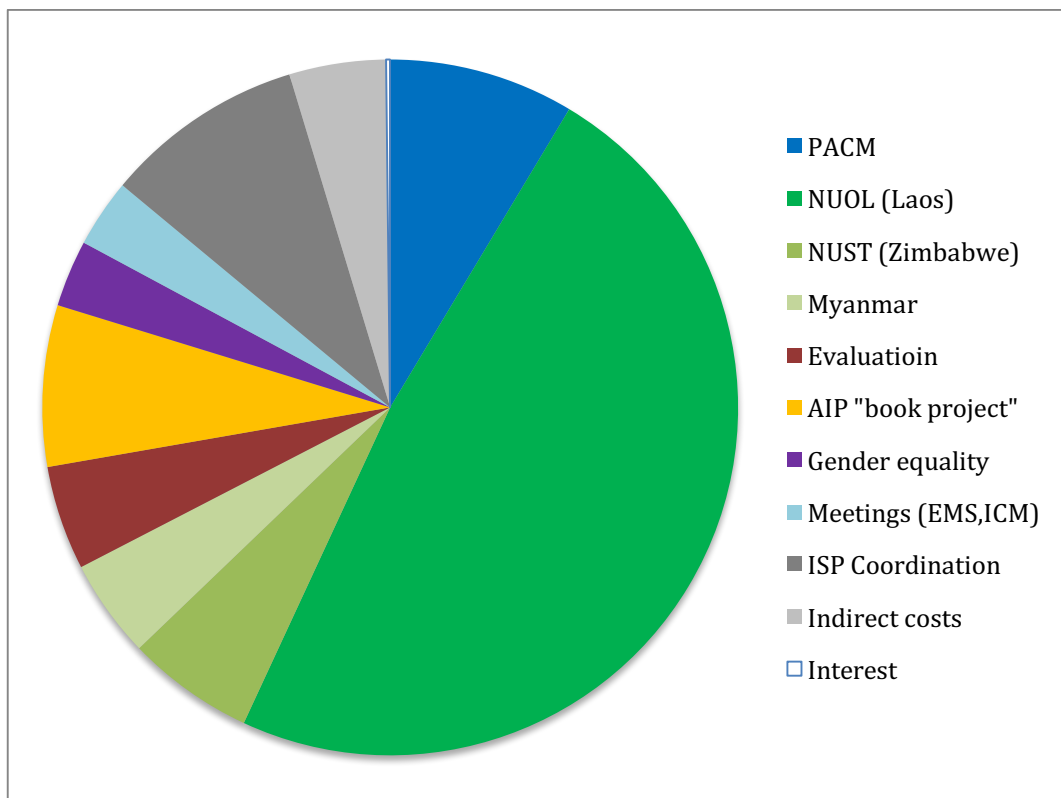
- 12) Continued attempts to develop the Pan African Centre for Mathematics (PACM), a cooperation between Stockholm University, Sweden, and University of Dar es Salaam, Tanzania.
- 13) Support to research groups in chemistry and physics at the Faculty of Science, National University of Laos (NUOL), Vientiane, Laos.
- 14) Support to a chemistry research group in biochemical ecotoxicology at National University of Science and Technology (NUST), Bulawayo, Zimbabwe.
- 15) A start-up of physics support in Myanmar.
- 16) The Asian Network for research on Food and Environmental Contaminants (ANFEC).
- 17) Evaluation of two scientific networks, one in mathematics (EAUMP) and one in physics (MSSEESA).
- 18) The “book project” together with the American Institute of Physics.
- 19) Gender equality promotion among mathematics and physics participants.
- 20) Meeting costs (arranging EMS and participating in ICM, both 2018)
- 21) Coordination of the cooperation and of the activities.
- 22) Indirect costs, which in Uppsala University’s financial management system are the costs of the administrative support and premises, as generated by the operation of the core activities.

Until 31 December 2019, 91% of the contribution for the years 2016 to 2019 has been used (Figure 1; including a balance brought forward from 2015; see Appendix 5). Of that,

- 8% was spent on PACM development (equaling 116% of that budgeted),
- 44% on support in Laos (equaling 94% of that budgeted),
- 5% on support in Zimbabwe (equaling 100% of that budgeted),

4% on developing support in Myanmar (equaling 106% of that budgeted),  
 0% on support to ANFEC (from 2016 the network was supported by Sida funding,  
 but SU funding was used 2011-2015),  
 4% on evaluation (equaling 39% of that budgeted),  
 7% on the AIP “book project” (equaling 174% of that budgeted),  
 3% on gender equality promotion (equaling 105% of that budgeted),  
 3% on meeting costs (equaling 107% of that budgeted),  
 9% on coordination (equaling 74% of that budgeted),  
 4% on indirect costs (equaling 68% of that budgeted), and  
 0.02% on interest (not budgeted, but resulting from “negative interest”).

The activities are accounted for in more detail in Section 3.



**Figure 1.** Distribution of expenditures from 1 January 2016 to 31 December 2019 of the contribution by the Faculty of Science, Stockholm University, to the International Science Programme, Uppsala University.

A development project budgeted 2019 has not yet been realized. In memory of late Professor Mikael Passare, it was planned to open for two travel stipends per year for young mathematicians in Sub-Saharan Africa. However, while developing this opportunity it was realized that is not allowed for universities in Sweden to use government funding for such a purpose. It remains to decide on how to go forward on this path.

### 2.3 Acknowledgement of the Contribution

The contribution to ISP by the Faculty of Natural Sciences, Stockholm University is acknowledged on ISP’s website ([www.isp.uu.se/our-sponsors](http://www.isp.uu.se/our-sponsors)) and yearly in ISP’s Annual Reports. Acknowledgement has also been given in 25 external presentations 2015-2019 (see Appendix 1).

### 3 Activities and Results

This section provides information about the efforts to develop the Pan African Centre for Mathematics, and accounts in more detail for the support to the Faculty of Science at the National University of Laos. There is also more information about the other activities listed in Section 2.2.

#### 3.1 Pan African Centre for Mathematics

The development of the Pan African Centre for Mathematics (PACM) has during the second agreement period met continued obstacles, despite all efforts. The members of the Management Committee have closely monitored the development, and have taken various actions to facilitate the work to realize the center (partly mirrored in Appendix 4; further details are in email communications, separate meetings, etc., which are not accounted for in detail in this reports). In brief (including the development from 2011):

- In 2011, a budget for PACM was proposed, and the distribution of responsibilities between Stockholm University and University of Dar es Salaam was determined.
- In 2011, it was decided to include the request for Sida support to PACM in ISP's application to Sida for the next phase of its core program.
- In 2012, ISP's core program application to Sida was submitted (30 March), including applying for Sida support to PACM. The Arab Bank for Economic Development in Africa (BADEA) awarded 300,000 USD to PACM.
- In 2013, Sida decided to consider possible support to PACM separately from ISP's core program application.
- In 2014, Sida decided, as notified in an email to the Management Committee 27 June from Hannah Akuffo (then Acting Head of the Unit for Research Cooperation, Sida), that PACM will receive no support from Sida, for reasons given in the email notice.
- In 2015, a new meeting with Sida took place and all relevant documents in the matter were submitted to Sida's Senior Research Advisor Afzal Sher for reconsideration.
- In 2016, the Management committee suggested that PACM should be included in the fund-raising efforts then initiated by ISP.
- In 2017, Anders Karlhede and Stefan Nordlund visited Tanzania and met with ISP Board member Prof. Mohamed Bilal (former vice-president of Tanzania) and with Dr. Eunice Mureithi (Head of Department of Mathematics, University of Dar es Salaam (UDSM), to rejuvenate the existing Memorandum of Understanding regarding PACM. UDSM committed itself to earlier pledges, and back at SU the External Relations and Communications Office was engaged in the continued efforts.
- In 2018, efforts continued without tangible progress.
- In 2019, the Embassy of Tanzania in Stockholm was contacted and responded supportively. A new visit to UDSM was recommended, this time with the vice-chancellor of SU. At ISP's side, discussions were initiated with the African Development Bank Group (ABDG), as suggested by new ISP Board member Jennifer Blanke, a vice president of ABDG, to find projects of common interest that could be co-funded by ADBG. PACM was recommended as such a project by ISP, besides a few other possibilities.

The work is expected to continue, to pave the way for the establishment and eventual consolidation of PACM despite the various challenges that have kept delaying the work. The total expenditures during the period 1 January 2016 to 31 December 2019 were 349 019 SEK (Appendix 5)

## 3.2 Support to Faculty of Science at NUOL

The support to the Faculty of Science at the National University of Laos (NUOL) has been directed to chemistry and physics. The support is organized within the ISP core program, otherwise funded by Sida.

In the 2008 agreement with Sida, ISP was requested to discontinue support in Laos because it is not among the focus countries at that time listed by the Swedish government in the new development support policy announced in 2007. A phase out period of three years was decided, allowing for continued support until 2011. The agreement with Stockholm University 2011-2015 made it possible to continue the support to the present without interruption. This has been of strategic importance because ISP support to chemistry and physics in Laos had started as late as 2005, the development until 2011 had been quite modest, and a premature phase-out following the Sida request would have jeopardized investments in staff competence development and instrumental facilities.

In the period 2012 to 2015, the research activities in these chemistry and physics departments at NUOL have increased tangibly, as demonstrated by the results earlier reported for these years (and reiterated in this report). The continued development 2016-2019 is also reported here. The progress continues and Master's programs are becoming established in both disciplines.

Support to mathematics at NUOL, which started at a low level in 2012 using SU funding, has been converted from "research group support" to "scientific network support" with the start of the South East Asian Mathematics Network (SEAMaN) in 2015. SU funding was, however, used in 2015 to allow NUOL participants to participate in the inauguration meeting of SEAMaN in Phnom Penh, Cambodia.

### 3.2.1 Chemistry

ISP has supported the development of research and higher education at Department of Chemistry, National University of Laos (NUOL) since 2005, until 2011 using Sida funding, and 2012 to 2019 using Stockholm University funding. A bridging year of continued research group support was made available in 2012, and after that the support has been based on ISP scientific reference group evaluations of the applications to ISP for the periods 2013-2015, 2016-2018, and 2019-2021, respectively, submitted by the current group leader Dr. Kesiny Phomkeona.<sup>1</sup> The total expenditures during the period 1 January 2016 to 31 December 2019 were 983 533 SEK (Appendix 5).

The group has continued its research activities on heavy metal and pesticide residues analysis, and has conducted further testing of such contaminants in the environment and in foods and grains in the country. The group has continued to develop the methodology of residue analysis and have enhanced the analytical techniques and skills of the chemistry department staff and students. Until 2017, research results have been scarcely published and only at local publication venues, but in 2019 a paper appeared in *SN Applied Sciences*, which is a quality publication venue according to the Norwegian Register for Scientific Journals, Series and Publishers<sup>2</sup>. In recent years the group has also become more active with regard to conference contributions, many of which has been not only at local venues but also at regional meetings – and in 2019 at two international meetings, one in Thailand and one OPCW meeting in the Netherlands (Table 1, Appendix 1).

The funding was used for developing local research activities, staff training, participation in scientific conferences, and for covering the costs of the visits made by Mr. Michael Strandell, Department of Environmental Science, Stockholm University, to provide and maintain chemistry analytical instruments and train staff members. In 2015, a GC-FID and a HPLC-UV was installed, both provided by SU. In 2017, Strandell and Dr. Tomas Alsberg

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<sup>1</sup> <http://www.isp.uu.se/isp-core-program/isp-chemistry/research-groups/laos/>

<sup>2</sup> [https://dbh.nsd.uib.no/publiseringsskanaler/Forside.action?request\\_locale=en](https://dbh.nsd.uib.no/publiseringsskanaler/Forside.action?request_locale=en)

from the same department installed a LC-MS/MS, which has been operational since then. The costs for the transport, installation and training were shared between OPCW and the Faculty of Natural Science at NUOL.

Table 1. Chemistry group results dissemination 2011-2020.

Parameter	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of publications and share (%) in quality journals	0	0	0	2 0%	0	0	5 0%	0	3 30%
Number of contributions to scientific conferences and share (%) to international	2 0%	2 0%	1 0%	1 0%	3 0%	3 0%	5 0%	11 0%	6 33%

In 2015, the group had four PhD holders (50% women), all trained abroad (two in Japan, one in the Philippines, one in Thailand) on scholarships from other organizations than ISP. The group also had four MSc graduates, one of them from abroad (Thailand). All these had a position as lecturers. A local MSc program, on Energy Conservation, was established at the Faculty of Science level by partnering with KOICA. Another four staff members were still BSc graduates only, hired as teaching assistants. Three of them were registered for MSc training, two locally and one in Thailand, all on ISP/SU funding.

The group is a member of ANFEC, and hosted 5<sup>th</sup> and 7<sup>th</sup> ANFEC Training Programs on Gas Chromatography (GC/MS), Quantification and Quality Assurance, in 2017 and 2019, respectively (see Appendix 1). They are planned to host the Training Program again in 2022.

In 2018, the group reported that the following achievements were satisfactory reached. The accomplishment indicated that the level of scientific research in the chemistry department has been improved.

- Ability of the group has been improved since they can provide consultation on chemical contamination in terms of analysis service and short-term training courses using instrumentation.
- Group members participated in scientific conferences at Faculty of Natural Sciences, NUOL, and abroad.
- Undergraduate students, who received indirect support from ISP such as chemicals and some equipment, were able to present their final-year projects at science conference in Laos and abroad.

It is clear from the “other activities” accounted for in Appendix 1 that the international exposure of the group, and its contribution to the academic society and government authorities in Laos has increased dramatically since 2015.

### 3.2.2 Physics

ISP has supported the development of research and higher education in Geophysics, at the Department of Physics, National University of Laos (NUOL) since 2005, until 2011 using Sida funding, and from 2012 using Stockholm University funding. A bridging year of continued research group support was made available in 2012. After that, support has been based on the ISP scientific reference group evaluation of the applications to ISP for the period 2013-2015, 2016-2018, and 2019-2021, submitted by the leaders Mr. Viengthong Xayavong and Sounthone Singsoupho.<sup>3</sup> The total expenditures during the period 1 January 2016 to 31 December 2019 were 975 000 SEK (Appendix 5).

During the period 2012-2014 the group leader Sounthone Singsoupho was on PhD sandwich training at Prince of Songkla University, Hat Yai, Thailand, supported by the ISP funds available through the agreement with SU. He graduated in 2014 and he is now at NOUL taking care of the coordination of the group activities, while Mr. Xayavong is now in Vietnam for his PhD education with a graduation planed in 2021, also supported by ISP.

<sup>3</sup> <http://www.isp.uu.se/isp-core-program/isp-physics/research-groups/laos/>



The purpose of the group is to develop research activities in Geophysics especially on groundwater quality. The aim of the research work on groundwater is to study the water quality by using geophysical methods to determine groundwater table, the thickness and continuity of shallow aquifers, to delineate fresh and saline water, and then to map good quality groundwater. Rock magnetic and palaeomagnetic studies aiming to evaluate the postulated model of the Indochina and ShanThai blocks and palaeooccurrence of Mesozoic sandstone and lava flow of basalts in Laos, were part of Dr. Singsoupho's now concluded PhD study.

The group has also developed short- and long-term training in geophysics for staff and students at different level of study. A BSc program in geophysics was launched in 2012 at NUOL.

Research result has been scarcely published up to 2017, but from 2018 the group has published more frequently, and in 2020 the first scientific paper in a "quality journal" (listed with the Thomson & Reuter impact factor 1.186 at Web of Science) appeared. The group also has become more active with regard to conference contributions, which in 2018 and 2019 all were at international conferences (Table 1, Appendix 1).

Table 2. Physics group results dissemination 2011-2020.\* (N/A = not available)

Parameter	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Number of publications and share (%) in quality journals	0	0	0	1 100%	0	0	0	2 0%	1 0%	3 33%
Number of contributions to scientific conferences and share (%) to international	3 0%	1 100%	0	0	0	0	2 0%	3 100%	1 100%	N/A

\* Publication data from 2020 appeared in the group's activity report for 2019

### 3.3 Other Activities

#### 3.3.1 Biochemical Ecotoxicology at NUST

In 2016, Sida decided on a 5 million SEK reduction of their contribution to ISP, because the Swedish government was reducing the budget to development cooperation in favor of the needs created by the "refugee crisis" 2015. This required revision of ISP's budget, and in order not to discontinue support, one research group, IPICS ZIM:02, in the field of biochemical ecotoxicology (National University of Science and Technology (NUST), Bulawayo, Zimbabwe), was temporarily funded using the SU contribution. The total expenditures during the period 1 January 2016 to 31 December 2019 were 240 059 SEK (Appendix 5).

#### 3.3.2 Start-up of Physics Support in Myanmar

In 2016, the ISP physics program has initiated support to the Department of Physics, Mandalay University in Myanmar, and the pilot phase 2016-2017 has been financed using the SU contribution. The total expenditures during the period 1 January 2016 to 31 December 2019 were 185 724 SEK (Appendix 5).

The group comprises three projects: one on theoretical nuclear physics, one on applied nuclear physics for environmental monitoring, and one on materials sciences for sustainable energy applications.

### 3.3.3 ANFEC

In 2011, Stockholm University funding was provided to an emerging scientific network, Asian Network of Research on Food and Environment Contaminants (ANFEC), embracing ISP-supported environmental chemistry research groups in Bangladesh, Cambodia, and Laos, and coordinated from the Department of Chemistry at NUOL. The funding in 2011 was provided to facilitate initial meetings, and a workshop held in Phnom Penh, Cambodia, in October that year, facilitated by Mr. Michael Strandell, Stockholm University. The listed workshops 2011-2020 were developed and conducted by Michael Strandell and Ms. Ulla Eriksson, Stockholm University, in consultation with ANFEC members.

In 2015, the SU contribution was used for cost reimbursements of 36,574 SEK to Strandell and Eriksson in connection to the course, which that year was held in Dhaka, Bangladesh. From this year and onwards, the steering committee meetings were held in connection to the courses, and are no longer listed separately. From 2016, ANFEC has been supported using the Sida contribution to ISP, but still with Strandell and Eriksson conducting the course. In January-February 2020 they've made their final contribution to the course, then held in Phnom Penh, Cambodia, but ANFEC is now ready to continue the yearly course on its own. The courses are planned in 2021 in Dhaka, Bangladesh, in 2022 in Vientiane, Laos, and in 2023 back in Phnom Penh, Cambodia.

In 2017, a report about the activity was published by the International Higher Education Teaching & Learning Association (Griffiths *et al.*, 2017).

There were no expenditures during the period 1 January 2016 to 31 December 2019.

### 3.3.4 Evaluation of EAUMP

In 2017, a share of the SU contribution was used to partly cover the costs for the ISP-initiated evaluation of the East African Universities Mathematics Programme (EAUMP).<sup>4</sup> The total expenditures during the period 1 January 2016 to 31 December 2019 were 41 483 SEK (Appendix 5).

### 3.3.5 Evaluation of MSEESSA

In 2018, a share of the SU contribution was used to partly cover the costs for the ISP-initiated evaluation of Materials Science and Solar Energy Network for Eastern and Southern Africa (MSEESSA).<sup>5</sup> The total expenditures during the period 1 January 2016 to 31 December 2019 were 154 935 SEK (Appendix 5).

### 3.3.6 AIP Book Project

In 2016, 2018 and 2018, a share of the SU contribution was used to pay the shipping charges of books, following an informal agreement since 1999 with American Institute of Physics (AIP) about books from various publisher reviewed in the AIP journal "Physics Today". AIP collects these novel books and sends them in batches to different departments of physics as indicated by ISP.<sup>6</sup> A typical batch contains about 300 books. Since 1999, 75 such batches have been sent to 35 different institutes. The total expenditures during the period 1 January 2016 to 31 December 2019 were 303 845 SEK (Appendix 5).

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<sup>4</sup> [https://www.isp.uu.se/digitalAssets/504/c\\_504316-1\\_1-k\\_report\\_2017\\_final.pdf](https://www.isp.uu.se/digitalAssets/504/c_504316-1_1-k_report_2017_final.pdf)

<sup>5</sup> [https://www.isp.uu.se/digitalAssets/504/c\\_504316-1\\_1-k\\_msseesareport.pdf](https://www.isp.uu.se/digitalAssets/504/c_504316-1_1-k_msseesareport.pdf)

<sup>6</sup> <https://www.aip.org/news/2014/physics-today-uppsala-university-books-partnership>

### 3.3.7 EMS Meeting

In 2018, a share of the SU contribution was used to cover the costs for the ISP-arranged meeting of the European Mathematical Society (EMS) Committee for Developing Countries,<sup>7</sup> in Sigtuna, Sweden. The total expenditures during the period 1 January 2016 to 31 December 2019 were 108 259 SEK (Appendix 5).

### 3.3.8 ICM Participation

In 2018, a share of the SU contribution was used to cover the costs for ISP's participation in the International Congress of Mathematics (ICM), Rio de Janeiro, Brazil. The total expenditures during the period 1 January 2016 to 31 December 2019 were 20 468 SEK (Appendix 5). Posters and flyers about ISP and the PACM were distributed during a poster session.

### 3.3.9 Gender Equality Promotion

In 2019, a share of the SU contribution was used to partly cover the costs for ISP's work to promote gender equality among supported mathematics and physics partners. The total expenditures during the period 1 January 2016 to 31 December 2019 were 125 730 SEK (Appendix 5).

The investment has allowed for the realization of many different activities, locally created and organized to address some of the different reasons of the gender unbalance at the supported institutions. These activities have targeted the recruitment of female students at undergraduate programs in physics and mathematics at Makerere University in Uganda, and has increased the success rate of female students at the admission exam at University of Dar es Salaam in Tanzania. In many other institutions, outreach activities with local high school have increased the motivation and inspired female students to study science at the university level. In Kenya, Uganda and Tanzania, also mentoring programs for female university students have been organized for an improvement of the retention of girls in higher education at master and PhD levels. In many institutions, the available funds have promoted a spontaneous collaboration between physicists and mathematicians.

An important result has been the establishment in 2018 of the Eastern Africa Network of Women in Basics Science (EANWoBAS), partly supported by SU funding, the first ISP supported network with the aim to promote gender balance, coordinated from Uganda but joining mathematicians, physicists and gender researchers also from Kenya, Rwanda, Tanzania, and Zambia.<sup>8</sup>

In Asia, the most relevant result is the establishment in 2017 of a PhD position at Dhaka University, for a female candidate, allowing a more flexible working schedule to harmonize working and family tasks (ISP, 2018). In 2019, SU funding contributed to financing the present holder of the position.

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<sup>7</sup> <https://euro-math-soc.eu/committee/developing-countries>

<sup>8</sup> <https://isp.uu.se/what-we-do/physics/networks/eanwobas/>



EANWoBAS participants at the inception of the network.

## 4 SU staff engaged in ISP collaboration

The following 20 Stockholm University staff members has been engaged with ISP in the agreement period 2016-2019, 12 of them acting as host supervisors to students from ISP and Sida bilateral partners in Africa and Asia:

- **Anders Karlhede** (member of Management Committee, and previous a member of the ISP board)
- **Boris Shapiro** (host supervisor to ISP mathematics partner in Kenya)
- **Daniel Thorburn** (host supervisor to ISP mathematics partner in Cameroon)
- **Elzbieta Glaser** (member of the ISP board until 2018)
- **Gunnar Svensson** (host supervisor to ISP chemistry partner in Mali)
- **Henrik Boström** (host supervisor to ISP mathematics partner in Mozambique)
- **Jan-Erik Björk** (host supervisor to ISP mathematics partner in Uganda and Kenya)
- **Lars Asker** (host supervisor to Sida bilateral mathematics partner in Mozambique)
- **Lennart Bergstöm** (host supervisor to ISP chemistry partner in Mali)
- **Matti Tedre** (host supervisor to Sida bilateral mathematics partner in Mozambique)
- **Michael Strandell**, SU Department of Environmental Science (NOUL Department of Chemistry, and ANFEC technical facilitator and trainer)
- **Oliver Popov** (host supervisor to Sida bilateral mathematics partner in Mozambique and Uganda)
- **Paul Vaderlind** (host supervisor to ISP mathematics partner in Burkina Faso, lecturer at regional courses in East Africa and South-East Asia)
- **Pavel Kurasov** (host supervisor to ISP mathematics partner in Kenya)
- **Peter Brzeszinski** (member of ISP Board from 2018)
- **Rikard Bøgvad** (host supervisor to ISP mathematics partners in Ethiopia and lecturer in regional courses, Mozambique and Uganda, lecturer at regional courses in East Africa and South-East Asia)
- **Stefan Nordlund** (member of Management Committee)
- **Tom Britton** (member of the scientific reference group to the mathematics program, and host supervisor to ISP mathematics partner in Burkina Faso)
- **Tomas Alsberg**, SU Department of Environmental Science (NOUL Department of Chemistry technical facilitator and trainer)
- **Ulla Eriksson**, SU Department of Environmental Science (ANFEC technical facilitator and trainer)

## 5 Conclusions

The Stockholm University, Faculty of Science contribution to the International Science Programme (ISP):

- Has been instrumental in the continued work to establish the Pan African Centre for Mathematics (PACM), which, however, remains to be finally consolidated.
- Has secured the continued support to environmental chemistry and geophysics in Laos.
- Has facilitated the continued support to a research group in biochemical ecotoxicology in Zimbabwe.
- Has allowed for the start-up of physics support in Myanmar
- Has secured the continued activities of the Asian Network of research on Food and Environmental Contaminants (ANFEC), linking together ISP partner working in these fields of science in Bangladesh, Cambodia, and Laos.
- Has facilitated the evaluation of two scientific networks.
- Has secured the continued operation of the AIP “Book Project”.
- Has facilitated the European Mathematical Society meeting in 2018, hosted by ISP in Sigtuna, Sweden.
- Has allowed for ISP’s participation in the International Congress of Mathematics 2018, Rio de Janeiro, Brazil.
- Has allowed for continued work in 2019 to promote gender equality among mathematics and physics participants.
- Has been important for the engagement of about 20 SU staff members in ISP activities.

Further, the contribution from Stockholm University, Faculty of Science, to ISP has been a significant factor in negotiating the current Uppsala University (UU) agreement with Sida, for operating ISP 2020-2023, demonstrating that ISP has attracted additional financial support for the core program, besides from UU and Sida.

ISP hopes for a favorable evaluation by Faculty of Science at Stockholm University, allowing for an agreement of a next period of Stockholm University contribution to the ISP core program, after 2020.

## 6 References

- Griffiths, Z., Eriksson, U. & Strandell, M. (2017). Enabling and engaging students through open learning workshops. *International HETL Review*, 7(2).<sup>9</sup>
- ISP (2015). Cooperation between Faculty of Science, Stockholm University, Stockholm, Sweden, and the International Science Programme, Uppsala University, Uppsala, Sweden, 2011-2015, Dnr ISP/2010/46. Overview and Results Summary January 2011 – June 2015. Final 150811. Report to the Faculty of Science, Stockholm University.
- ISP (2018). International Science Programme (ISP) Annual Report 2017, Section 3.3.2.<sup>10</sup>

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<sup>9</sup> <https://www.hetl.org/enabling-and-engaging-students-through-open-learning-workshops>

<sup>10</sup> [https://isp.uu.se/digitalAssets/504/c\\_504306-l\\_1-k\\_isp\\_ar\\_2017.pdf](https://isp.uu.se/digitalAssets/504/c_504306-l_1-k_isp_ar_2017.pdf)

## 7 Abbreviations and acronyms

ABDG	African Development Bank Group
AIP	American Institute of Physics
ANFEC	Asian Network for research on Food and Environmental Contaminants
BSc	Bachelor of Science
EANWoBAS	Eastern Africa Network of Women in Basics Science
EAUMP	East African Universities Mathematics Programme
EMS	European Mathematical Society
FID	Flame Ionization Detector
GC	Gas Chromatography
HETL	Higher Education Teaching & Learning
HPLC	High Performance/Pressure Liquid Chromatography
ICM	International Congress of Mathematics
IPICS	International Programme in the Chemical Sciences
ISP	International Science Programme
KOICA	(South) Korea International Cooperation Agency
LC	Liquid Chromatography
MS	Mass Spectrometer
MSc	Master of Science
MSEESSA	Materials Science and Solar Energy Network for Eastern and Southern Africa
N/A	Not Available
NUOL	National University of Laos
NUST	National University of Science and Technology
OPCW	Organization for the Prohibition of Chemical Weapons
PACM	Pan African Centre for Mathematics
PhD	Doctor of Philosophy
SEAMaN	South East Asian Mathematics Network
SEK	Swedish Crowns
Sida	Swedish International Development Cooperation Agency
SN	Springer Nature
SU	Stockholm University
UDSM	University of Dar es Salaam
USD	United States Dollar
UU	Uppsala University
UV	Ultraviolet
ZIM	Zimbabwe

## Appendix 1. Acknowledgements and Activities

### a) Acknowledgements in presentations of ISP

The contribution to ISP by the Faculty of Natural Sciences, Stockholm University is acknowledged in ISP's website ([www.isp.uu.se/our-sponsors/](http://www.isp.uu.se/our-sponsors/)) and yearly in ISP's Annual Reports. Acknowledgement has also been given in the following external presentations 2015-2019 (in chronological order):

#### 2015

- P. Sundin (2015a). Supporting Basic Sciences in Developing Countries – a Sida-financed program at Uppsala University. Sida Diplomatic Forum, 12 February, Stockholm, Sweden. (Oral, invited)
- P. Sundin (2015b). The research sponsorship and other activities of International Science Program. Meeting with the International Foundation of Science, 3 March, Stockholm, Sweden. (Oral, invited)
- P. Sundin (2015c). The research sponsorship and other activities of International Science Program. Meeting with the College of Natural Sciences, University of Nairobi, 24 April, Nairobi, Kenya. (Oral)

#### 2016

- P. Sundin (2016a). Supporting Basic Sciences in Developing Countries – a Sida-financed program at Uppsala University. Sida Diplomatic Forum, 10 February, Stockholm, Sweden. (Oral, invited)
- P. Sundin (2016b). Supporting Basic Sciences in Developing Countries – a Sida-financed program at Uppsala University. Riksdagens utrikesutskott, 14 Mars, Uppsala, Sweden. (Oral, invited)
- P. Sundin (2016c). “Activities at the agencies” – The International Programme in the Chemical Sciences. Swetox Workshop on Activities in developing countries, 20 April, SLU, Uppsala, Sweden. (Oral, invited)
- P. Sundin (2016d). The International Science Program (in its 55<sup>th</sup> year of operation). Meeting at the University of Ouagadougou, 17 May, Ouagadougou, Burkina Faso. (Oral)
- P. Sundin (2016e). The International Science Program (in its 55<sup>th</sup> year of operation). Meeting at the University of Science, Techniques and Technologies, 20 May, Bamako, Mali. (Oral)
- P. Sundin (2016f). Overview of the Activities of the International Science Program (in its 55<sup>th</sup> year of operation). Meeting at Makerere University, 27 September, Kampala, Uganda. (Oral)
- P. Sundin (2016g). Overview of the Activities of the International Science Program (in its 55<sup>th</sup> year of operation). Meeting at Addis Ababa University, 30 September, Addis Ababa, Ethiopia. (Oral)
- P. Sundin (2016h). Overview of the Activities of the International Science Program (in its 55<sup>th</sup> year of operation). Meeting at African Academy of Sciences, 3 October, Nairobi, Kenya. (Oral)
- P. Sundin (2016i). Overview of the Activities of the International Science Program (in its 55<sup>th</sup> year of operation). Meeting with the College of Natural Sciences, University of Nairobi, 5 October, Nairobi, Kenya. (Oral)
- P. Sundin (2016j). Overview of the Activities of the International Science Program (in its 55<sup>th</sup> year of operation). Meeting with the University of Rwanda, 24 October, Butare, Rwanda. (Oral)



- P. Sundin (2016k). The International Science Program – Current Scope and Reporting Procedures. The 9<sup>th</sup> Symposium of the African Network for Chemical Analysis of Pesticides (ANCAP), 22 November, Nairobi, Kenya. (Oral)
- N. Megersa & P. Sundin (2016) Analytical Chemistry Research Development at Addis Ababa University through Swedish Sida bilateral and ISP Support. Pan African Chemistry Network Congress 2016 – Sustainable Water Resources for Africa, 2 December, Nairobi, Kenya. (Oral, invited)

## 2017

- T. Rantakokko (2017). International Science Programme. Meeting with Muni University, 22 April, Arua, Uganda. (Oral)
- L. Abrahamsson & E. van Groningen (2017). International Science Programme. Presentations to representatives of the Inter-University Council for East Africa, 22 March, Uppsala, Sweden. (Oral, invited)
- P. Sundin (2017a). The International Science Program – long term sponsorship of basic sciences and new requirements on the demonstration of results. The 17<sup>th</sup> NAPRECA Symposium, 15 August, Addis Ababa, Ethiopia. (Oral)
- P. Sundin (2017b). The International Science Programme – Resource, Facilitator and Cooperation Partner to Swedish Universities. Universitetsnätverket för strategisk internationalisering, 23 August, Linköping, Sweden. (Oral, invited)
- P. Sundin (2017c). The International Science Program – long term partnership in basic sciences. Meeting at National University of Science and Technology, 21 October, Bulawayo, Zimbabwe. (Oral)

## 2018

- P. Sundin (2018a). The International Science Program – long term partnerships in basic sciences. Sida Diplomatic Forum, 7 March, Stockholm, Sweden. (Oral, invited)
- P. Sundin (2018b). On Internationalisation of Partner Institutions: Perspectives and Strategic Approaches. Expert workshop on Selective Internationality, 16 November, Konstanz, Germany. (Oral, invited)

## 2019

- P. Sundin (2019a). International Science Program. Sida Diplomatic Forum, 12 February, Stockholm, Sweden. (Oral, invited)
- P. Sundin (2019b). International Science Program. International Credit Mobility Staff Week, 16 May, Uppsala, Sweden. (Oral, invited)
- P. Sundin & R. Andersson (2019). The Sandwich Model. Africa-Europe Conference on Higher Education Collaboration, “Investing in people, by investing in higher education and skills in Africa“, 25 October, Brussels, Belgium. (Poster)

## b) Activity Development at NUOL Chemistry

### Support to Department of Chemistry, National University of Laos (NUOL)

The main activities and results, as reported to ISP, are as follows (results reported in 2015 are included in grey). Note that the total achievements of the research group are presented, part of which is SU-ISP funded.

#### Scientific publications

##### 2014

- Deevanhxay, P., Phomkeona, K., Louangsysouphan, S., Keoinpang, S., Sydara, K., Phommavong, K., Thepkaysone, K. (2014). Analysis of heavy metals in a Lao medicinal plant, *Coscinium fenestratum* Colebr. *Proceedings of the Annual Symposium on Natural Sciences*, Vientiane, Laos, 26 November 2014.
- Phomkeona, K., Keoinpang, S., Sompaseuth, S., Japhia, J., Oudomsouk, T., Keoudom, P. (2014). Determination of heavy metals in groundwater. *Proceedings of the Annual Symposium on Natural Sciences*, Vientiane, Laos, 26 November 2014.

##### 2017

- L. Phongphane, M. Olomthong, I. Lorkeosy, P. Keobountham, S. Kongmany & K. Phomkeona (2017). Investigation of methyl parathion, malathion, chlorpyrifos, cypermethrin, fenvalerate residue in some vegetables. *Proceedings of the 1<sup>st</sup> Conference on Science Technology and Engineering of Under Graduate Students*, NUOL, Laos, 4 August 2017, pp 17-24.
- V. Choulamany, S. Kongmany, P. Inthaboun, V. Liamphachanh & S. Phommalard (2017). Monitoring of Nitrate and Nitrite Contamination in Some Processed Products. *Proceedings of the Annual Scientific Conference 2017*, Faculty of Natural Science, NUOL, Laos, 8 November 2017, pp. 61-64.
- P. Deevanhxay, B. Her, F. Mekaye, L. Vue & S. Koeingpheng (2017). Characterization and Quantification of Bioactive Compounds in Some Medicinal plants of Laos. *Proceedings of the Annual Scientific Conference 2017*, Faculty of Natural Science, NUOL, Laos, 8 Nov. 2017, pp 24-29.
- S. Kongmany, V. Choulamany, K. Phomkeona, P. Keobountham & S. Khanthavong (2017). Monitoring and Evaluating Hong-Xeng Wastewater Quality for Green and Sustainable Development. *Proceedings of the Annual Scientific Conference 2017*, Faculty of Natural Science, NUOL, Laos, 8 November 2017, pp 71-76.
- K. Phomkona, B. Mingkuan & S. Incheng (2017). Quantification of Minerals and Nutrients Content in *Moringa oleifera* Lam in Laos. *Proceedings of the Annual Scientific Conference 2017*, Faculty of Natural Science, NUOL, Laos, 8 Nov. 2017, pp 30-33.

##### 2019

- S. Kongmany, V. Choulamany, K. Phomkeona, P. Keobounthum & S. Khanthavong (2019). Hongxeng and Huay-Mark-Hiew Domestic Wastewater Quality Surveillance in Vientiane Capital. *Scientific Journal of National University of Laos*, 15:105-114
- S. Kongmany, K. Phomkeona & P. Keobounthum (2019). Investigation of methyl parathion, malathion, chlorpyrifos, cypermethrin, fenvalerate in some vegetables. *Scientific Journal of National University of Laos*, 15:1-7.
- Y. Kamimoto, N. Okamoto, T. Hagio, J. Yong-Jun, P. Deevanhxay & R. Ichino (2019). Development of magnesium–iron layered double hydroxide and application to nitrate removal. *SN Applied Sciences*, 1:1399 (6 pp.). DOI: 10.1007/s42452-019-1240-7

## Contributions at Scientific Meetings

### 2011

- Vanseng Choulamany. Toxicity Monitoring of Effluents from a Wastewater Treatment Plant. (Oral) *Second International Conference on Applied Science and The Third Conference on Science and Technology for Sustainable Development of The Greater Mekong Sub-region*, at Souphanouvong University, Luang Prabang, LaoPDR. March 24-25, 2011.
- Vanpaseuth Phouthavong. The Contamination of Arsenic in Groundwater. (Oral) *Second International Conference on Applied Science and The Third Conference on Science and Technology for Sustainable Development of The Greater Mekong Sub-region*, at Souphanouvong University, Luang Prabang, LaoPDR. March 24-25, 2011.

### 2012

- Kesiny Phomkeona. Highly stereoselective Ru(II)–Pheox catalyzed asymmetric cyclopropanation of terminal olefins with succinimidyl diazoacetate. (Poster) *SPEC 2012 conference Shedding New Light on Disease*, Chiang Mai, Thailand, 10-17 November 2012.
- Kesiny Phomkeona. Overview of Environmental Contamination in Lao PDR. (Oral) *ANFEC training workshop on Environmental Contaminant Analysis*, Phnom Penh, Cambodia, 18-20 Dec. 2012.

### 2013

- Kesiny Phomkeona. Spiked recovery test on multi residue analyses of organochlorine and organophosphorus pesticides. (Oral) *Scientific Exhibition*, Faculty of Science, NUOL, Vientiane, 20 December 2013.

### 2014

- Deevanhxay, P., Phomkeona, K., Louangsysouphan, S., Sydara, K., Phommavong, K., Thepkaysone, K. Quantification of heavy metals in a Lao medicinal plant. (Poster) *The Annual Science Week*, 18–20 July 2014, Kampaengphet, Thailand.

### 2015

- S. Keoingpeng, K. Phomkeona, S. Somephasuthe, T. Udomsak & P. Keoudom. Monitoring of Heavy Metals Content in Ground water, Thoulakhom District, Vientiane Province. (Oral) *The role of the Scientist to enhance the quality of graduates for the development of the ASEAN community*, 18-19 August 2015, Kamphaeng Phet, Thailand.
- P. Deevanhxay, K. Phomkeona, K. Phommavong & K. Thepkaysone. Analysis of Heavy Metals in Lao medicinal plant, *Coscinium fenestratum* Colebr. (Poster) *The Annual Science Exhibition*, Univ. convention hall, NUOL, 29-30 October 2015, Vientiane, Laos.
- P. Deevanhxay, K. Phomkeona, N. Maeshibu & S. Hirose. Quantification of major protoberberin alkaloids and steroid in *Coscinium fenestratum* Colebr. (Oral). *Botanical Research in Tropical Asia*, 6-11 December 2015, Vientiane, Laos.

### 2016

- S. Kongmany & P. Deevanhxay. (Oral) Research capacity of LAO:01. *Research Workshop for the project “Enhancing the resilience and productivity of rainfed dominated systems in Lao PDR through sustainable groundwater use”*, National Agriculture and Forestry Research Institute (NAFRI), 16-17 March 2016, Vientiane, Laos.
- P. Deevanhxay, X. Noulorsaytour, A. Souvinkham, D. Ladborbvone, S. Keoinpang & K. Phomkeona. Quantification of Some Organochlorine Pesticides in Water Samples from Lake and River in Vientiane’s Agriculture Areas by Gas Chromatography Mass Spectrometry. (Oral) *6<sup>th</sup> BENJAMITRA Network National and international conference on Local Wisdom and Sustainable Development*, 26 May 2016, Chiang Mai, Thailand
- V. Phouthavong, D. Viboonratanasri, P. Prompinit & K. Sereenonchai. Optimization of magnetic-solid phase extraction of phosphorus in water samples. (Oral) *13<sup>th</sup> ASIANALYSIS*, 8-11 December 2016, Chiangmai, Thailand.

## 2017

- V. Choulamany, S. Kongmany, P. Inthaboun, V. Liamphachanh & S. Phommalar. Monitoring of Nitrate and Nitrite Contamination in Some Processed Products. (Oral) *Annual Scientific Conference 2017*, 8 November 2017, Faculty of Natural Science, NUOL, Vientiane, Laos.
- P. Deevanhxay, B. Her, F. Mekaye, L. Vue & S. Koeingpheng. Characterization and Quantification of Bioactive Compounds in Some Medicinal Plants of Laos. (Oral) *Annual Scientific Conference 2017*, 8 November 2017, Faculty of Natural Science, NUOL, Vientiane, Laos.
- S. Kongmany, V. Choulamany, K. Phomkeona, P. Keobountham & S. Khanthavong. Monitoring and Evaluating Hong-Xeng Wastewater Quality for Green and Sustainable Development. (Oral) *Annual Scientific Conference 2017*, 8 November 2017, Faculty of Natural Science, NUOL, Vientiane, Laos.
- K. Phomkona, B. Mingkuan & S. Incheng. Quantification of Minerals and Nutrients Content in *Moringa oleifera* Lam in Laos. (Oral) *Annual Scientific Conference 2017*, 8 November 2017, Faculty of Natural Science, NUOL, Vientiane, Laos.
- L. Phongphane, M. Olomthong, I. Lorkeosy, P. Keobountham, S. Kongmany & K. Phomkona. Investigation of Methyl parathion, Malathion, Chlorpyrifos, Cypermethrin, Fenvalerate residue in some vegetables. (Poster) *Annual Scientific Conference 2017*, 8 November 2017, Faculty of Natural Science, NUOL, Vientiane, Laos.

## 2018

- P. Deevanhxay, X. Noulorsaytour, A. Souvinkham, D. Ladbavone, S. Keoinpang & K. Phomkeona. Quantification of some organochlorine pesticides in water samples from lake and river in Vientiane's agriculture areas by gas chromatography mass spectrometry. (Oral) *Seminar on separation science for the prosperity community in a time of brilliant technologies (Hanoi Symposium)*, 22 February, Hanoi University of Pharmacy, Hanoi, Vietnam.
- P. Deevanhxay, Y. Kamimoto & R. Ichino. Electroplating of carbon black on Nickel plate. (Oral) *3<sup>rd</sup> Seminar on JSPS Core-to-Core Program (B. Asia-Africa Science Platforms) "Establishment of Research Hub for Compact Mobility Model in the ASEAN Region"*, 27 February, Nagoya, Japan.
- V. Phouthavong, K. Sereenochai, P. Prompinit, S. Manakasettharn & D. Viboonratanasri. Onlinemagnetic-solid phase extraction of phosphate in water using magnetite. (Oral) *3<sup>rd</sup> Seminar on JSPS Core-to-Core Program (B. Asia-Africa Science Platforms) "Establishment of Research Hub for Compact Mobility Model in the ASEAN Region"*, 27 February, Nagoya, Japan.
- K. Yourpor, B. Her, F. Mekaye, L. Vue, K. Phomkeona & P. Deevanhxay. Quantification and Characterization of Essential Oil in Lao *Aquilaria crassna*. (Poster) *3<sup>rd</sup> Seminar on JSPS Core-to-Core Program (B. Asia-Africa Science Platforms) "Establishment of Research Hub for Compact Mobility Model in the ASEAN Region"*, 27 February, Nagoya, Japan.
- S. Kongmany, K. Phomekona, L. Phomphong & P. Keobounthum. Investigation of chlorpyrifos and cypermethrin pesticide residue in some vegetable in Laos PDR. (Oral) *Seminar Science & Innovation in Thailand 4.0*, 3-4 July, Kampaengphet Rajabhat Univ., Thailand.
- K. Phomkeona, P. Phommaly, L. Mitsouphoun, V. Phouthavong & K. Phomkeona. Development of A Simple and Cost-effective Colorimetric Detection of Ammonium Using Membraneless-Vaporization (MB-LVP) Technique. (Poster) *Seminar Science & Innovation in Thailand 4.0*, 3-4 July, Kampaengphet Rajabhat Univ., Thailand.
- P. Deevanhxay, T. Yangchuthao, B. Souako, D. Leelianou, S. Khanthavong, Chaleunniapao & K. Phomkeona. Quantification of Organochlorine Pesticide Residue in *Curcuma Xanthorrhiza* by Gas-Chromatography-Mass spectrometry. (Oral) *Int. and Nat. Res. Conf. on Diversity, Environment, Sci., Technol. and Innov.*, 5-6 Nov., Vientiane, Laos.

- S. Kongmany, V. Chounlamany, P. Keobountham, S. Khanthavong, Hongxeng & Huay-Mark-Heiw. Domestic wastewater quantity surveillance in Vientiane Capital of Lao PDR. (Oral) *Int. and Nat. Res. Conf. on Diversity, Environment, Sci., Technol. and Innov.*, 5-6 Nov., Vientiane, Laos.
- P. Deevanhxay, Y. Kamimoto, S. Okura, T. Hagio, T. Wada & R. Ichino. Electroplating of carbon black on Nickel plate. (Oral) *4<sup>th</sup> Seminar on JSPS Core-to-Core Program (B. Asia-Africa Science Platforms) "Establishment of Research Hub for Compact Mobility Model in the ASEAN Region"*, 13-14 December, Nagoya, Japan.
- K. Phomkeona, Y. Takeuchi, S. Motoshima, T. Hagio & Y. Kamimoto. Energy storage by formation of methane hydrate. (Poster) *4<sup>th</sup> Seminar on JSPS Core-to-Core Program (B. Asia-Africa Science Platforms) "Establishment of Research Hub for Compact Mobility Model in the ASEAN Region"*, 13-14 December, Nagoya, Japan.
- V. Phouthavong, S. Nijpanich, T. Hagio, Y. Kamimoto & R. Ichino. Possibility studies of rice husk as a silica source for preparation of MFI zeolite particles. (Poster) *4<sup>th</sup> Seminar on JSPS Core-to-Core Program (B. Asia-Africa Science Platforms) "Establishment of Research Hub for Compact Mobility Model in the ASEAN Region"*, 13-14 December, Nagoya, Japan.

## 2019

- V. Phouthavong, T. Hagio, V. Chounlamany, M. Hiraiwa, S. Nijpanich, T. Nishihama, Y. Kamimoto & R. Ichino. Preparation of Magnetic BEA-type Zeolite via Dry-Gel Conversion, 3R. *International Scientific Conference on Material Cycles and Waste Management*, 27 Feb – 3 Mar 2019, Bangkok, Thailand.
- V. Chounlamany. Roles of Women in Department of Chemistry. *Symposium for Women in Chemistry (OPCW)*, 23 – 25 Jun 2019, The Hague, Netherlands.
- V. Phouthavong & S. Vongsa. CBRN in Laos. *Regional Workshop P61: Laboratory Training (EU)*, 15 – 19 July 2019, Singapore.
- V. Phouthavong, H. Inoue, P. Phommaly, L. Mitsouphon, V. Chounlamany & K. Phomkeona. A simple separation unit for colorimetric detection of solid and colored liquid samples. *International Research Forum on Science, Technology and Innovation for Sustainable Development*, NUOL, 5-6 Nov. 2019, Vientiane, Laos.
- P. Deevanhxay, K. Huexiachai, T. Xailamoua, K. Vilaithong & B. Sengthongsa. Quantification of vitamin C and quercetin in *Spondias pinnata* by HPLC. *International Research Forum on Science, Technology and Innovation for Sustainable Development*, NUOL, 5-6 Nov. 2019, Vientiane, Laos.
- S. Keoinpaeng, V. Chounlamany, P. Deevanhxay, S. Kongmany, V. Phouthavong, A. Chandavong, B. Sengthongsa, M. Xayyakham, B. Inthaleuxay, K. Xomviman & P. Mokxom. Survey and analysis of water quality in Phou Chom Voy Provincial Protected Area of Bolikhamxay Province. *International Research Forum on Science, Technology and Innovation for Sustainable Development*, NUOL, 5-6 Nov. 2019, Vientiane, Laos.

## Arranged events

### 2011

- Workshop on Quality Control in Analytical Chemistry and Pesticide Residues Analysis. Department of Chemistry, NUOL, Vientiane, Laos, 25-27 January 2011.
- Training course on using GC-MS, on an instrument donated by Stockholm University through Mr. Michael Strandell, Department of Chemistry, NUOL, Vientiane, Laos, 31 January – 11 February 2011.
- Mr. Michael Strandell from Stockholm University spent two weeks at Department of Chemistry, NUOL in the propose of giving training on the operation of GC-MS and data evaluation and also checking the instrument. October 31-November 14, 2011.

**2012**

Training course on Analytical Instrumentation at Department of Chemistry, NUOL, Vientiane, Laos, 9-21 April 2012.

**2013**

Theoretical and practical training course on analytical instruments, 18-30 March 2013, Dept. Chemistry, NUOL, Vientiane, Laos

Seminar on method development of spiked recovery test on multi residue analyses of organochlorine and organophosphorus pesticide, 8-9 Apr. 2013, Dept. Chemistry, NUOL; Vientiane, Laos.

**2014**

Course on Instrumentation and Water sampling and analysis, Department of Chemistry, NUOL, Vientiane, Laos. 6-10 October 2014.

**2015**

Training course on chromatography (GC/MS) quantification and quality assurance, Dept. Chemistry, 15-29 May 2015, NUOL, Vientiane, Laos. (12 participants)

**2016**

Gas chromatography-Mass spectrometry training, 5-14 October 2016, NUOL, Vientiane, Laos. (5 participants)

**2017**

The 5<sup>th</sup> ANFEC Training Program on Gas Chromatography (GC/MS), Quantification and Quality Assurance at Dept. Chem., NUOL, Vientiane, Laos, 9-27 January 2017. (18 participants)

Annual Meeting of the ANFEC Committee, Dept. Chem., NUOL, Vientiane, Laos, 25 January 2017. (5 participants)

Introductory training on operation of LC-MS/MS, NUOL, Vientiane, Laos, 26-30 November 2017. (5 participants)

**2018**

Training course on Analysis of Heavy Metals Contaminant in Soil and Water by Atomic Absorption Spectrophotometry Technique, Dept. Chem., NUOL, 21-23 August., co-organized with Environment Protection Fund and World Bank. (25 participants)

**2019**

The 7th ANFEC Training Program on Gas Chromatography (GC/MS), Quantification and Quality Assurance at Chemistry Department, NUOL, Vientiane, Laos, 11 February to 1 March. (20 participants)

Annual Meeting of the ANFEC Committee, Dept. Chem., NUOL, Vientiane, Laos, 28 February 2019. (4 participants)

**Other activities and results****2011**

Vanpaseuth Phouthavong attended a training course on *Analytical Skills Development* at Helsinki, Finland. May 27- June 10, 2011

Vanpaseuth Phouthavong was sent to attend the *Research Review meeting* as a representative for the ANFEC proposal defense and also *the ISP 50<sup>th</sup> Anniversary Seminar* at Uppsala University, Sweden during September 21-27, 2011.

Santi Kongmany and Vanpaseuth Phouthavong attended a training course on Quality Control and Quality Assurance in POPs Analysis, at Royal University of Phnom Penh, Cambodia. October 03-22, 2011.

Santi Kongmany attended a training course on Assess and Develop Capacity to Identify Foodborne Diseases at Women Union, Vientiane, Laos PDR. November 23-25, 2011.

Three group members attended a workshop on SPS Risk Evaluation in Lao PDR (Food Safety). Vientiane province, Lao PDR. December 12-16, 2011.

A Japanese internship student, Mr. Kazuyuki Tsuzuki spent two weeks working with the group. His internship program was granted by Toyohashi University of Technology, Japan. August 2-14, 2011.

A MFS Swedish student, Ms. Sofia Carlsson spent her internship program working on installation of the hydride generation system in AAS for arsenic analysis at the Department of Chemistry, June 10-August 15, 2011.

## 2012

Vanpaseuth Phouthavong was sent to attend the first meeting about launching of the ANFEC network and also the *Seminar on Organic Pollutants in Food, Agricultural Products and Environment* at University of Dhaka, Bangladesh. January 16-18, 2012.

## 2015

Dr. Vanseng Choulamany participated in the Result Based Management Workshop of the "Non-Toxic Environment and Risk Reduction for Sustainable Development Research Network in Southeast Asia", Bangkok, Thailand, provided by the Regional Development Section of the Swedish Embassy in Bangkok, 21-23 January 2015.

Michael Strandell (M) and Ulla Eriksson (F), Stockholm Univ., Sweden, visited Dept. Chem., NUOL, in February 2015, to check the condition of the GC/MS and other instruments, and discuss the possibility of arranging a training course at NUOL.

Dr. Yuki Kamimoto (M), Nagoya Univ., Japan, visited Dept. Chem., NUOL, in April 2015., to discuss staff and scientific exchanges.

Dr. Kesiny Phomkeona and Ms. Sysavad Louangsysouphan contributed to a meeting on Development of National Standard for Quality Control of Traditional Medicine in Lao PDR, at Institute of Traditional Medicine, Vientiane, 21 August 2015.

Dr. Soda Chanthamath (M), Toyohashi Univ. Technol., Japan, visited Dept. Chem., NUOL, in October 2015 to discuss possible research collaboration on bioactive compounds in traditional medicine.

## 2016

Sopha Keoingpeng gave an account for "ASEAN research networking on food analysis", presented at the National Institute of Public Health, 24-26 October 2016, Vientiane, Laos.

Kesiny Phomkeoa (F) and Phengxay Deevanxay (M) were awarded best young researcher at the 20<sup>th</sup> Anniversary of National University of Laos, Vientiane, 2016.

Santi Kongmany (M) participated in the ANFEC-NITUB Training Program, Dept. Chem., Univ. Dhaka, Bangladesh, 11-30 January 2016.

Michael Strandell (M) and Ulla Eriksson, Dept. Environ. Sci. Analyt. Chem. (ACES), Stockholm Univ., Sweden, visited Dept. Chem., NUOL, in February 2016 to install a donated LC-MS/MS, to check the condition of GC/MS and other instruments in the lab, and to discuss the possibility of arranging a next training course in NUOL.

Kesiny Phomkeona (F) and Vanseng Choulamany (F) paid a research visit to Khon Kaen University, Thailand 5-7 July, 2016.

Seiji Iwasa (M), Dept Environ. Life Sci., Toyohashi Univ. Technol., Japan, visited the group 26 October 2016 to present his research on pesticide test kits.

Soda Chanthamath (M), Dept. Environ. Life Sci., Toyohashi Univ. Technol., Japan, visited the group 26 October 2016 and gave a presentation on "The Important Role of Organic Chemistry: Efficient Asymmetric Synthesis of Bioactive Compounds".

## 2017

- Prof. Seiji Iwasa (M) and Dr. Soda Chanthamath (M), Dept. Environ. and Life Science, Toyohashi Univ. Technol., Japan, visited Dept. Chem., NUOL, 6-8 February 2017, to discuss about student exchange program.
- Dr. Kesiny Phomkeona (F) and Dr. Phengxay Ddeevanhxay (M) paid a visit to Ritsumekan Univ., Japan, 23-25 February 2017, for an International collaborative research meeting.
- P. Deevanhxay, B. Her, F. Mekaye, L. Vue & S. Koeingpheng. Characterization and Quantification of Bioactive Compounds in Some Medicinal plants of Laos. Presentation at the International collaborative research meeting at Ritsumekan University, Japan, 23-25 February 2017.
- P. Deevanhxay, L. Souama, N. Konephanthavong, S. Chaleunniapao & K. Phomkeona. Quantification of Phyllanthin in Lao *Phyllanthus amarus*. Presentation at the International collaborative research meeting at Ritsumekan University, Japan, 23-25 February 2017.
- Prof. Ken Tanaka (M), Dept. Pharmacy, Coll. Pharmaceut. Sci., Ritsumekan Univ., Japan, visited Dept. Chem., NUOL 1-3 March 2017, to discuss about possible collaboration on bioactive compounds in medicinal plants of Laos.
- Dr. Kesiny Phomkeona (F), Dr. Vanseng chounlamany (F), Dr. Santi Kongmany (M) and Dr. Phengxay Ddeevanhxay (M) paid a visit to four Thai Universities (Chulalongkorn, Thammasat, AIT and Bualapha University), Thailand. 7-11 March 2017.
- S. Kongmany & P. Deevanhxay. Seminar for undergraduate students on organochlorine pesticides in medicinal plants and the environment, 22 March 2017, Dept. Chem, NUOL, Vientiane, Laos. (52 participants)
- Kesiny Phomkeona (F) attended a Project Steering Committee Meeting on Polychlorinated Biphenyl (PCB) Management and Disposal, 29 March 2017, at the Energy Sector at Ministry of Natural Resources and Environment, Vientiane, Laos.
- Prof. Hidehiro Sakurai (M), Dept. Appl. Chem., Osaka Univ., Japan, visited Dept. Chem., NUOL 11-12 May 2017, to discuss Sakura Sci. Progr. for staff exchange.
- P. Deevanhxay gave a training course on Analysis of Heavy Metals in Medicinal plants by AAS, 24-28 July 2017, for staff at the Institute of Traditional Medicine, Vientiane, Laos. (8 participants)
- Dr. Santi Kongmany (M) paid visit to Dept. Chemistry, Champasuck Univ., Laos, 7-10 September 2017.
- S. Kongmany gave a training course on Pesticides Analysis by GC/ECD, 13-17 November 2017, for staff and researchers at the Dept. Chem. of Champasuck University. (10 participants)
- Mr. Michael Strandell (M) and Dr. Tomas Alsberg (M), Dept. Appl. Environ. Sci., Stockholm Univ., Sweden, visited Dept. Chemistry, NUOL 20 November - 9 December 2017, to install an LC/MS MS and they conducted training on the operation.
- Mr. Sopha Keoingpheng (M) paid visit to Dept. Appl. Chem., Osaka Univ., 23 November - 2 December 2017.
- Assoc. Prof. Vudtichai Parassuk (M) Dept. Chem., Chulalongkorn Univ., Thailand, visited NUOL 27-28 December 2017, to discuss about a student exchange program and gave a workshop on Computational Chemistry.

## 2018

- Assist. Prof. Yuki Kamimoto (M), Nagoya Univ., Japan, visited Dept. Chem., NUOL, 5-6 February to discuss research collaboration on methane hydrate formation and utilization of waste materials for the removal of chemical contaminants in water.
- Dr. Phengxay Deevanhxay (M) and Mr. Vanpasueth Phouthavong (M) paid a research visit to Inst. Materials Innovation, Inst. Innovation for Future Society, Nagoya Univ., Japan, 25 February - 1 March.
- Dr. Takeshi Hagio (M), Nagoya Univ., Japan, visited Dept. Chem., NUOL in March to discuss research exchange regarding the utilization of waste materials for the removal of chemical contaminant in water.



Kesiny Phomkeona participated in the workshop “Trends in quality management – improving your laboratory’s proficiency”, 25-27 July, Jakarta, Indonesia.

The chemistry group provided consultation and assistance to the Department of Hygiene and Health Promotion, and has analysed arsenic in samples of groundwater from the disaster area of Sanamxay District that was damaged from the dam collapse on Aug. 2018.

Kesiny Phomkeona (F) attended a Project Steering Committee Meeting on Polychlorinated Biphenyl (PCB) Management and Disposal, 5 September 2018, at the Energy Sector at Ministry of Natural Resources and Environment, Vientiane, Laos.

Kesiny Phomkeona (F) attended a National Action Plan Formulation Workshop, 19-20 September 2018, Vientiane, Laos; Project: Development of Minamata Initial Assessment (MIA) and Updating of National Action Plan (NAP) for Artisanal and Small-Scale Gold Mining in Lao PDR.

Dr Vanseng Chounlamany (F) was awarded an Erasmus+ K107 International Credit Mobility to visit the Dept. Chem., Uppsala University. The visit took place 9-22 September.

Mr Vanpasueth Phouthavong (M; 10-30 Sep) and Dr Kesiny Phomkeona (F; 24-30 Sep) paid research visits to Inst. Materials Innovation, Inst. Innovation for Future Society, Nagoya Univ., Japan.

Kesiny Phomkeona (F) attended a Workshop on Globally Harmonized System of Classification and Labeling of Chemical (GHS) at Ministry of Industry and Commerce, Vientiane, Laos, 5-6 December.

In 2018, Dr Santi Kongmany (M) was promoted to Director of the Center of Excellence in Environment at NUOL.

The chemistry group collaborates with Water Management Institute Lao PDR (IWMI), National Agriculture and Forestry Research Institute (NAFRI), and Ministry of Agriculture and Forestry to survey contamination of organochlorine pesticides in a banana farm (North of Laos). Results of analyses were reported to the Lao government for further management.

The chemistry group collaborates with Ministry of Health (MoH) by providing analysis data of organochlorine pesticide and some heavy metals (As, Pb, Hg and Cd) contaminants in medicinal plants sample from Institute of Traditional Medicine. In addition, a training course was provided, on the extraction method and how to analyze the sample by using AAS at their institute.

The chemistry group collaborates with the Department of Pollution Control, Ministry of Natural Resources and Environment, to provide a consultation on their project about POPs and PCB. From the first discussion, the Ministry has requested the group to analyze the contamination of PCB in transformer oil in Vientiane Capital and to write a textbook of Persistent Organic Pollutant (in Lao language) to use for environmental curriculum program of NOUL undergraduate students.

## 2019

Assoc. Prof. Dr. Yuki Kamimoto (M) from Nagoya University, Japan, visited Dept. of Chemistry, NUOL in 5-6 April, to discuss about possible research collaboration on the utilization of waste materials for the removal of some chemical contaminant in water. The visit was funded by Nagoya University.

Vanphasueth Phouthavong (M), attended a Workshop of Asia Pacific Food Analysis Network (APFAN), in Bangkok, Thailand 19-21 June.

Vanpasueth Phouthavong (M) paid a research visit to Institute of Materials Innovation, Institute of Innovation for Future Society, Nagoya University, Japan, 13-20 Oct. The visit was funded by Nagoya University.

From 2014, the research group at Department of Chemistry, National University of Laos, provides services on sample testing to other sectors such as the National Institute of Medicinal Plants. Results from the experiments has provided them with supplementary information for issuing standards of Lao medicinal plants. Both group members and staff

from other sectors are given opportunities to take part in laboratory work, allowing them to gain knowledge and experience.

Cooperation between ANFEC network with local government and private sectors is one of our network purposes. Therefore, staff from other organization in Laos, such as Ministry of Health, Ministry of Agriculture, Ministry of Natural Resources and Environment were invited to the ANFEC training program 2019. When those staff had finished the training course and returned to their organization, their knowledge could be applied and spread to other group members, students and society for future communication and collaboration.

### c) Activity Development at NUOL Physics

#### Support to the Geophysics Unit, Department of Physics, National University of Laos (NUOL)

The main activities and results, as reported to ISP, are as follows (results reported in 2015 included in grey). Note that the total achievements of the research group are presented, part of which is SU-ISP funded.

#### Academic Theses

##### 2014

Sounthone Singsoupho, Rock magnetism and palaeomagnetism of the Mesozoic to Tertiary rocks in Lao PDR. (PhD, September, Prince of Songkhla University, Hat Yai, Thailand)

#### Scientific publications

##### 2014

Singsoupho, S., Bhongsuwan, T., and Elming, S-Å. (2014) Tectonic Evaluation of the Indochina Block during Jurassic-Cretaceous from Palaeomagnetic Results of Mesozoic Redbeds in Central and Southern Lao PDR. *J. Asian Earth Sci.*, 92, 18–35, DOI: 10.1016/j.jseaes.2014.06.001.

##### 2018

Singsoupho, S., Bhongsuwan, T. & Elming, S-Å. (2018). Deformation in Jurassic-Cretaceous Redbeds from Champasak and Khammouane, Lao PDR, Revealed by Anisotropy of Magnetic Susceptibility. *Chiang Mai Journal of Science*, 45(1)576-587.  
Sompaserth, S., Singsoupho, S., Xayavong, V., Xaunsuandao, T. (2018) Structural Geology.<sup>11</sup> (This is a book written in the Lao language and summarizes basic concepts of geology and structural geology for geophysics students at National University of Laos.)

##### 2019

Leuangtakoun, S., Loat, B. V, Hong, B. T., & Thang, D. Đ., Singsoupho S. (2019). Assessment of Natural Radioactivity and Associated Radiation Hazards in Soils samples from Khammuan Province, Laos. *VNU Journal of Science: Mathematics – Physics*, 35(2)1-11. DOI: 10.25073/2588-1124/vnumap.4318

##### 2020

Bui, V. L., Leuangtakoun, S., Hong, T., Thi, B., Duyen, K., Le, N. Thiem, V., Duong, T.D., Singsoupho, S., & Trun, H. N. (2020). Natural radioactivity and radiological hazards in soil samples in Savannakhet province, Laos. *Journal of Radioanalytical and Nuclear Chemistry*, 323:303–315. DOI: 10.1007/s10967-019-06965-0  
Xayavong, V., Singsoupho, S., Sompaserth, S. & Sounsundao, T. (2020). Gravity prospecting.<sup>3</sup>  
Singsoupho, S., Sompaserth, S. & Sounsundao, T. (2020). Electromagnetic prospecting.<sup>3</sup>

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<sup>11</sup> This is a book written in the Lao language and summarizes basic concepts of geology and structural geology for geophysics students at National University of Laos.

## Contributions at Scientific Meetings

### 2011

- V. Xayavong, S. Keophilavong, T. Sounsouandao, S. Xayheuangsy, S. Leungtakoun.  
Application of Electrical Resistivity Survey for Groundwater Investigation in Phon Hong District of Vientiane Province, Lao PDR. *2nd Academic Conference on Natural Science for Master and PhD Students from Cambodia, Laos, Malaysia, Vietnam (CLMV-02)*, Vinh City, 11-15 Oct 2011.
- Viengthong Xayavong, Application of electrical Resistivity survey for groundwater investigation in Phonhong district, Vientiane province Lao P.D.R. (Oral) *International Workshop on Higher Education for Sustainable Development and Today International Integration at 15th Anniversary of National University of Laos*, Vientiane, 3 Nov 2011.
- Sounthone Singsoupho, Sten-Åke Elming, Tripob Bhongsuwan. Rock magnetic, AMS, and Palaeomagnetic Studies of Neogene-Quaternary Basalts from Southern Laos. (Oral) *International Conference on Geology, Geochronology, and Mineral Resources of INDOCHINA (GEOINDO2011)*, Khon Kaen, Thailand, 1-3 December 2011.

### 2012

- Sounthone Singsoupho, Tripob Bhongsuwan and Sten-Åke Elming. Tectonic Evaluation of the Indochina Block during Jurassic- Cretaceous from Palaeomagnetic Results of Mesozoic Red Sandstones in Central and Southern Lao PDR. (Oral) *The 6th International conference on Applied Geophysics*, Nov., 15-17, 2012, Kanchanaburi, Thailand.

### 2017

- Singsoupho, S., Xayavong, V., Sompasert, S., Xouansouandao, T. & Bhongsuwan, T.  
Application of 2D-ERT and Seismic Refraction for Delineation of Gypsum of Nadone Village Thakhek District, Khammouane province, Lao PDR. (Oral) *CASEAN-2017 Conference*, 4-7 October, Dalak, Vietnam.
- Singsoupho, S. & Bhongsuwan, T. Natural radioactivity measurements and radiation dose assessment in Mesozoic sedimentary rock samples from central and southern Lao PDR. (Oral) *International Research Conference on Conservation and Development*, 23 November 2017, Luang Phrabang, Laos.

### 2018

- Sounthone Singsoupho. Application of 2d-Ert And Seismic Refraction for Delineation of Gypsum at Nadone Village, Thakhek District, Khammouane Province, Lao PDR. (Oral) *International Conference on the East African Rift System and Commemorating 25 Years of ESARSWG*, 8-10 October, Dar es Salaam, Tanzania.
- Singsoupho, S., Bhongsuwan, T. & Elming, S-Å. Rock magnetism and Anisotropy of Magnetic Susceptibility of Permo-Triassic Rocks in Northern Laos. (Oral) *8<sup>th</sup> International Conference on Applied Geophysics*, 8-10 November, Songkhla, Thailand.
- Xayavong, V., Singsoupho, S., Sompasert, S. & Xaunsouandao, T. Groundwater Investigation Using Electrical Resistivity Tomography in Savannakhet Province, Laos. (Oral) *8<sup>th</sup> International Conference on Applied Geophysics*, 8-10 November, Songkhla, Thailand.

### 2019

- Xayavong, V., Vu, D.M., Do, A. Ch., Xayheuangsy, S. & Sounsouandao, T. Study the Possibility of Applying the Advanced 2D Multi-Electrode Electrical Exploration Method to Find Groundwater in Vientiane Province, Laos. *The 6<sup>th</sup> International Conference on Applied and Engineering Physics (ICAEP)*, 22-26 October, Thai Nguyen City, Vietnam.

## **Other activities and results**

### **2011**

Sountone Singsoupho carried out research work at the Palaeomagnetic Lab, Lulea University of Technology, Sweden, April to June.

### **2012**

Sountone Singsoupho carried out research work at the Palaeomagnetic Lab, Lulea University of Technology, Sweden, April to June and also spent two weeks at Lund University. Viengthong Xayavong and Sonexay Xayheuangsy were trained on radiometric prospecting at Prince of Songkla University, Thailand, 15 November to 15 December 2011.

### **2015**

Dr. Sounthone Singsoupho paid a research visit to the paleomagnetic lab at the Geophysics Res. Ctr, Prince of Songkla University, Thailand.

### **2016**

Research activities focused on groundwater investigations were run in Atsaphangthong District of Savannakhet Province for assessment of groundwater conditions to determine the depth to groundwater table/aquifers and delineate fresh and saline groundwater due to salt affected groundwater. Two pilot wells were dug to confirm the geophysical results and for future water supply to two secondary schools, Samakkhixai and Lienxai.

### **2017**

Dr. Sounthone Singsoupho (M) and Ms. Sackxay Sompaserth (F) visited the Palaeomagnetic Lab at Geophysics Res. Ctr., Prince of Songkla Univ., for 20 days, to measure the anisotropy of the magnetic susceptibility using the Kappabridge KLY-3S of 150 samples.

### **2018**

All four geophysics staff members received the academic position as lecturers. One has received the administration position of Deputy Head of Department. A Lao-Australia Groundwater Geophysics Short Course was held 16-23 March in Vientiane, Laos, organized with Flinders University, Adelaide, Australia. (13 part.) Sounthone Singsoupho (NUOL) was part of the organizing committee of the 8<sup>th</sup> International Conference on Applied Geophysics, 8-10 November, Hat Yai, Thailand, organized by Prince of Songkla University.

### **2019**

Workshop on Structural Geology, held in NUOL, 20-22 September. (25 participants)  
The geophysics team assists the SUNWIP project<sup>12</sup> with investigation of groundwater in Savannakhet central part of Laos. The purpose is to define groundwater potential zones to support the local community.  
Staff of the Geophysics Unit contributed to a training workshop for assistant staff and students in the Department of Physics, Savannakhet University, Laos.

### **2020**

Workshop on Ore Deposit and Rare Earth Element deposit, held in NUOL, 14-15 January. (50 participants)

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<sup>12</sup> [www.ces.de/scaling-up-nutrition-and-wash-infrastructure-sunwip/](http://www.ces.de/scaling-up-nutrition-and-wash-infrastructure-sunwip/)

## **d) Activity Development of ANFEC**

### **Asian Network of Research on Food and Environment Contaminants (ANFEC)**

The main activities and results, as reported to ISP, are as follows (results reported in 2015 included in grey). Note that the total achievements of the scientific network are presented, part of which is SU-ISP funded.

#### **Arranged events**

##### **2011**

ANFEC Workshop on Quantification and Quality Assurance; Theory and practical training in extraction, cleanup and analysis of real samples and the evaluation of data, focused on samples of fish and contamination with PCBs and DDTs. Department of Chemistry, Royal University of Phnom Penh, Cambodia, 3-21 October 2011.

##### **2012**

ANFEC Steering Committee Meeting at Department of Chemistry, NUOL, Vientiane, 5-6 March 2012.

The 1<sup>st</sup> ANFEC training workshop on Environmental Contaminant Analysis. Department of Chemistry, Royal University of Phnom Penh (RUPP), Cambodia, 18-20 December 2012.

##### **2014**

ANFEC Steering Committee Meeting at Department of Chemistry, NUOL, Vientiane, 5 September 2014.

The 2<sup>nd</sup> ANFEC training workshop on Quality Assurance and Quality Control, RUPP, Cambodia, 2-20 January 2014.

##### **2015**

The 3<sup>rd</sup> ANFEC training/workshop on chromatography (GC/MS), quantification and quality assurance. Chemistry department, Royal University of Phnom Penh, Phnom Penh. Cambodia, 19 January to 6 February. (18 participants)

##### **2016**

The NITUB Regional Training Programme and 4<sup>th</sup> ANFEC Workshop on Gas Chromatography, Quantification and Quality Assurance, Department of Chem. and Centre of Advanced Research in Science, University of Dhaka, Dhaka, Bangladesh, 11-29 Jan. (14 participants)

##### **2017**

The 5<sup>th</sup> ANFEC Training Program on Gas Chromatography (GC/MS), Quantification and Quality Assurance at Department of Chemistry, NUOL, Vientiane, Laos, 9-27 January (18 participants)

##### **2018**

The 6<sup>th</sup> ANFEC training/workshop in chromatography (GC/MS), quantification and quality assurance, 27 January to 16 February, Camcontrol, Phnom Penh, Cambodia. (18 participants)

##### **2019**

The 7<sup>th</sup> ANFEC Training Program on Gas Chromatography (GC/MS), Quantification and Quality Assurance at Chemistry Department, NUOL, Vientiane, Laos, 11 February to 1 March. (20 participants)

**2020**

The 8<sup>th</sup> ANFEC Training Workshop in Chromatography (GC/MS), Quantification and Quality assurance, 27 January to 14 February, Camcontrol, Phnom Penh, Cambodia. (19 participants)



At the 8<sup>th</sup> ANFEC Training Workshop 2020, which was the final one conducted by Michael Strandell and Ulla Eriksson, Stockholm University, these very appreciated teachers were warmly thanked for their long and dedicated work to develop and conduct the course since 2011. Photo by ISP.

In the ANFEC Steering Committee meeting held 14 February 2020 in Phnom Penh, it was decided to review the results of the ANFEC workshops 4-8 with the aim to compile the analytical data in a manuscript for publication in a suitable scientific journal, such as Chemosphere or Science of the Total Environment.

## Agreement of Cooperation

(hereinafter the Agreement)

between

Faculty of Science, Stockholm University,  
Stockholm, Sweden

and the

International Science Programme (ISP),  
Uppsala University, Uppsala, Sweden

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Recognizing the long-lasting collaboration between ISP and members of the Faculty of Science, Stockholm University, by ISP engaged as members of the Board, as members of the Scientific Reference Groups, as collaborating lecturers, and as supervisors to "sandwich" students from ISP supported research groups and scientific networks in developing countries, as well as from ISP coordinated Sida bilateral projects on research development support, an ambition has been expressed by both Parties to formalize the cooperation. The intention is furthermore to strengthen the cooperation by the extension of ISP services available to the Faculty of Science, Stockholm University, thereby including funding by the Faculty of Science, Stockholm University, of common activities mediated and coordinated by ISP (the Parties). A first agreement, comprising the years 2011-2015, was signed in December 2010 (Dnr ISP 2010/46 Dass 1:3). After evaluation in 2015, the Board of the Faculty of Science, Stockholm University (Stockholms universitets naturvetenskapliga fakultetsnämnd). 2015-09-16 decided on a continued contribution to ISP of 1 million SEK per year during 5 years, as established in this agreement.

Now therefore, the Parties have agreed as follows:

### **Article 1: Areas of Cooperation**

The overall objective of the Agreement is to further develop academic relations in the collaboration with third parties in developing countries, in the fields of science that are of common interest, by:

- 1.1 ISP administrating visiting researchers, lecturers, and students (participants) to the Faculty of Science, Stockholm University, as requested, including (fully or partly) the following:



- (a) preparation of visa/residence permit for participants, and documents needed for the process, such as letter of invitation, and insurance certificate.
  - (b) insurance for participants
  - (c) travel arrangements for participants
  - (d) accommodation for participants
  - (e) payment of monthly subsistence allowance for participants not registered as PhD students or staff at the Faculty of Science, Stockholm University
  - (f) social care of participants (including airport transfer, installation assistance, information package, and invitation to social gatherings and ISP fellow evenings).
- 12 ISP providing scientific coordination, as requested, including (fully or partly) the following:
- (a) Consultation regarding contacts with scientists and organisations in developing countries and assistance in development of such contacts
  - (b) Identifying possible scientific contacts and tentative cooperation partners within the ISP network of scientific and organizational contacts in developing countries
  - (c) When visiting development countries on other assignments, identifying tentative fields of scientific cooperation with contacts concerned
  - (d) Consultation in planning, developing and implementing projects in developing countries
  - (e) Facilitating communications between for example participants and cooperation partners/supervisors at the Faculty of Science, Stockholm University
  - (f) Assisting students at the Faculty of Science, Stockholm University to find projects of interest in developing countries, e.g. in the frame of Minor Field Studies, in particular with research groups supported by ISP, directly or in Sida bilateral projects
- 13 ISP carrying out evaluation of cooperation projects between the Faculty of Science, Stockholm University, and third parties in developing countries, as requested
- 14 ISP effectuating financial transactions with developing countries on behalf of the Faculty of Science, Stockholm University, as requested
- 15 ISP contributing to the organisation of scientific meetings in developing countries, as requested
- 16 ISP acting in common with the Faculty of Science, Stockholm University with regard to organisations such as Sida.

## **Article 2: Obligations**

In furtherance to this Agreement

2.1 The Faculty of Science, Stockholm University, agrees

- 2.1.1 To support the activities covered by the Agreement with a yearly contribution of 1,000,000 SEK for as long the Agreement remains valid.
  - (a) to effectuate any payments requested to be carried out by ISP as described in 1.1(c) and 1.1(e) with regard to ticket costs and/or subsistence allowances to Participants.
  - (b) to effectuate any payments requested to be carried out by ISP as described in 1.4 regarding transfer of funding from the Faculty of Science, Stockholm University, to third parties in developing countries, or.
- 2.1.3 To pay ISP 25,000 SEK per participant and year, plus insurance fee and what is prescribed in 2.1.2(a), for all services described in 1.1 for any number of Participants exceeding 10 (ten) in a year, in addition to what is agreed in 2.1.1.
- 2.1.4 To remunerate ISP for any costs ensuing as a result of activities outside Sweden, including travels, as a consequence of requests of services as described in 1.5.
- 2.1.5 To distribute maximum 500,000 SEK of the support as given in 2.1.1 to specified common activities subject to separate agreement between the Parties.
- 2.1.6 To consider the interest of both Parties in contacts according to 1.6

2.2 ISP agrees

- 2.2.1 To effectuate services as described in 1.1 for up to ten (10) participants yearly within the support given in 2.1.1 provided that the condition given in 2.1.2(a) is fulfilled, that is, costs for travels, 1.1(c), and subsistence allowance, 1.1(e), is provided separately by the Faculty of Science, Stockholm University, or by any third party in agreement with the Faculty of Science, Stockholm University.
- 2.2.2 To effectuate services as described in 1.2 within the support given in 2.1.1.
- 2.2.3 To effectuate services as described in 1.3 subject to separate agreement on terms of reference and additional financing by the Faculty of Science, Stockholm University.
- 2.2.4 To effectuate services as described in 1.4 under the conditions given in 2.1.2.
- 2.2.5 To effectuate services as described in 1.5 within the support given in 2.1.1, provided that the condition given in 2.1.4 is fulfilled.
- 2.2.6 To consider the interest of both Parties in contacts according to 1.6.

## **Article 3: Management committee**

A Management Committee comprising two members of each of the Parties shall be responsible for the implementation of the collaboration and ensuring accomplishment of the activities envisaged shall be appointed. The Parties shall agree on the Chairmanship of the Committee and frequency of meetings. The Committee shall have the power to co-opt. Agreed minutes shall be made available to both Parties within four (4) weeks of meetings, and the minutes may when applicable serve as separate agreements for any additional activities

#### **Article 4: Finance**

- 4.1 The yearly contribution by the Faculty of Science, Stockholm University, shall, after considering any separate agreement as given in 2.1.5, be transferred to ISP upon request including terms of transfer. Request and transfer shall be accomplished within the first quarter each year during the validity of the Agreement.
- 4.2 Payment of any services described in Article 2, in addition to those as given in 2.2.1, 2.2.2 and 2.2.6, shall be transferred subject to agreement in each case.

#### **Article 5: Reporting**

ISP will provide the Faculty of Science, Stockholm University, with a yearly narrative and financial report of all activities carried out by ISP under the Agreement, up to the year after which the Agreement expires. The report shall be submitted 30 June, at the latest, regarding previous year, and can be part of ISP composite reporting.

#### **Article 6: Validity of this Agreement**

- 6.1 The terms of this Agreement shall be five (5) years from the date of signing the Agreement, provided that either party is free to terminate upon giving the other in writing ninety (90) days of notice.
- 6.2 Renewal of the agreement shall be determined at least thirty (30) days prior to expiry, and be preceded by evaluation of the activities within the frame of the Agreement, to be conducted in the final year of the agreement period, and executed as agreed between the Parties.
- 6.3 In case of termination of this Agreement, both Parties shall ensure that existing students involved will continue to receive agreed support and joint efforts of both parties hereto in respect of alternative arrangements, for the completion within reasonable time of their educational activities and the attainment of the relevant degrees awarded once they satisfy the degree requirements.

#### **Article 7: Review and Amendment of this Agreement**

This Agreement may be reviewed and/or amended in writing as need arises by the separate written agreement between the Parties, e.g. as described in Article 4. Such amendments, once approved by both Parties shall become part of this Agreement.

#### **Article 8: Dispute resolution**

In the event of any dispute or difference of opinion between the Parties arising out of or in connection with this Agreement, the Parties shall first endeavor to settle it amicably. If

however, the Parties fail to arrive at an amicable resolution the dispute shall be referred to an arbitrator agreed upon by the parties.

**Article 9: Force majeure**

Neither of the Parties to this Agreement shall be liable to the other nor held to be in breach of this Agreement to the extent that it is prevented, hindered or delayed in performance or observation of its obligations hereunder by reason of industrial action, strikes, lock-out, inability to obtain supplies, accidents or any cause or contingency whatsoever beyond its control.

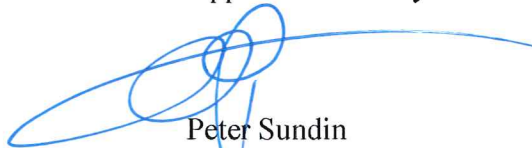
Stockholm December 16, 2015

Executed for the Faculty of Science,  
Stockholm University



Anders Karlhede,  
Dean, Faculty of Science

Executed for ISP,  
Uppsala University



Peter Sundin  
Head, ISP

**UTDRAG UR PROTOKOLL** vid  
sammanträde med Stockholms  
universitets naturvetenskapliga  
fakultetsnämnd 2015-09-16

Närvarande      Dekanus, professor Anders Karlhede, prodekanus professor Ylva Engström, professorerna, Lars Bergström, Lennart Bergström, Magnus Breitholtz, Tom Britton, Clas Hättestrand, Kerstin Iverfeldt, Lena Mäler, Sören Nylin, Cynthia de Wit, Ann-Kristin Östlund Farrants, universitetslektorer Maria Andrée och Catarina Rydin, universitetsadjunkt Birgitta Åkerman (SACO-rådet), facklig representant Daniel Emanuelsson (ST) samt studeranderepresentanterna Kerstin Larsson, Rebecka Töyrä och Josefin Velandér.

**ÄRENDE**

**ÅTGÄRD**

- |     |  |  |
|-----|--|--|
| 15. | Utvärdering av fakultetens stöd till International Science Programme (ISP) samt frågan om fortsatt stöd. | Områdesnämnden beslutar om fortsatt ekonomiskt stöd till ISP med 1 Mkr/år under 5 år. Eventuell fortsättning beslutas efter utvärdering av verksamheten. |
|-----|--|--|

Ur protokollet

Ewa Lach

# Appendix 4

## Möte mellan Naturvetenskapliga fakulteten vid Stockholms universitet och International Science Programme, Uppsala Universitet

Dag: Tisdag 5 april 2016  
Tid: från kl.10.30  
Plats: Stockholms universitet, Frescati (Stefans rum)  
Närvarande: Anders Karlhede (SU), Stefan Nordlund (SU), Leif Abrahamsson (UU), Peter Sundin (UU)

### Anteckningar

1. Val av mötesordförande och sekreterare

Stefan valdes till mötesordförande och Peter till d:o sekreterare.

2. Val av justeringsperson

Anders valdes till justeringsperson.

3. Fastställande av dagordning

Dagordningen fastställdes.

4. Anteckningar från föregående möte (16 december 2015), uppföljning; Bilaga 1

Punkt 5. Stefan har ej kontaktat Mohamed el Tom, och undrar om Bilal nu är med i ISPs styrelse. Leif meddelade att så är fallet och Peter att ett möte i juni ska sonderas med styrelsen. Stefan föreslog att då ett PACM-möte<sup>1</sup> skulle hållas i maj.

En diskussion fördes om turerna kring UDSM,<sup>2</sup> AIMS,<sup>3</sup> och NM-AIST.<sup>4</sup> AIMS lokaliserade sig inte till UDSM utan till Bagamoyo, inte knutet till UDSM. Peter pekade på möjligheten att ta upp finansieringsfrågan i samband med ISPs nu aktuella fundraising-aktiviteter. Kan finansieringsläget förbättras kan intresset att mobilisera insatsen från UDSMs sida öka. Möjligheten med lokalisering till NMAIST släpps ändå inte, intressant av andra skäl, trots avtalet med UDSM.

Leif informerade i samband med detta närmare om den nya styrelsen för ISP, 2016-2018, och sondering av kandidat till ny styrelsekategori.

Punkt 7. Punkten, som bland annat angav möjlig neddragning av Sidas bidrag till ISP 2016, rekapitulerades inför nuvarande mötes punkt 6. Sidas neddragning är nu bekräftad, deras bidrag till ISP minskades dock efter förhandling till 5 milj. kr, från 33 milj. kr till 28 milj. kr. (Ursprungligt neddragningsbud från Sida var 10 milj. kr).

5. Ekonomisk rapport för 2015; Bilaga 2

Stefan önskade ett klagörande om hur indirekta kostnader beräknats och hur negativ ränta, uppstått (och blivit en kostnad). Peter Sklarar ut detta med Peter R (ekonom på ISP) och återkopplar till styrgruppen.

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<sup>1</sup> PACM - Pan African Centre for Mathematics

<sup>2</sup> UDSM - University of Dar es Salaam

<sup>3</sup> AIMS - African Institute for Mathematical Sciences

<sup>4</sup> NM-AIST - Nelson Mandela African Institution for Science & Technology

6. Budget och planerade aktiviteter 2016; Bilaga 3

Budget och planerade aktiviteter 2016 godkändes.

7. Strategihandlingsplan 2016, sammanfattning; Bilaga 4

Handlingsplanen noterades och möjligheten att inkludera PACM som fundraisingprojekt föreslogs övervägas. ISPs "case statement" delades ut.

Ökning av bidraget från SU togs upp som en framtida diskussionsfråga, och befanns möjlig att ta upp mot slutet av nuvarande anslagsperiod, och i perspektiv av utvecklingen av PACM.

8. Övriga frågor

Leif informerade om att Sidas nästa bilaterala samarbete kan bli med Royal University of Phnom Penh (RUPP), i Kambodja, och att deras strategi i den ansatsen är att i startskedet basera insatsen huvudsakligen på ISPs nuvarande stöd vid RUPP Faculty of Science.

9. Nästa möte

Nästa ordinarie möte planeras till våren 2017, vid en tidpunkt när bokslutet för 2016 är klart och planerna för 2017 kan presenteras. Peter uppdras kalla med en "doodle" i början av året. Om möte behövs dessförinnan, initieras detta av den/de styrgruppsmedlem/ar som så anser det vara påkallat.

10. Mötet avslutas

Avslutades 11.39



Peter Sundin  
sekreterare



Stefan Nordlund  
mötesordförande



Anders Karlhede  
justeringsperson

## Årligt möte med styrgruppen för samarbetet mellan Naturvetenskapliga fakulteten vid Stockholms universitet och International Science Programme, Uppsala Universitet

Dag: Onsdag 24 april 2017  
Tid: Kl.13.00 - 14.15  
Plats: Stockholms universitet, Frescati (Stefans rum)  
Kallade: Anders Karlhede (SU), Stefan Nordlund (SU), Leif Abrahamsson (UU), Peter Sundin (UU)

### Anteckningar

1. Stefan valdes till mötesordförande och Peter till sekreterare.
2. Anders valdes till justeringsperson.
3. Dagordningen fastställdes.
4. Anteckningar från föregående möte (5 april 2016)

Bilaga 1

Anteckningarna lades till handlingarna.

#### Uppföljning:

Anders och Stefan var i Tanzania i höstas, träffade bl.a. Mohamed Bila! och Eunice Mureithi (prefekt för Dept. Math., UDSM). Kom överens om att göra aktualisering av gällande MoU. Detta kom till stånd och finns, säger att arbetet för att inrätta PACM ska fortsätta, UDSM ska stå för vad de lovat tidigare. SUs Samverkansavdelning kommer att utgöra stöd i det fortsatta arbetet med fundraising, Stefan har haft två möten med dem.

Stefan undrar hur mycket svenska ambassaden i DSM vet om PACM? Detta är okänt, sondera med Ernst om lämplig kontaktperson på ambassaden (hänvisar till Ulf Källstig, ulf.kallstig@gov.se, är nytillträdd chef för utvecklingssamarbetet med Tanzania).

När det gäller TWAS meddelades att Prof. Mohammed Hassan är tillbaka som Acting Executive Director.

Stefan arbetar vidare med PACM tillsammans med handläggarna på SU. Finansieringsansträngningarna kommer bl.a. att riktas mot företag. Möjligheten att söka finansiering tillsammans med ISP påtalades.

Leif vidarebefordrade information från Paul Vaderlind om att UoN, UDSM och Makerere tänkte söka pengar för "emerging center of excellence" utgående från EAUMP, men vad är relation till PACM? Paul bör involveras och utreda detta.

Peter nämner ISPs relation till African Academy of Science, som kan vara en möjlig partner.

Peter informerar om ny Sida-handläggare för ISP, Fanny Von Heland.

Stefan undrar om högre nivå-kontakter på Sida avseende PACM. Leif och Peter nämner

- AnnaMaria Oltorp (Chef, Enheten för forskningssamarbete, annamaria.oltorp@sida.se),
- Johanna Värlander ("initierad forskningssekreterare" på Afrikaavdelningen, Johanna.Varlander@sida.se),
- Claes Kjellström ("initierad forskningssekreterare" på Afrikaavdelningen, Claes.Kjellstrom@sida.se),
- Annika Jayawardena numera chef för utvecklingssamarbetet med Etiopien),
- Hanna Akuffo ("senior advisor" på Enheten för forskningssamarbete, Hannah.Akuffo@sida.se),
- Lena Ingelstam (Chef, Avdelningen för partnerskap och innovation, lena.ingelstam@sida.se).

Peter informerar om ny ISP styrelseledamot, Hans Corell.

Peter informerar om i oktober 2016 återtagen neddragning av Sida.



5. Ekonomisk rapport för 2016;

Bilaga 2

Rapporten godkändes med en uppmaning att till nästa år dela upp aktiviteter med bättre specifikation av kostnaderna, särskilt för PACM.

6. Budget 2017

Bilaga 3

Budgeten fastställdes med förbehållet att om PACM-aktiviteten drar igång, kan kostnaderna för det behöva öka på bekostnad av budgeterade kostnader för utvärderingarna.

7. Övriga frågor

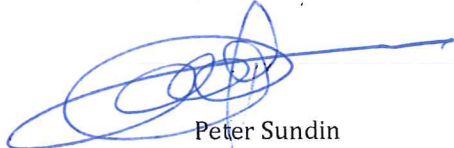
- a) Leif informerar om EAUMP-utvärderingen. Skicka länken tillsammans med minnesanteckningarna.
- b) Leif informerar om nytt call på gång för nästa programfas i Rwanda, med start 1 juli 2018. Det bör övervägas om det kan vara aktuellt med andra möjliga SU-institutionssamarbeten.
- c) Peter informerar om nytt call på gång för nästa programfas i Bolivia. Universiteten där skriver i juli "Concept note" som underlag.
- d) Peter informerar om läget i utvecklingen av Sidas bilaterala program med Royal University of Phnom Penh i Kambodja. Leif skickar under mötet information till Anders om nuvarande call för samarbetspartners i biologi.
- e) Peter informerar om ISPs avtal med Sida, som löper ut 31 december 2018, om avsikten att ta fram en ny strategisk plan för ISP 2018-2021, samt ISPs förväntningar avseende Sidas utvärdering av nuvarande programfas och ansökan om en nästa.

Stefan och Anders bad att information om framtida calls ska skickas till kanslicheferna Katariina Kiviniemi Birgersson, Områdeskansliet för naturvetenskap, och Fredrik Oldsjö, Områdeskansliet för humanvetenskap.

8. Nästa möte

Våren 2018, Peter kallar.

Antecknat av



Peter Sundin

Ordförande



Stefan Nordlund

Justeras



Anders Karlhede

## Årligt möte med styrgruppen för samarbetet mellan Naturvetenskapliga fakulteten vid Stockholms universitet och International Science Programme, Uppsala Universitet

Dag: Måndag 4 juni 2018  
Tid: Kl. 14.15 -15.15  
Plats: Stockholms universitet, Frescati (Stefans rum)  
Kallade: Anders Karlhede & Stefan Nordlund (SU), Leif Abrahamsson & Peter Sundin (UU)

### Anteckningar

1. Stefan valdes till mötesordförande och Peter till sekreterare.
2. Anders valdes till justeringsperson.
3. Dagordningen fastställdes, med en övrig fråga: Konsekvenser av nya högskoleförordningen.
4. Anteckningar från föregående möte (24 april 2017), uppföljning; Bilaga 1

Stefan informerade om stödet från "SU fundraising" i försöken att finna finansiering av PACM, men att ännu ingen framgång nåtts. Nästa steg är att avisera projektet på SU:s hemsida, på både svenska och engelska. Ett möte om PACM ska snart hållas på Matematiska institutionen för att utröna om institutionen har intresse och kompetens för det följande arbetet. Förnyad kontakt med Sida har tagits, men det förefaller vara svårt att passa in programmet i deras stödmodell. Beskedet var att nu satsas på forskarutbildning.

I ISP:s förberedelser inför nästa ansökan till Sida bör undersökas om PACM kan tas med som en komponent.

Leif informerade om planer att omforma stödet till EAUMP till inriktning mot (regionala) forskargrupper, men med visst följande stöd till nätverket. När det gäller tidigare information från Paul Vaderlind om att matematikinstitutionerna vid Makerere, UDSM och UR, utgående från EAUMP, avsåg söka pengar för "emerging center of excellence", så kunde Leif meddela att dessa planer skrinlagts.

Peter informerade om ny Sida-handläggare för ISP sedan oktober 2017, Nils Ohlanders, med bakgrund från SGU.

Peter informerade om ny styrelse för ISP, med hänvisning till separat utskickad information (som också finns på ISP:s webb).

Peter informerade om lägena i Sidas bilaterala program med Rwanda, Bolivia och Kambodja. Rwandaprogrammet är öppet för ansökan (om "Letter of Intent") till 29 juni. Boliviautlysningen är försenad. Sidas nya Kambodjaprogram är i slutfasen av behandling av ansökan från Royal University of Phnom Penh (RUPP) inför avtal, men blir sannolikt något försenat i förhållande till tidigare planerade start 1 juli 2018. Ett separat utskickat dokument, i form av ett utdrag av den slutliga ansökan från RUPP, visar vilka institutioner och personer vid SU som är tänkta att vara engagerade i programmet.

Peter informerade om Sidas utvärdering av ISP, den förväntade processen därefter, samt kommande möten; presentation av utvärderingen på Sida 25 juni, och ISP:s årsmöte vid Sida 27 juli. Vid det senare mötet skapas förhoppningsvis större klarhet i tidplanen för den fortsatta processen. SU inbjöds delta i mötet 25 juni.

5. Ekonomisk rapport för 2017. Bilaga 2  
Godkändes.
6. Budget 2018. Bilaga 3  
Godkändes. Leif efterfrågade PACM-information att ta med till ICM2018.

7. Övriga frågor

Leif informerade om de möjliga konsekvenserna av den nya högskoleförordningen för Sida-finansierade studenter och detta diskuterades.

8. Mötet avslutades 15.15.

Antecknat av



Peter Sundin

Ordförande



Stefan Nordlund

Justeras



Anders Karlhede

## Årligt möte med styrgruppen för samarbetet mellan Naturvetenskapliga fakulteten vid Stockholms universitet och International Science Programme, Uppsala Universitet

Dag: Tisdag 7 maj 2018<sup>9</sup>  
 Tid: Kl. 13.15 – 14.02  
 Plats: Stockholms universitet, Frescati (Stefans rum)  
 Kallade: Anders Karlhede & Stefan Nordlund (SU), Leif Abrahamsson & Peter Sundin (UU)

PS 1905W

### Anteckningar

#### 1. Val av mötesordförande och sekreterare

Stefan valdes till mötesordförande och Peter till sekreterare

#### 2. Val av justeringsperson

Anders valdes till justeringsperson

#### 3. Fastställande av dagordning

Dagordningen fastställdes, med övrig fråga: information om ärende påkallat av Inspektionen för strategiska produkter.

#### 4. Anteckningar från föregående möte (4 juni 2018), uppföljning.

Bilaga 1

Stefan informerade om att råd inhämtats från Johan Kyulenstierna om lämpligast väg för fortsatta sonderingar rörande möjligheterna att finansiera och få igång PACM. Som resultat har Tanzanias ambassad i Sverige samt Sida kontaktats, och kontakt kommer att tas med svenska ambassaden i Dar es Salaam. Positiva signaler, särskilt från tanzaniska ambassaden, som rekommenderat besök vid University of Dar Es Salaam för att komma vidare i processen. SUs rektor anser att ärendet har hög prioritet och planerar besöka Dar es Salaam månadskiftet oktober-november. Stefan och Anders avser medverka. Leif erbjuder stöd om han kan passa ihop med annan Afrikaresa.

Peter meddelade att PACM ej togs upp i ISPs ansökan till Sida om fortsatt stöd till kärnprogrammet, efter konsultation med Sidas ISP-handläggare.

Leif rekapitulerade läget rörande "Emerging center of excellence". Nu har USDM, Makerere och UR tillsammans med IUCEA bestämt att starta EACMaR (East African Center of Mathematical Research(?)), som ska sjösättas 20 juni utan klar finansiering, och med en 'steering committee' bestående av rektorer. Bengt-Ove Turesson (LiU) medverkar, medan Paul Vaderlind (numera också LiU) har hoppat av initiativet. Bra att känna till i relation till PACM, som kan komplettera genom att utbilda blivande forskare.

Peter informerade om läget för Sidas bilaterala program med Rwanda, där koordineringen på den svenska sidan ska föras över från LiU till ISP, och Bengt-Ove rekryteras till ISP som 50 % biträdande programdirektör i matematik och därmed kan fortsätta som koordinator. Programmet med Bolivia är fortfarande i väntan på utlysning, och programmet med Kambodja är färdigförhandlat, kontrakterat per 1 januari 2019, och klart att starta. ISP koordinerar på den svenska sidan, och subkontraktering av svenska institutioner pågår, handledaren på SU har dock fallit bort på grundval av bedömningar vid Miljövetenskapliga institutionen vid RUPP.

Peter gav en kort uppdatering av läget efter Sidas utvärdering 2018, ny strategisk plan för ISP 2019-2024, samt ansökan till Sida om fortsatt stöd 2020-2024, inlämnad i februari 2019.

## 5. Ekonomisk rapport för 2018

Bilaga 2

Noterades att ”balanssiffrorna” vid *Other activities* är felaktiga samt irrelevanta och ska bortses ifrån, för övrigt godkändes rapporten.

## 6. Budget 2019

Bilaga 3

Punkt 7 togs först, som inledning till budgetpunkten. Därefter godkändes budgeten med förbehålet att de föreslagna utvecklingsaktiviteterna gentemot Libanon och Kurdistan ska invänta utfallet av PACM-mötet i Tanzania i november, och bara initieras om det står klart att PACM-initiativet inte går att förverkliga.

## 7. Framtida samarbete och förslag till utveckling

Bilaga 4

Leif och Peter föreslog att aktiviteter skulle övervägas som tydligare knyter initiativtagaren till samarbetet mellan ISP och Naturvetenskapliga fakulteten vid SU, framlidne Mikael Passare, till verksamheten. Exempelvis genom att inrätta ett stipendium till Mikael minne inom ramen för de medel som SU bidrar med till ISP, inom ämnet matematik, och kanske för årets bästa avhandling eller som resestipendium för presentation av forskningsresultat vid en vetenskaplig konferens. Urvalet av mottagare kan vara inom ISPs kärnprogram, eller utsträckas till att även omfatta de av Sidas bilaterala program som inrymmer stöd till matematik. Stefan och Anders ställde sig positiva till detta och föreslog två stipendier årligen, till en kvinnlig och en manlig matematiker. Vikten av att stämma av detta med Mikael familj betonades och Leif uppdrogs sondera samt föreslå detaljer för stipendiernas omfattning och urvals/ansökningsprocess.

Förslagen om att inleda matematiksamarbeten med universitet i Libanon och Kurdistan-förslagen mottogs positivt, men bör än så länge stå tillbaka för de slutliga sonderingarna om förutsättningarna att förverkliga PACM (se §6).

I båda dessa fall bör SU uppmärksammas tydligare som bidragsgivare och delaktig.

Slutligen noterades att 2020 är sista året inom nuvarande avtal, och för att möjliggöra en bedömning vid Naturvetenskapliga fakulteten vid SU om värdet av en fortsättning bör ISP tillhandahålla ett underlag för utvärdering i god tid för att tas upp vid nästa årsmöte. Peter uppdrogs ansvara för detta.

## 8. Övriga frågor

Peter informerade om det ärende som Inspektionen för strategiska produkter inlett med anledning att Mikael Strandell vid SU, i samförstånd med ISP (UU) och i samarbete med OPCW (som finansierat transportkostnaderna), överfört en donerad masspektrometer (bench top LCMSMS) till National University of Laos. Masspektrometern har en jonkälla som gör att den formellt är anmälningspliktig till Inspektionen för strategiska produkter vid export, vilket varken Strandell eller ISP(UU) hade kännedom om, och OPCW inte informerat om. (OPCW har däremot tidigare informerat om vikten av att inhämta godkännande från det mottagande landets myndighet med ansvar för antikemvapenkonventionen, och det hade Strandell gjort).

## 9. Mötet avslutas

Mötet avslutades kl. 14.02, och ordföranden tackade de närvarande för deras medverkan.

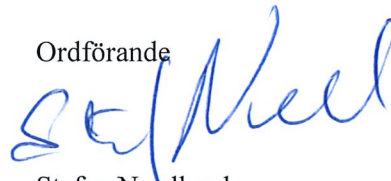
Antecknat av



Peter Sundin



Ordförande



Stefan Nordlund

Justeras



Anders Karlhede

University/Institution:

UU International Science Programme (ISP)

Programme/Project Title:

Stockholm University support to ISP

Report for the period starting:

2016-01-01 ending: 2019-12-31

Balance on 2015-12-31

SEK 433 703

Proj 172561000 = ISP/SU  
 Proj 172561001 = ISP/SU Other activities  
 Proj 172561002 = ISP/SU IPPS Lao:01  
 Proj 172561003 = ISP/SU IPICS Lao:01  
 Proj 172561004 = ISP/SU JPMS Lao:01  
 Proj 172561006 = IPPS MYA:01  
 Proj 172561007 = IPPS AIP Books

Cost item	Balance brodd forward	Budget 2016-2019		Funds received		Expenditure		Balance carried forward
		SEK	Income	Expenses	Date	Amount	Specification	
<b>Opening Balance Funds from SU</b>	433 703	4 000 000			2016-2019	4 000 000		
ISP/SU			320 000				262 571	
Salary			165 000				104 907	
Travel and other costs			25 000				9 426	
Office costs			267 000				182 470	
Indirect costs							7 292	
<b>Interest</b>			777 000				566 666	
<b>Total</b>			300 000				349 019	
<b>Other activities</b>			209 000				41 483	
PACM development			299 000				154 935	
Evaluation EAUMP			70 000				108 269	
Evaluation MSSESA			50 000				20 468	
EMS meeting Sigtuna			120 000				125 730	
Internat Congr ICM 2018, Rio de Janeiro			196 000				0	
Gender equality promotion activities			1 244 000				799 904	
<b>Total</b>			975 000				975 000	
<b>Physics</b>								
IPPS LAO:01								
Equipment, fieldwork and exchange visits by cooperating scientists.								
<b>IPPS AIP Books</b>								
IPPS MYA:01								
Shipping charges			175 000				303 845	
Development costs including travel			175 000				185 724	
<b>Total</b>			1 325 000				1 464 569	
<b>Chemistry</b>								
IPICS Lao:01								
Field work, workshop, equipment, chemicals and support to students			1 111 000				983 553	
<b>IPICS ZIM:02</b>								
Chemicals, consumables and travel costs			240 000				240 059	
<b>Total</b>			1 351 000				1 223 612	
<b>Total SEK</b>	433 703	4 000 000	4 697 000			4 000 000	4 054 751	378 952

\* 2018 ingår i 20518 kr för Evaluation EAUMP, SU PACM and evaluation.

Submitted by:



Peter Sundin  
 Head of ISP

Date: 2020-04-16

Certified by:



Anna Wallin



UPPSALA  
 UNIVERSITET  
 INTERNATIONAL SCIENCE PROGRAMME  
 UPPSALA UNIVERSITY, SWEDEN

Date of agreement: 2015-12-16

University/Institution: UU International Science Programme (ISP)

Programme/Project Title: Stockholm University support to ISP

Report for the period starting: 2016-01-01 ending: 2016-12-31

Balance on 2016-12-31 SEK -23 630

Proj 172561000 = ISP/SU
Proj 172561001 = ISP/SU Other activities
Proj 172561002 = ISP/SU IPPS Lao:01
Proj 172561003 = ISP/SU IPICS Lao:01
Proj 172561004 = ISP/SU IPMS Lao:01
Proj 172561007 = ISP/SU IPPS AIP Books

Cost Item	Balance brought forward	Budget 2016		Funds received		Expenditure	Balance carried forward
		Income	Expenses	Date	Amount		
Opening Balance Funds from SU	SEK 433 703	1 000 000		2016-04-15	1 000 000		
ISP/SU			80 000			71 668	
Salary			52 000			58 232	
Travel and other costs			68 000			56 612	
Indirect costs						2 284	
Interest			200 000			188 786	
Total			309 000			318 811	
Other activities							
SU PACM and evaluation							
Total			309 000			318 811	
Physics							
IPPS LAO:01						225000*	
Equipment, fieldwork and exchange visits by cooperating scientists.							
IPPS AIP Books							
Shipping charges						99 716	
IPPS MYA:01						100 724	
Travel costs							
Total			425 000			425 440	
Chemistry							
IPICS Lao:01						284 237	
Field work, workshop, equipment, chemicals and support to students							
IPICS ZIM:02						240 059	
Chemicals, consumables and travel costs							
Total			500 000			524 296	
Total SEK	433 703	1 000 000	1 433 703			1 457 333	-23 630

\* By mistake SEK 22575 has been included in SEK 225000. This will be corrected in 2017.

Submitted by:

Date: 2017 03-28

Certified by:



Leif Abrahamsson  
Deputy Director of ISP



Anna Wallin

Date of agreement: 2015-12-16

University/Institution: UU International Science Programme (ISP)

Programme/Project Title: Stockholm University support to ISP

Report for the period starting: 2017-01-01 ending: 2017-12-31

Balance on 2017-12-31 SEK 120 385

Proj 172561006 = IPPS MYA:01  
 Proj 172561000 = ISP/SU  
 Proj 172561001 = ISP/SU Other activities  
 Proj 172561002 = ISP/SU IPPS Lao:01  
 Proj 172561003 = ISP/SU IPICS Lao:01  
 Proj 172561004 = ISP/SU IPMS Lao:01

Cost Item	Balance brou forward SEK	Budget 2016		Funds received		Expenditure Specification	Balance carried forward SEK
		Income	Expenses	Date	Amount		
Opening Balance Funds from SU	-23 630	1 000 000		2017-04-25	1 000 000		
ISP/SU			80 000			68 451	
Salary			36 000			38 858	
Travel and other costs			61 000			52 913	
Indirect costs						1 847	
Interest							
Total			177 000			162 070	
Other activities			100 000			0	
SU PACM and evaluation			149 000			41 483	
Evaluation EAUMP 2016/2017							
Total			249 000			41 483	
Physics							
IPPS LAO:01			225 000			225 000	
Equipment, fieldwork and exchange visits by cooperating scientists.							
IPPS MYA:01			75 000			85 000	
Travel costs							
Total			300 000			310 000	
Chemistry							
IPICS Lao:01			251 000			342 432	
Field work, workshop, equipment,chemicals and support to students							
Total			251 000			342 432	
Total SEK	-23 630	1 000 000	977 000		1 000 000	855 985	120 385

Submitted by:



Peter Sundin  
 Head of ISP

Date: 2018 05-28

Certified by:



Anna Wallin



University/Institution:

UU International Science Programme (ISP)

Programme/Project Title:

Stockholm University support to ISP

Report for the period starting:

2018-01-01 ending: 2018-12-31

Balance on 2017-12-31

SEK 120 385

Proj. 172561006 = IPPS MYA:01  
 Proj. 172561000 = ISP/SU  
 Proj. 172561001 = ISP/SU Other activities  
 Proj. 172561002 = ISP/SU IPPS Lao:01  
 Proj. 172561003 = ISP/SU IPICS Lao:01  
 Proj. 172561004 = ISP/SU IPMS Lao:01

Cost item	Balance brought forward SEK	Budget 2018		Funds received		Expenditure 2018 Specification	Balance carried forward SEK
		Income	Expenses	Date	Amount		
Opening Balance Funds from SU	120 385	1 000 000		2018-07-06	1 000 000		
ISP/SU			80 000			59 548	
Salary			40 000			7 199	
Travel and other costs			12 000			4 777	
Office costs			68 000			36 732	
Indirect costs						1 335	
Interest			200 000			109 591	
Total			100 000			30 208	19 489
Other activities			70 000			108 269	68 675
SU PACM and evaluation			150 000			154 935	99 958
EMS meeting Sigtuna			50 000			20 468	13 205
Evaluations ESARSWG, MSSEESA, NAPRECA							
*Internat Congr ICM 2018, Rio de Janeiro							
Total			370 000			313 880	
Pysics			225 000			225 000	
IPPS LAO:01							
Equipment, fieldwork and exchange visits by cooperating scientists.							
IPPS Book project			75 000			152 210	
Total			300 000			377 210	
Chemistry			250 000			154 774	
IPICS Lao:01							
Field work, workshop, equipment, chemicals and support to students							
Total			250 000			154 774	
Total SEK	120 385	1 000 000	1 120 000			1 000 000	164 929

\* Resan blev konterad på annat projekt, beloppet är på logikostn på reseräkning

Submitted by:

Certified by:

Date: 2019-05-29



*Anna Wallin*  
 Anna Wallin

Peter Sundin  
 Head of ISP

Date of agreement: 2015-12-16

University/Institution: UU International Science Programme (ISP)

Programme/Project Title: Stockholm University support to ISP

Report for the period starting: 2019-01-01 ending: 2019-12-31

Balance on 2018-12-31 SEK 164 929

Proj.172561000 = ISP/SU  
 Proj.172561001 = ISP/SU Other activities  
 Proj.172561002 = ISP/SU IPPS Lao:01  
 Proj.172561003 = ISP/SU IPICS Lao:01  
 Proj.172561007 = IPPS AIP Books

Cost Item	Balance brought forward SEK	Budget 2019		Funds received		Expenditure Specification	Balance carried forward SEK
		Income	Expenses	Date	Amount		
<b>Opening Balance Funds from SU</b>	164 929	1 000 000		2019-07-19	1 000 000		
ISP/SU			80 000			62 914	
Salary			37 000			617	
Travel and other costs			13 000			4 649	
Office costs			70 000			36 213	
Indirect costs						1 826	
<b>Interest</b>			200 000			106 219	
<b>Total</b>			120 000			125 730	
Other activities			196 000			0	
Gender equality promotion activities							
Development activities							
<b>Total</b>			316 000			125 730	
<b>Physics</b>							
IPPS LAO:01			300 000			300 000	
Equipment, fieldwork and exchange visits by cooperating scientists.							
<b>AIP Books</b>							
<b>Total</b>			300 000			51 919	
<b>Chemistry</b>							
IPICS Lao:01			350 000			202 110	
Field work, workshop, equipment, chemicals and support to students							
<b>Total</b>			350 000			202 110	
<b>Total SEK</b>	<b>164 929</b>	<b>1 000 000</b>	<b>1 166 000</b>			<b>785 977</b>	<b>378 952</b>


Submitted by:



Peter Sundin  
Head of ISP

Date: 2019-04-16

Certified by:



Anna Wallin



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INTERNATIONAL SCIENCE PROGRAMME  
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