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Swedish Chemicals Agency

Food and Agriculture Organization of the United Nations

PESTICIDE ACTION NETWORK ASIA & THE PACIFIC · EMPOWERING PEOPLE FOR CHANGE ·

The Field Alliance

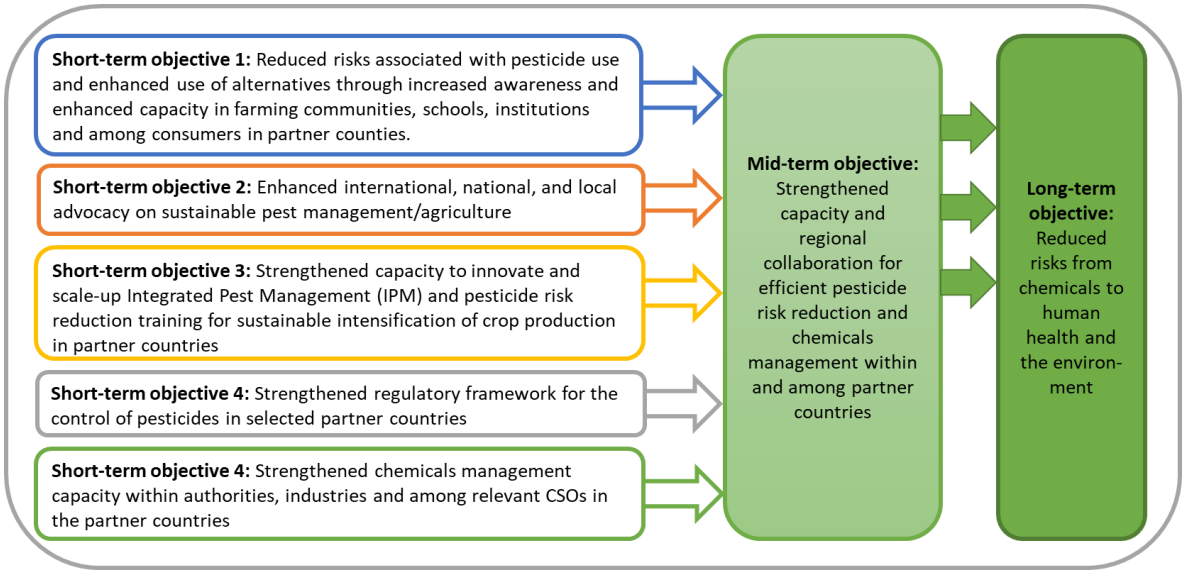
Regional Programme:
"Towards a Non-Toxic South-East Asia"
Phase II

Final progress report
Sept 2013 - May 2019

1 Executive summary

This is the final progress report for the regional programme "Towards a non-toxic South-East Asia". The report contains a description of the overall achievements and budget follow up for phase 2 of the programme period, 2013-2019, (this document) as well as a more detailed description of activities, results and budget follow-up for 2018-2019 (Annexes 1-3).

The second phase of the programme has now been completed after 5.5 years implementation of activities (11 years since the initiation of the programme). All partners have continued their efforts to reduce the risks from chemicals to human health and the environment, thereby also supporting the member countries to achieve the 17 UN Sustainable Development Goals (SDGs). The programme has achieved all agreed objectives and targets set at the initiation of phase 2. This has also been confirmed by two external evaluations in 2019.

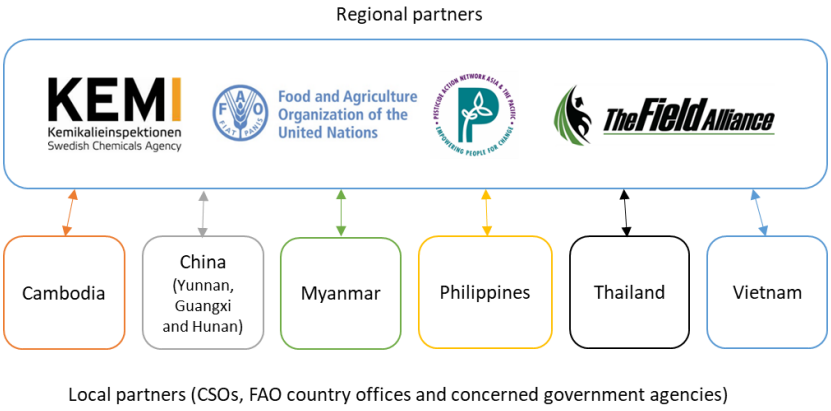


The objectives have been achieved through support for adoption of sustainable agricultural production and protection methods, trainings, campaigns and other activities to increase awareness on pesticide risks, support to the strengthening of regulatory control of pesticides, industrial and consumer chemicals and support for regional collaboration and exchange of experiences and best practices, to create better understanding of the situation in the different countries and to promote sharing of experiences and efficient use of resources on a regional basis.

1.1 Background

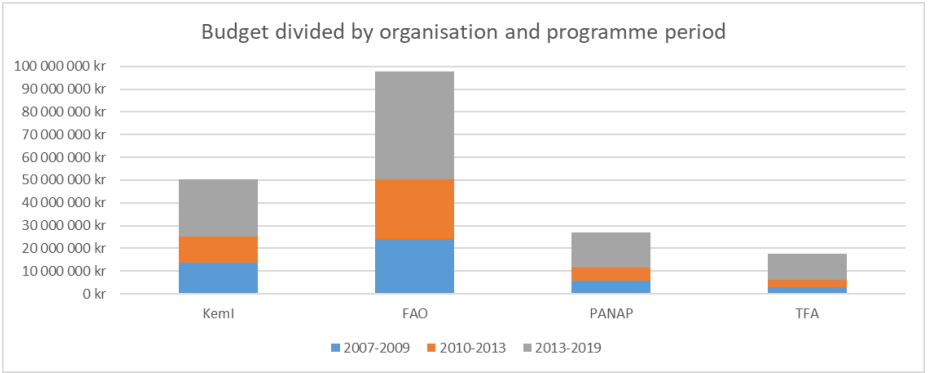
In 2004, Sida commissioned a number of studies to get an overview of the management of chemicals in the region and to develop ideas for possible interventions. The studies documented that there were serious issues that needed immediate attention and that vulnerable groups were disproportionately affected. The studies highlighted that there was virtually no enforcement of laws and regulations around the management and use of such chemicals and a serious lack of capacity and political commitment to tackle the problem. This prompted a recommendation that regulations governing pesticides should be an important initial target in order to phase out WHO Hazard Class I (extremely and highly hazardous) pesticides. It recommended that a multi-sectorial approach, including more effective regional cooperation, should be

used to tackle the issues. As a response to these findings and recommendations, the SENSA office (Swedish Environmental Secretariat for Asia) at the Embassy of Sweden in Bangkok developed a programme proposal with suitable components and identified a number of relevant organisations in the region and in Sweden that could provide expertise and support. The Swedish Chemicals Agency was asked to be lead agency and overall programme manager and the Food and Agriculture Organization of the United Nations (FAO), Pesticide Action Network Asia and the Pacific (PAN-AP) and the Field Alliance (TFA) were selected as implementation partners. In addition to the regional partners, a number of local partners in the member countries have supported the implementation of programme activities.



In January 2007, the programme "Towards a Non-Toxic Environment in South-East Asia" was launched. Objectives of the first phase were basically the same as the current programme) see above), with the difference that advocacy work on local, national and global level was less pronounced and there was more focus on building up basic capacity of local partners and communities. Based on recommendations from an external evaluation, the first phase was prolonged with another 2 years and in 2013, Sida approved a second phase of the programme (2013-2018) with largely the same focus as previous phase and the same implementing partners. The geographical scope of the programme has always been South-East Asia with a primary focus on the Mekong region countries. Initial partner countries were Cambodia, China (Yunnan, Guangxi and Hainan provinces), Lao PDR, Philippines, Thailand and Vietnam and in phase 2, Myanmar entered the collaboration. Regional activities under the programme have sometimes involved other neighboring countries, like Bhutan, Indonesia, Nepal etc.

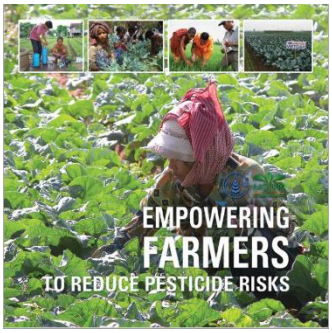
The programme has had a total budget of SEK 192 830 000 (phase 1, 2007-Aug 2013: SEK 93 500 000, phase 2, Sept 2013-May 2019, SEK 99 330 000). The division of the budget was made according to each organisation's capacity and network of local partners.



1.2 Key results

The programme (2007-2018) has contributed to considerable achievements in the region. Many overall achievements related to the development objectives are, however, the result of a combination of factors, support from different projects and programmes, general political and economic development etc. As a consequence it is not always possible to determine the magnitude of the programme's contribution to the various aspects of this development.

The programme's overall objective was to contribute to reduced risk from chemicals to human health and the environment. Unfortunately, there are no monitoring data to confirm that risk levels have actually decreased in the member countries during the programme period and as a result of programme activities. Monitoring pesticide levels in peoples' blood, in water, soil, and sediments is very costly and would have required substantial additional resources and technical input from the programme. Neither is such data available from other actors in the region since there is no system in place to systematically collect and analyse samples. Instead, proxy-indicators of risk reduction have been used to measure progress. Farmers who implement IPM and other sustainable agricultural methods use less pesticides, use less toxic pesticides and protect themselves better. As a result, risks from pesticides are reduced, both for the applicators, for other worker on the farm and for consumers eating the agricultural products. A long-term impact assessment study done within the framework of the programme confirms this. This study shows that trained farmers reduced their total pesticide use with 50%, they stopped using WHO Class I pesticides (extremely and highly hazardous), they reduced exposure due to less mixing of pesticides, improved disposal of pesticide containers and increased the use of protective clothing when handling pesticides.



Countries banning or severely restricting the use of hazardous products will eventually lead to sustainable risk reduction. It is, however, important that legislation is properly enforced to ensure that concerned actors follow the rules. The fact that several countries in the region have banned the same pesticides increases the probability that such products are actually being phased out since import, production and use is prohibited in all those countries.

Implementing regulations for industrial and consumer chemicals also has the potential to reduce risks to human health and the environment. In many countries in the region, the production, import and use of these chemicals were basically unregulated at the beginning of the programme and the general public was not aware of potential risks from such chemicals.

National level

Within the programme more than 150,000 farmers and 2,000 extension workers have been trained in Integrated Pest Management, Pesticide Risk Reduction or other alternative agricultural practices, including ecological agriculture.

A Pesticide Impacts Assessments curriculum has been adapted to identify gender roles in agriculture with the emphasis on decision making and handling of pesticides in addition to the assessment of the status of the pesticides use and impacts to health and the environment.

A new curriculum has been introduced and used by teachers and children in farming communities on pesticides impact and agro-biodiversity. School gardens have been used to introduce safer agriculture practices and for raising awareness.

Organic food production is slowly increasing with organic shops and markets being set up mainly in cities and small towns. The programme has supported this trend by expanding awareness and demand at consumer level as well as by providing farmers with knowledge and access to sustainable farming techniques, i.e. making it possible for farmers to produce biocontrol products themselves or purchase these from the private sector. The programme has also actively worked to link organic farmers to more rewarding local and international markets.

The programme has worked with farming communities to promote safer handling of empty pesticide containers. As a result, communities have constructed disposal tanks where they can put empty containers and thereby avoid contamination of the environment. In Vietnam, the programme contributed to the development of a circular that regulates collection, transport and treatment on empty pesticide containers.

With support from the programme, levels of pesticides residues in blood and urine as well as in vegetables and fruit used for school lunches have been monitored. Results showed that the presence of pesticide residues was widespread. Presentation of the results to community members, local authorities and concerned government agencies contributed to raised awareness on the seriousness of this issue. In Thailand the government later issued a ministerial order with the aim that all schools must be freed from pesticides.

Through trainings and workshops, a large number of government staff have increased their knowledge in chemical management practices including, development of legislation, risk reduction methods, classification and labelling, enforcement and cooperation between private and public sector.

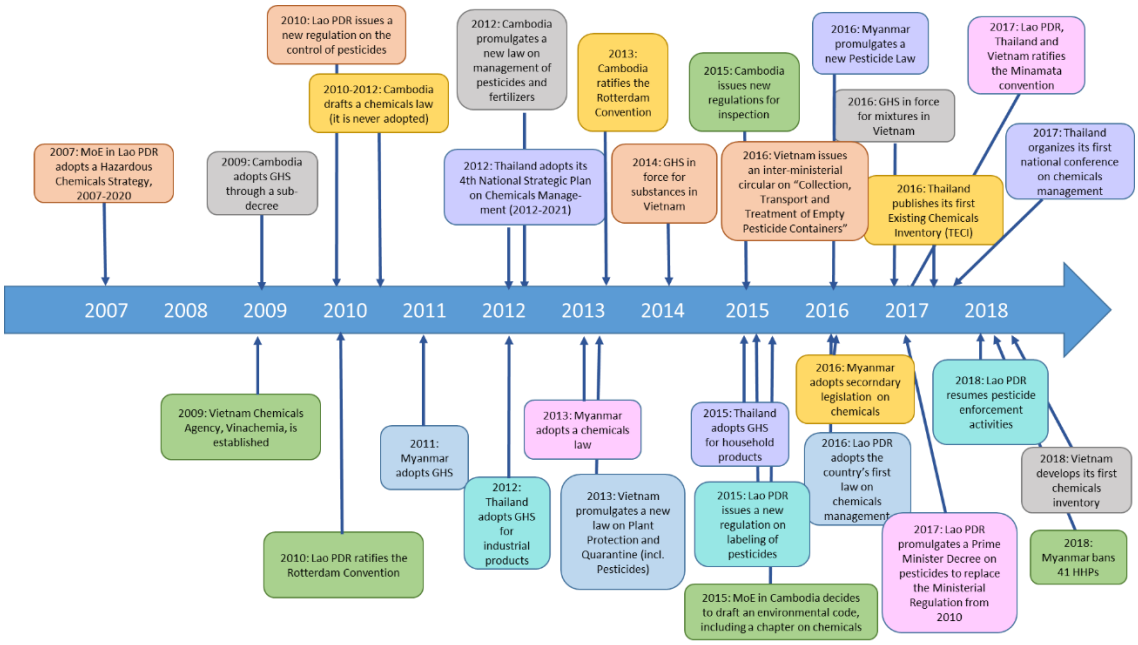
The programme has supported development and adoption of enhanced legislation on pesticides and other chemicals by providing technical and legal advice to Lao PDR, Cambodia, Myanmar and Vietnam. The programme has also facilitated ratification of the Rotterdam Convention in Cambodia and Lao PDR, and helped build capacity for its implementation. This enables these countries to take informed decisions on what products still can be permitted for import, to use the provisions of the Convention as a mechanism to better control imports and to be able to influence the continued development of the convention.

The programme was directly involved in the development of inspection manuals and training of pesticide inspectors in Lao PDR and Cambodia. With support from the programme, a large number of inspections of pesticide retailers were subsequently carried out. The educational effect of inspections led to broad improvements among retailers. Persistent cases of non-compliance were recorded, some of them resulting in fines/warning letters/sanctions.

All programme countries have taken significant steps towards phase out of highly hazardous pesticides by restricting and/or banning such products. The programme has contributed to this progress both by highlighting problems with these pesticides trough monitoring and data collection at local level, by demonstrating to farming communities how to grow crops without those products and by providing responsible authorities with increased knowledge on how to assess and manage them from a government and community perspective.

Within the programme, a large number of information materials on pesticides and other chemicals (reports, videos, posters, guidance documents etc.) have been developed. The material has been used for general awareness raising, campaigns etc. and have reached a large audience through distribution via traditional media, websites, e-mails and social media.

Below is a summary of key decisions and policy development in the member countries from 2007 to 2018.



Regional level

The programme has supported regional collaboration and exchange of experiences and best practices, to create better understanding of the situation in the different countries and to promote efficient use of resources on a regional basis. This has been done in two different ways. One way has been to organize regional meetings bringing together several countries to share experiences and best practices and to allow regional discussions and networking. Examples are regional workshops on assessment and management of highly hazardous pesticides, licensing and inspection schemes, management of invasive crop pests, curriculum development, including sharing of training modules, working methods, results from national studies etc. The other way has been to collaborate with regional organisations and intergovernmental bodies with a mandate to support management of pesticides and other chemicals.

At the initiation of the programme there was no formal regional organisation or working group focusing on support for general chemicals management. In response to this vacuum, the programme created a regional Forum for capacity building and networking related to industrial and consumer chemicals (in 2009). Initially, the forum consisted of three countries (Cambodia, Lao PDR and Vietnam) but has gradually expanded to include most ASEAN countries. The regional Forum has been highly appreciated by the member countries and has contributed to better knowledge among government officials on issues

ranging from development of regulations and enforcement to anti-corruption and the connection between chemicals and human rights. The possibility to assign country delegations with participants from several concerned authorities has also contributed to improved inter-ministerial dialogue. The appreciation from participants and their organisations has been confirmed by external evaluations.

The programme has provided technical support and facilitated countries' participation in the Asia Pacific Plant Protection Commission (APPPC). Work of the Commission encompasses activities to ensure that production, trade and use of chemical pesticides are properly and effectively regulated in line with the FAO/WHO Code of Conduct on Pesticide Management and other international treaties, as well as to reduce the pesticide risks as much as possible. It promotes implementation of IPM by coordinating regional information sharing and agreements so that member countries can adopt IPM technologies that are appropriate for their situations.

Since 2015, the programme has had a continuous dialogue with the ASEAN secretariat and its working group on chemicals and waste in order to support their work and to investigate possible ways to collaborate and enhance the regional chemicals agenda. Contacts are now established and the member countries have expressed an interest in continued collaboration.

Global level

During the implementation of the programme, efforts to try to influence the global frameworks related to management of pesticides and other chemicals have gradually increased. On numerous occasions, evidence from the ground collected by programme partners has been used to influence international policies and conventions. Important examples are the decision to phase out endosulfan on global level and the adoption of a resolution on highly hazardous pesticides recognizing that such products cause adverse human health and environmental effects in many countries, particularly in low-income and middle-income countries. The resolution encourages stakeholders to undertake concerted efforts to implement the HHP Strategy at the local, national, regional and international levels, with emphasis on promoting agroecologically based alternatives and strengthening national regulatory capacity. Contributions and work by programme partners were instrumental in these processes. It was particularly valuable to be able to address the issue from different perspectives, as government, UN organization and CSO.

The programme has also supported the development of the FAO pesticide registration toolkit, a web - based registration handbook intended for day-to-day use by pesticide registrars. A number of national and regional trainings on the toolkit have contributed to the development of the toolkit itself as well as to increased knowledge among pesticide registrars from the member countries. Experiences from work on strengthening regulatory control within the programme also contributed to improved international guidelines on pesticide legislation and new guidelines on pesticide inspection and licensing.

Cross-cutting issues

Most of the cross-cutting issues have been imbedded in the everyday work of the programme. To leave no one behind has been very important. All partners have worked hard to raise general awareness on the importance of taking gender aspects into account when designing, planning and implementing activities so that both women and men can and want to participate. The knowledge and capacity have gradually increased at local level as well as on national and global level. To follow the gender balance in different activities gender-disaggregated data has been collected thru the whole programme. The programme has adapted trainings and other activities so that everyone is empowered with relevant knowledge/skills and have a possibility to be part of decision-making and to take necessary protective measures. To highlight this work the programme let 25 women, who had benefitted from programme interventions, describe their achievements in the booklet "Stories from the field". Efforts within the programme have resulted in a good balance of male and female participants and the benefits of the broadened participation is acknowledged.

The programme has addressed climate change issues by working with rural communities on awareness and capacity building for implementation of mitigation and adaptation strategies in the agriculture sector.

The clear link between mismanagement of chemicals and violation of human rights, such as right to health, right to life, right to a clean environment, access to justice and right to information has been highlighted and documented by the programme. To raise the general awareness of this link the programme approached the UN special rapporteur on the Right to food and the rapporteur on Human Rights and Hazardous substances. In 2017, the rapporteurs delivered a joint report to the UN Human Rights Council detailing how pesticide use transgresses human rights and calling on the global community to take action. Information from the programme was important input to this report.

Corruption has been addressed both by strengthening internal management and control systems (such as external audits etc.) and by raising general awareness on the negative effects of corruption on poverty reduction and general development. Good governance, open and transparent governments, rule of law etc. has been promoted as means for reducing the risk for corruption. When developing and revising legislation an important focus has been to create clear criteria and definitions that minimize the room for interpretation. Inspection procedures have been designed to ensure transparency and implementation of efficient control systems.

1.3 Lessons learned and recommendations for the future

General

At present, combating climate change is higher on the political agenda than chemicals control in most countries. Since there is a clear linkage between chemicals management and climate change, this fact could be used to mobilise increased political priority and resources for work related to chemicals management. The chemicals and waste sector contribute to a significant proportion of global greenhouse gas emissions, particularly from energy consumption and direct material-related emissions in industrial production processes and waste treatment. The ambition of a more circular economy, in addition to reducing

greenhouse gas emissions, is to contribute to better utilisation of resources and, if correctly designed, to also reduce the use and release of hazardous substances. The pursuit of a circular economy must not lead to the recycling of materials containing hazardous substances that could increase exposure and where the material would lose its value.

Preventive chemicals control is a prerequisite for sustainable development and a means for contributing to the achievement of most of the objectives in Agenda 2030. There are clear associations between sound chemicals management and several of the goals: safe food and agriculture (SDG 2), good health (SDG 3), clean water (SDG 6), safe working environments (SDG 8), sustainable cities (SDG 11), sustainable consumption and production patterns (SDG 12), climate action (SDG 13) and protection of ecosystems and biodiversity in water and on land (SDG 14 and 15). To mobilize more resources for chemicals management issues, countries in the region could benefit from making the connection to the SDGs more visible.

The shrinking space for CSOs to work in several countries in the region is something that need to be addressed also in the future. Human rights and environment activists are increasingly being threated, harassed or even killed and it is important to continue highlighting such cases and work towards elimination of this violence. When designing and planning activities it is crucial with in-depth knowledge on local and national contexts to be able to take necessary safety measures and avoid potentially dangerous situations.

National level

A large number of people are still unaware of risks from pesticides and other chemicals to human health and the environment. Continued campaigning, awareness raising activities and trainings for farmers, consumers, children, teachers etc. is important. It is also important that national work to phase out the most hazardous substances continue.

All countries in the region need to make sure that farmers have access to high quality training and advice on sustainable agricultural practices to be able to move away from use of hazardous pesticides. Currently, the number of trainers is limited and more resources and political priority need to be mobilized.

General knowledge and institutional capacity to manage pesticides and other chemicals is still quite weak in Cambodia, Lao PDR and Myanmar. These countries would benefit from continued support to develop their chemicals control. Countries like Thailand and Vietnam have stronger regulations and government capacity but need to devote more resources to enforcement activities to make sure that all stakeholders

take their responsibility. All countries need to establish sustainable financing of their chemicals control based on national taxes and fees and move away from the need of external donor support.

Chemicals management requires good inter-ministerial cooperation. Most countries in the region lack functioning organisation that facilitate such cooperation and it is highly important that the countries continue improving this.

When collaborating with government authorities that are affected by changing political landscapes, priorities etc. it important with flexible workplans with a possibility to adapt to changing circumstances.

It would be beneficial to analyse the system for agricultural production and distribution in the countries in the region to identify obstacles and opportunities for safer food production systems (from subsidies on agricultural inputs and conditions for farmers to access various resources to public procurement and links to value chains). How can you create incentives for farmers to switch to sustainable farming methods?

Regional level

A number of regional collaboration initiatives related to pesticides and other chemicals are in place today but their capacity to support the member countries is still weak and countries in the region do not allocate enough resources to make the collaboration work. It is important to find the right incentives for countries to invest time and resources into regional collaboration. Without common regional legislation and requirements or established work-sharing procedures, work and priorities on national level tend to limit resources that are set aside for regional collaboration. The big differences in government capacity in the countries in South-East Asia probably needs to be addressed before countries are ready to take steps towards increased regional collaboration where all countries benefit from it. Political priority for regional harmonisation of chemicals legislation, data sharing, joint assessments, classification and labelling etc. would facilitate improved use of resources, expertise and experiences within the region. Such aspirations are raised in many high-level declarations but need to be concretized and followed by sufficient resources from the countries. Since GHS is designed as a common system for classification and labelling of chemicals, implementation of the system could be a suitable pilot area for regional harmonisation.

Existing regional collaboration initiatives are currently only involving a limited part of concerned government authorities. Since the management of chemicals is a cross-ministerial issue and responsibility, efforts to expand and involve all concerned government authorities is important for the future development of the regional agenda on chemicals management.

Industry is asking for regional harmonisation of regulations on pesticides and other chemicals since it facilitates trade. Increased dialogue and involvement of the industry sector and relevant industry organisations would be beneficial for the continued development of chemicals management in South-East Asia. Linking requirements for using GHS to regional trade agreements could also be worth exploring.

Global level

Certain risks from chemicals are best handled on a global level, such as phase out of highly hazardous substances. In these global processes, experiences and data from local communities are important pieces of information. It is therefore very important to continue collecting and sharing such data to the global community to make sure that the chemicals causing most problems are prioritized and addressed. Knowledge on local contexts is also important for development of effective measures.

2 Table of contents

3 Acronyms and abbreviations

Acronym	Explanation
ABD	Agro-biodiversity
AEC	ASEAN Economic Community
APPPC	Asia & Pacific Plant Protection Commission
ASEAN	Association of Southeast Asian Nations
AWGCW	ASEAN working group on chemicals and waste
ATSA	The Agriculture Technology Services Association
BEA	Biodiversity based Ecological Agriculture
CECAD	Center for Environment and Community Assets Development
CEDAC	Centre d'Études et de Développement Agricole Cambodgien
CGFED	Research Center for Gender, Family and Environment in Development
CPAM	Community-based Pesticide Action Monitoring
CSO	Civil Society Organisation
DALY	Disability Adjusted Life Year
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FFS	Farmer Field School
GEF	Global Environment Facility
GHS	Globally Harmonised System for Classification and Labelling
GMS	Greater Mekong Sub-region
ICCM	International Conference on Chemicals Managment
ICERD	Initiative for Community Empowerment and Rural Development
IFCS	International Forum for Chemical Safety
IPCS	International Program on Chemical Safety
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
IRRI	International Rice Research Institute
JICA	Japan International Cooperation Agency
KemI	Swedish Chemicals Agency
LFA	Logical Framework Approach
MDG	Millennium Development Goals
MoA(I)	Ministry of Agriculture (and Irrigation)
MoAC	Ministry of Agriculture and Cooperatives
MoC	Ministry of Commerce
MAF(F)	Ministry of Agriculture, Forestry (and Fishery)
MARD	Ministry of Agriculture and Rural Development
MIID	Myanmar Institute for Integrated Development
NIAES	National Institute for Agro-Environmental Sciences
NGO	Non Governmental Organisation
OISAT	Online Information Service on non-chemical pest management in the Tropics
PAN-AP	Pesticides Action Network Asia & Pacific
PAN-NA	Pesticides Action Network North America
PEAC	Pesticide Eco Alternative Center
PIA	Pesticide Impact Assessment
PIC	Prior Informed Consent
POC	Protect Our Children
POP	Persistent Organic Pollutants
RBM	Result-based Management
RDS	Rural Development Sole., Ltd
RCRD	Research Center for Rural Development
REAL	Rural Ecological Agriculture for Livelihood
RRI	Regional Rice Initiative
SAEDA	Sustainable Agriculture & Environment Development Association
SDGs	Sustainable Development Goals
SAICM	Strategic Approach to International Chemical Management
SEK	Swedish kroner
SENSA	Swedish Environmental Secretariat for Asia
Sida	Swedish International Development Cooperation Agency

SRI	System for Rice Intensification
TFA	The Field Alliance
TEF	Thai Education Foundation
TPPA	Trans-Pacific Partnership Agreement
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organisation

4 Background

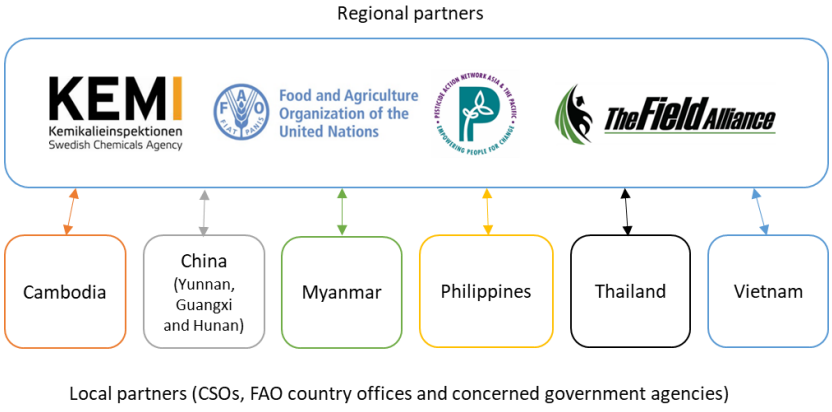
4.1 The chemicals challenge

Over the past few decades, there has been a growing concern that chemicals, while essential for virtually every aspect of modern life and the economy, can cause significant adverse effects on human health and the environment. There have been several global responses and calls for action to improve chemicals management. These included the Bahia Declaration on Chemicals Safety in 2000, and the Johannesburg Plan of Implementation adopted by heads of state in 2002, with a goal that, "By 2020, chemicals are produced and used in ways that minimize significant adverse impacts on human health and the environment". The Strategic Approach on International Chemicals Management (SAICM) was adopted globally in 2006 to guide efforts to achieve the said Johannesburg Plan of Implementation. The Fourth Session of the International Conference on Chemicals Management (ICCM4) in September 2015 stated that governments, industry and other stakeholders need to commit and stay engaged in order to accelerate progress and achieve the 2020 goal. Many of the Sustainable Development Goals (SDGs), adopted in 2015, have clear connection to chemicals management and recognize that sound chemicals management and sustainable intensification of agricultural production is crucial in national effort to realize sustainable development.

Many countries in South-East Asia lack the capacity to handle chemicals management issues and are in great need to develop institutions, legislation, knowledge and general awareness.

4.2 Development of the programme

In 2004, Sida commissioned a number of studies to get an overview of the management of chemicals in the region and to develop ideas for possible interventions. The studies documented that there were serious issues that needed immediate attention and that vulnerable groups were disproportionately affected. The studies highlighted that there was virtually no enforcement of laws and regulations around the management and use of such chemicals and a serious lack of capacity and political commitment to tackle the problem. This prompted a recommendation that regulations governing pesticides should be an important initial target in order to phase out WHO Hazard Class I (extremely and highly hazardous) pesticides. It recommended that a multi-sectorial approach, including more effective regional cooperation, should be used to tackle the issues. As a response to these findings and recommendations, the SENSA office (Swedish Environmental Secretariat for Asia) at the Embassy of Sweden in Bangkok developed a programme proposal with suitable components and identified a number of relevant organisations in the region and in Sweden that could provide expertise and support. The Swedish Chemicals Agency was asked to be lead agency and overall programme manager and the Food and Agriculture Organization of the United Nations (FAO), Pesticide Action Network Asia and the Pacific (PAN-AP) and the Field Alliance (TFA) were selected as implementation partners. In addition to the regional partners, a number of local partners in the member countries have supported the implementation of programme activities.



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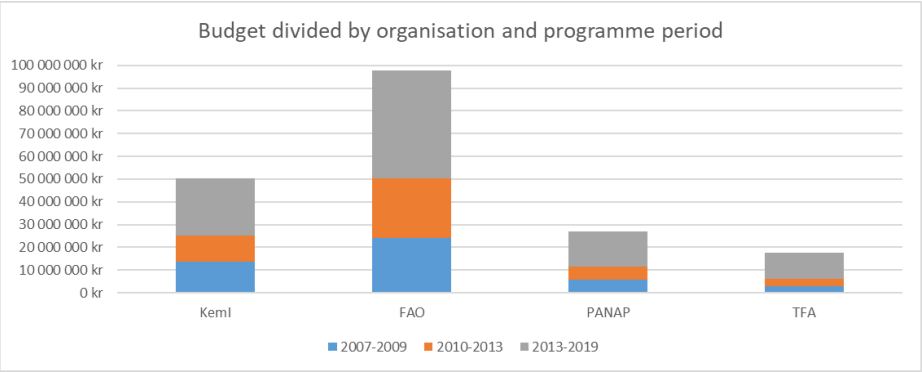
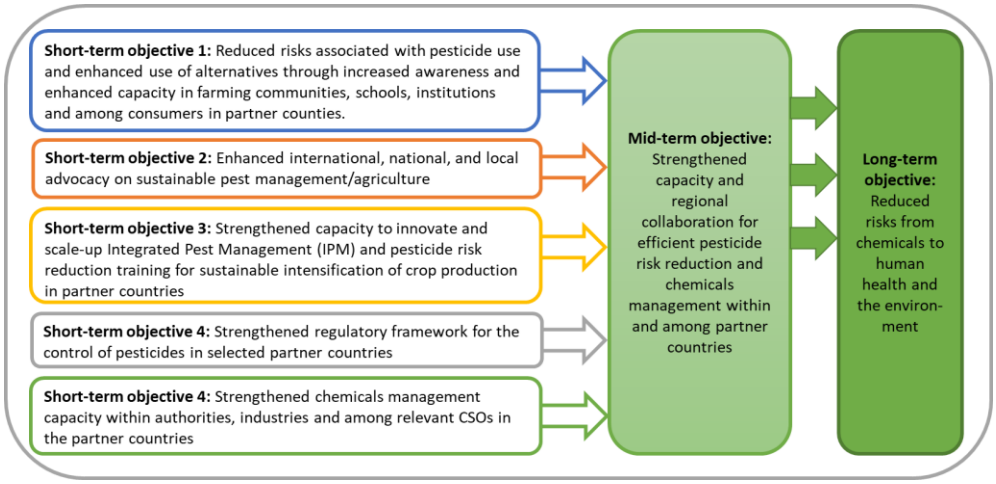


The programme's overall aim is to contribute to reduced health and environmental risks from chemicals through better management of agricultural, industrial and consumer chemicals and sustainable intensification of agricultural production.



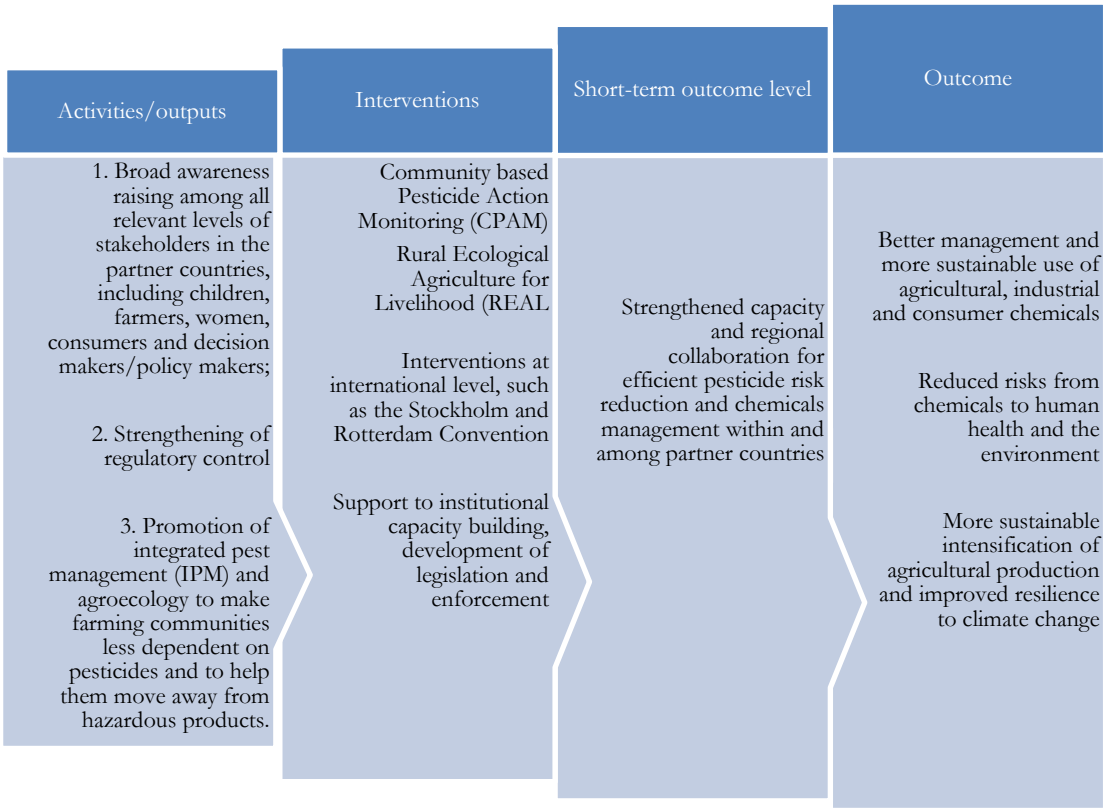
The programme considers safe food a "right" of all and not a privilege of a few. Farmers, their families and their communities have a right to live and work in a non-toxic environment and consumers have a right to eat food that is healthy, safe and free from pesticide residues. To protect themselves, everybody has a right to know about health and environmental risks from chemicals and about what can be done at indivual and community level to achieve risk reduction.

4.3 The programme's strategy for change

The strategy for "Strengthened capacity for pesticide risk reduction and chemical management within and among partner countries" is supported by five immediate objectives (logically developed to achieve the short-term outcomes and medium-term outcome) and corresponding activities.

All programme activities are designed and implemented taking into account cross-cutting issues, such as gender aspects, poverty and the human rights perspective, anti-corruption and good governance, in order to ensure transparency, inclusiveness, reduced health and environment risk from the use of chemicals and safe food for all.

All implementing partners acknowledge the importance of taking such aspects into account and undertake to work actively with these issues. Specific indicators at all levels ensure that the cross-cutting issues are continuously monitored and evaluated.



4.4 The programme's connection to the Sustainable Development Goals

Programme activities are actively helping the member countries achieving a number of the sustainable development goals (SDGs) that were adopted by the UN General Assembly in September 2015. Sound management of chemicals and waste is an essential and integral cross-cutting element of sustainable development and is of great relevance to the 2030 Agenda for Sustainable Development, the development agenda for transforming our world.

Nine goals have clear connection to chemicals and the work that is being done within the framework of "Towards a non-toxic South-East Asia". Programme activities are also contributing to other goals, such as gender equality (SDG 5), climate action (SDG 13) and partnerships for the goals (SDG 17).

End poverty in all its forms everywhere
"Towards a non-toxic South-East Asia" contributes to more efficient and safe food production, safe workplaces and reduced pollution of the environment, which in its turn leads to better health, better profits, less poverty and improved livelihoods for poor people.

End hunger, achieve food security and improved nutrition and promote sustainable agriculture
"Towards a non-toxic South-East Asia" contributes to safe food and sustainable agricultural production by preventing distribution and presence of chemicals that can be of harm to human health and the environment.

Ensure healthy lives and promote well-being for all at all ages
"Towards a non-toxic South-East Asia" contributes to healthier lives by reducing exposure to chemicals that can threaten people's health and well-being.

Ensure availability and sustainable management of water and sanitation for all
"Towards a non-toxic South-East Asia" contributes to safe drinking water and better water quality by preventing release and distribution of hazardous chemicals in the environment.

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
"Towards a non-toxic South-East Asia" contributes to a safe working environment by making knowledge on chemical hazards available and by reducing exposure of workers to hazardous chemicals.

Make cities and human settlements inclusive, safe, resilient and sustainable
"Towards a non-toxic South-East Asia" contributes to reduced environmental impact from cities by preventing release and distribution of hazardous chemicals.

Ensure sustainable consumption and production patterns
"Towards a non-toxic South-East Asia" contributes to an effective preventive chemicals control and safe handling of chemicals, thereby limiting the presence of hazardous chemicals in society and enabling safe and resource efficient systems for waste handling, recycling and a circular economy.

Conserve and sustainably use the oceans, seas and marine resources for sustainable development
"Towards a non-toxic South-East Asia" contributes to protection of the oceans and *in-situ* preservation of biological diversity and ecosystem services in agricultural production landscapes by preventing release and distribution of hazardous chemicals.

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
"Towards a non-toxic South-East Asia" contributes to protection of ecosystems, and preservation of biological diversity and ecosystem services by preventing release and distribution of hazardous chemicals.

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
"Towards a non-toxic South-East Asia" contributes to capacity building of government institutions responsible for management of pesticides, industrial and consumer chemicals.

5 Context analysis

Since the fact finding and development stage (2004-2006) of the first regional programme managed by the Swedish Chemicals Agency, countries in South-East Asia (Cambodia, Lao PDR, Myanmar, Thailand and Vietnam) have made steady progress on the management of chemicals. At that time, only Thailand had some degree of organised set-up in the government for chemicals management. Overall, there was a lack of proper legislation, institutional capacity and general awareness. Now all the countries, except Cambodia, have adopted new or revised basic chemicals legislation. Multilateral Agreements governing chemicals such as the Montreal, the Basel, Stockholm, Rotterdam and the new Minamata Conventions are being ratified and implemented and application of The Globally Harmonized System for Classification and Labelling of Chemicals (GHS) is slowly gaining a foothold (see table 1). An increasing number of government staff has been trained in chemicals management, both within the regional collaboration and within KemI's International Training Programme (ITP) on strategies for national chemicals management.

Country	Rotterdam convention	Stockholm convention	Minamata convention	GHS implementation[1]
Brunei	-	-	-	No
Cambodia	Party	Party	-	No
Indonesia	Party	Party	Party	Fully
Lao PDR	Party	Party	Party	No
Malaysia	Party	Party	-	Partly
Myanmar	-	Party	-	No
Philippines	Party	Party	-	Partly
Singapore	Party	Party	Party	Fully
Thailand	Party	Party	Party	Partly
Vietnam	Party	Party	Party	Fully

Table 1: Status of ratification of international chemicals conventions and implementation of GHS

Still, with the rapid industrialization and efforts to liberalize trade, countries in South-East Asia continue to face many challenges in the area of chemicals management. Many industrial and consumer chemicals are still not regulated in the region. Institutions, secondary legislation, enforcement and general awareness need to be further strengthened in order to avoid devastating effects on public health and the environment.

General chemicals production, use and disposal continue to increase faster in the Asian region than in any other parts of the world. A recently published report[2] by the European Chemical Industry Council (Cefic) predicts that global chemical sales will almost double between 2017 and 2030 and the major part of that increase will take place in Asia (see figure 1).

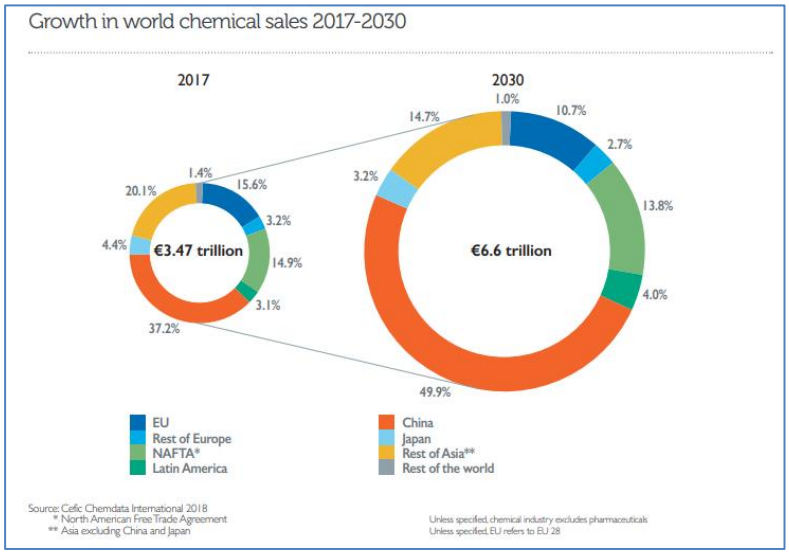


Figure 1: Projected growth in world chemical sales 2017-2030 (CEFIC, 2018)

[1] Persson, L., Karlsson-Vinkhuyzen, S., Lai, A., Persson, Å. & Fick, S. (2017). The Globally Harmonized System of Classification and Labelling of Chemicals—Explaining the Legal Implementation Gap. http://www.mdpi.com/2071-1050/9/12/2176

[2] https://cefic.org/app/uploads/2018/12/Cefic_FactsAnd_Figures_2018_Industrial_BROCHURE_TRADE.pdf=1

Chemical manufacturing and processing activities are steadily expanding into developing countries and countries with economies in transition and the above mentioned report also reveals that China together with the rest of Asia (excluding Japan) have almost tripled their part of world chemicals sales from 2007 to 2017. In 2017, China alone accounts for nearly 40 % of the world chemical market sales.

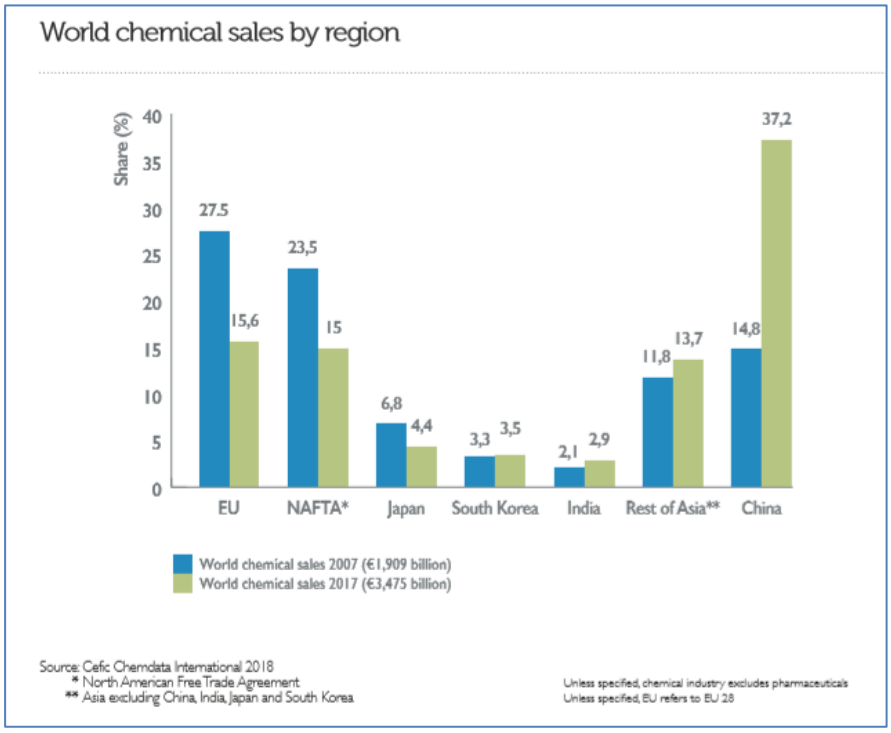


Figure 2: World chemicals sales 2007 and 2017 by region (CEFIC, 2018)

Products include hazardous substances like chlorpyrifos, paraquat and neonicotinoids. Some of the pesticides that are restricted in the US or Europe are still permitted for broad use in China and other GMS countries and continue to cause serious risks to human health and the environment. It should, however, be noted that China is taking important steps to gradually phase out the use and production of some of the more hazardous pesticides. China has banned the use of liquid paraquat and restricted the use of chlorpyrifos and all sale and use of paraquat will be banned from 2020, something that will affect all neighbouring countries. Other signs of China's efforts to improve pesticide management and switch to more sustainable farming practices is the recent institutional reform where the newly established Ministry of Agriculture and Rural Affairs is strengthened compared to the previous Ministry of Agriculture, particularly on issues related to rural affairs and development.

Chemicals related matters are, however, continuing to gain attention and priority in the Asia Pacific region. In 2015, ASEAN created a specific working group named ASEAN Working Group on Chemicals and Wastes (AWGCW). The objective of the working group is to strengthen regional coordination and cooperation in addressing hazardous chemical and wastes under relevant multilateral environmental agreements such as the Basel Convention, the Rotterdam Convention, the Stockholm Convention, and the Minamata Convention, as well as internationally agreed-upon systems such as the Globally Harmonized System for Classification and Labelling of Chemicals (GHS) and SAICM. The working group has developed and agreed on a work-plan for the coming years and more concrete actions and activities will hopefully be observed in the near future. The increased attention to chemicals management issues was further reaffirmed in April 2017 when all Ministers of Environment of the ASEAN member states signed

the ASEAN Joint Declaration on Hazardous Chemicals and Waste Management[3]. In this declaration the member states are called upon to continue their efforts to minimize the adverse impacts on human health and the environment caused by the release of hazardous chemicals and wastes to air, water and soil; to enhance the coordination and collaboration between ASEAN member states and partner organisations for capacity building, exchange of information and knowledge and transfer of technologies in order to achieve the 2020 goal of SAICM and the 2030 Sustainable Development Agenda.

The same aspirations are expressed in the regional road map for implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific[4] (March 2017). Regional and sub-regional collaboration is highlighted as an important complement to national mechanisms to support capacity building and sharing of good practices and home-grown approaches. In the Manila Declaration on Health and Environment[5] (October 2016), Ministers of Health, Ministers of Environment and Heads of Delegation participating in the Asia-Pacific Regional Forum on Health and Environment call upon their governments, the international community, civil society organizations and the development community in general to change the work on environment and health. Signatories of the declaration endeavour to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination through environmentally sound management of chemicals and waste throughout their life cycle and substantial reduction of waste through prevention, reduction, recycling and reuse. Dialogue, sharing of information and collaboration both at national and regional levels are highlighted as a way to ensure the well-being of current generations and to protect future generations from catastrophes.

Public awareness on pesticide risks has increased significantly through various social media and poster campaigns organized by the programme's regional and national partner organisations as well as by the launching of a regional study that tests children, farmers, and community members for pesticide residues in their blood.

Organic food production is slowly increasing with organic shops and markets being set up mainly in cities and small towns in the GMS countries. There is increased demand for food with less pesticides residues among consumers in South-East Asia and more awareness about organic and agro-ecological farming practices. The programme is supporting this trend by expanding awareness and demand at consumer level as well as by providing farmers with knowledge and access to sustainable farming techniques, i.e. making it possible for farmers to produce biocontrol products themselves or purchase these from the private sector. The programme is also actively working to link organic farmers to more rewarding local and international markets.

Governments' interest in sustainable intensification of agricultural production continues to increase in the region. Several governments adopted new -and strengthened implementation and enforcement of - pesticide management decrees and regulations in 2018. In Lao PDR, following the 2017 promulgation of a Prime Minister Decree on Pesticide Management, developed and promoted with programme support, work continued with the MAF/DOA Regulatory Division, in joint action with the World Bank, on development of a secondary legislation, including better regulation of the pesticide retail sector.

In addition to China and Vietnam, the governments of Cambodia and Lao PDR now also invest in up-scaling of FAO-piloted Integrated Pest Management and Pesticide Risk Reduction training for farmers. In

[3] http://asean.org/asean-joint-declaration-on-hazardous-chemicals-and-wastes-management/
[4] www.unescap.org/sites/default/files/publications/SDGs-Regional-Roadmap.pdf
[5] www.wpro.who.int/entity/apac_rfhe/manila_declaration.pdf

Myanmar, the government is keen to strengthen the pesticide registration process, aligned with best practice guidance provided in the FAO Pesticide Registration Toolkit. A recently initiated Parlimentary Inquiry in Agrochemical Residues will likely add stimulus for government to strengthen pesticide management efforts and promote Integrated Pest Management and Pesticide Risk Reduction among its many millions of smallholder farmers.

Corruption remains widespread in the region, something that is affecting the poorest and most marginalised groups in particular. Existing laws and regulations risk being ineffective or non-functional due to difficulties to enforce the laws and weak government structures and lack of resources. Powerful multinational corporations promoting chemical pesticides as the only available solution for pest management contributes to additional challenges in the work to promote non-chemical alternatives to pesticides and a non-toxic environment.

The new laws for CSOs that have been adopted in Cambodia, China and the recent martial law in Mindanao, Philippines make it more difficult for CSOs to operate in these countries, cause a lot of difficulties and impede their activities. The closing of several newspapers in Cambodia in the lead up to the 2018 general elections has also effected partners' outreach in Cambodia. Martial Law in Mindanao, Philippines, has threatened the lives of activist and farmer leaders. The focus of the projects has deviated slightly due to security concerns including human rights violations. The campaign to pressure for the bill to ban glyphosate and paraquat which was gaining momentum has now been postponed.

Many countries in Asia still have insufficient resources for the management of chemicals and the issue is not highly prioritized at political level. A survey of chemicals management in South-East Asia show that the number of staff working on chemicals management at government level varies considerably between countries, from as low as three full time staff to around 70 full time staff.

All member countries in the KemI supported regional collaboration on chemicals management continue to show great interest in the regional Forums and other activities that are organised by the programme. The number of participants continue to grow and evaluations show that the participants are satisfied with the activities and that they find the shared knowledge and network useful. Participating countries consider the Forum as an important meeting place for national and regional exchange of information and networking. The member countries are starting to express aspriration for closer regional collaboration, including development of a regional platform for sharing of information, harmonization of chemicals legislation and policies etc.

Thailand continues to be an important actor in the regional collaboration on chemicals management and an inspiration to neighbouring countries. The Thai government is currently chairing two important regional working groups on chemicals and waste (the Thematic Working Group on chemicals and waste within the Asia-Pacific Forum on Health and Environment and the ASEAN working group on chemicals and waste, AWGCW). In July 2017, Thailand organized its first National Conference on Chemicals Management with participation from all concerned stakeholder; the government, civil society, academia and the private sector. In 2017, Thailand also developed the Fifth National Strategic Plan on Chemical Management outlining priorities for the coming years, 2022-2026.

6 Progress report with results from 2013 to 2019

The second phase of the programme "Towards a non-toxic South-East Asia" has now been completed after 5.5 years implementation of activities. All partners have continued their hard work towards reduced risk from chemicals to human health and the environment and thereby supporting the member countries to achieve the sustainable development goals. This has been done through support for adoption of sustainable agricultural methods, support for improved management of pesticides, industrial and consumer chemicals and support for regional collaboration in order to enhance exchange of experiences and best practices, to create better understanding of the situation in the different countries and to promote efficient use of resources on a regional basis.

6.1 Cross-cutting issues

Gender

Since the beginning of the programme, all partners have worked actively to make sure that gender aspects are taken into consideration when designing, implementing, evaluating and improving programme activities. All partners have, however, continued their efforts to improve their own knowledge on how to best include a gender perspective in all operations.

Gender equity is at the core of the design of FAO's community education programmes on IPM/pesticide risk reduction and National IPM Programmes. Community education programmes are designed for various stakeholders (e.g., Farmers' Unions, Women's Unions, Out-of-school Youth, technical line agencies, local governments, etc.) based on their role in pesticide and pesticide risk management in the community. Additional components are added to training curricula as to respond to needs of men or women. For example, aside from training on technical aspects on sustainable production, farmers decide to set up savings funds to help meet financial needs for education or health care of children. The schedule of training activities takes into account the other roles (e.g., reproductive) that women and men need to perform. It has become common to see young boys and girls with their parents in farmer training activities exposing them to valuable learning and at the same time addressing the need for parents (i.e., men and women) to look after their children. At programme level, field implementers have become more conscious of the need for gender-disaggregated programme data collection and reporting and the importance of the information for designing more gender-sensitive programmes. This was also confirmed by the recent evaluation of FAO's part of the programme.

Recognizing the important contribution of rural women to food security and nutrition at household and community levels, women must be at the center of any action to promote sustainable agriculture and eradicate food insecurity as well as poverty in the face of challenges such as changing climatic and en environmental conditions. Climate-smart transformation of food and agricultural systems is a knowledge-intensive and innovative process. It is also a multi-sector, multi-actor and multi-level process that addresses complexities across biophysical, technical and socio-economic levels. FAO promotes a highly interactive, inclusive and gender-sensitive process aligned with country development priorities and deepens country ownership, commitment and mutual accountability in approaching capacity development towards climate-smart agriculture[6]. A brochure, published by FAO in December 2018, highlights

[6] For a relevant example see FAO (2017) case study on gender and integrated rice-shrimp based farming systems in the Mekong Delta region in Vietnam: http://www.fao.org/3/a-i7277e.pdf

integrated and gender-transformative approaches and provides examples of FAO's work in agriculture, forestry, fisheries and other sectors in promoting gender equality and women's empowerment, including through Farmers Field Schools[7]. And the FAO Strategic Programmes News (March 2018 issue) focused on gender issues[8] and include the following quote as part of the DDG-Introductory Note: "*For example, we need to arrange Farmer Field Schools at times that accommodate women's workloads in the field and in the household. We need to make sure that the technologies we promote do not have any hidden "gendered" effects – for instance, increasing the burden of work that traditionally falls to women. We need to ensure that women benefit from improved marketing and financial services, and are empowered to participate fully in decision making."*

Gender awareness and women's empowerment are also important focus areas for PANAP and local partners. Women farmers and workers are more vulnerable than male farmers to the impact of pesticides due to economic, political and biological factors. This analysis has been supported by CPAM (Community Pesticide Action Monitoring) results and documented in a number of reports including in "Communities in Peril: Asian report on health impacts of pesticide use in agriculture"; "Breast Cancer: A wake up call" and "Breast Cancer and You".

The Irene Fernandez Women's Leadership Training (IFWLT), a programme developed by PANAP took off in Vietnam, resulting in women trainees adopting agroecological practices and taking the lead in organizing organic markets. The training program was named after the late Irene Fernandez, a pioneer of PANAP and the women migrants' movement in Malaysia and a prominent social activist.. To raise awareness on the breast-cancer causing effects of pesticides, PANAP's booklet Breast Cancer, Pesticides & You! was also translated into Vietnamese and widely distributed. In addition, key women farmers from China, Cambodia and Philippines were part of the capacity building at the regional level using the IFWLT methodology.

PANAP have also highlighted the grassroots women leaders who struggled to bring up the issues of pesticide impacts on their communities, families and their children. PANAP has contributed to the UNEP Global Chemicals Outlook, that features the benefits of agroecology for women. PANAP has used the UNEP Global Chemicals Outlook as a reference, for capacity building on gender for customs officers in the UNEP Regional Enforcement Network.

In order to move beyond the level of participation PANAP and partners have also supported strengthened leadership among women. In Vietnam, women have formed the women's Pioneer group and have actively conduct Community Pesticide Action Network (CPAM) and have started their own farmers market at the district level. These women have gone on to train other women in their community as well.

In May 2017, PANAP's executive director, MS Sarojeni V. Rengam received the Gender Pioneers for a Future Detoxified Award given by the Basel, Rotterdam and Stockholm (BRS) Conventions the for her efforts in championing women's issues in various campaigns against toxic pesticides over 25 years.

[7] http://www.fao.org/3/CA2678EN/ca2678en.PDF
[8] http://newsletters.fao.org/q/13VkBZN6g54wUoqGiTvH9/wv

On International Women's Day, March 8, 2017, the booklet "Stories from the Field: Women Working Towards a Non-Toxic Environment" was officially launched[9]. The publication was also highlighted through articles on Sida's[10] and KemI's[11] websites. The publication was developed jointly by TFA, FAO RAP and PANAP in 2016 and documents the positive results from partners' continuous and collective work to advance gender equality. The booklet contains stories of 25 women from five countries who are involved in an inspiring, ongoing campaign to reduce and, if possible, eliminate the use of chemical pesticides and promote agroecology in the Mekong Region. The Booklet is available in printed form as well as in electronic format[12]. The booklet has been distributed to various national, regional and global meetings related to chemicals and the environment.

Video's from the Stories from the Field from PANAP's partners CEDAC[13] and SAEDA was featured in the main foyer of FAO during the UN Food and Agriculture Organization of the United Nations (FAO) second International Symposium on Agroecology in Rome, April, 2018. Stories from the Field and PAN's book Replacing Chemicals with Biology was distributed in the Symposium as well. In 2018, one video documenting women practicing agroecology was produced[14].

TFA has integrated gender roles into all the trainings conducted for both schools children and farmers for the past five years. The assessment of gender roles in agriculture and particularly for making decisions and involvement in handling pesticides allowed communities and partners to designed specific interventions to minimize the risks of exposure to pesticides based on gender. Many positive results are being observed as a result of these efforts. The percentage of women participating in the program has increased to over 50% and in nutrition trainings it was up to 90%. Women's savings groups were established in Cambodia. Members contribute into the savings and are able to loan money to use for agriculture activities or other urgent needs for the family. The efforts helped reduce their dependent on microfinance and the groups have saved up to approximately USD 3,100 by the end of 2017.

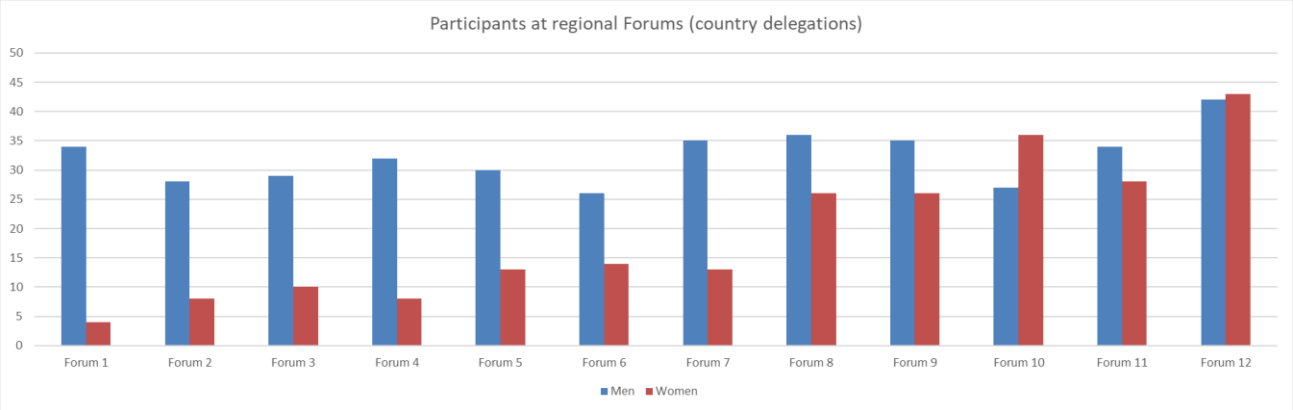
The program also supported capacity building and materials for poor women/families for weaving traditional Lao skirt, which helped them gain an average of USD 60-100 per individual/month in Laos. In Thailand, the attendance of women in training has increased to approximately 60 % and women are increasingly selected as group leaders, presenters and express their opinions equally or more than male counterparts. Women have increased their understanding of their roles in working with men and vice versa. Men have also changed their behaviors during training and at work and now show increased respect

[9] http://panap.net/2017/03/inspiring-stories-of-women-vs-pesticides/
[10] http://www.sida.se/Svenska/Har-arbetar-vi/Asien/Regionalt-samarbete-Asien/resultatexempel/utbildning-ska-minska-giftbesprutningen-och-oka-skorden/
[11] https://www.kemi.se/nyheter-fran-kemikalieinspektionen/2017/svenskt-stod-till-kvinnors-arbete-for-giftfritt-jordbruk-i-sydostasien/?_t_id=1B2M2Y8AsgTpgAmY7PhCfg%3d%3d&_t_q=sydostasien&_t_tags=language%3asv%2csiteid%3a007c9c4c-b88f-48f7-bbdc-5e78eb262090&_t_ip=172.17.2.215&_t_hit.id=KemI_Web_Models_Pages_NewsPage/_2e603f2a-c719-4d55-911e-9a5442bdacca_sv&_t_hit.pos=3
[12] http://www.sida.se/globalassets/sida/sve/har-arbetar-vi/stories-from-the-field-2016.pdf
[13] https://www.youtube.com/watch?v=C6eQtd3ve10&t=54s
[14] https://www.youtube.com/watch?v=vh6jpXqWbuY&t=118s

of women, including avoidance of cynical and profound language in their communication, something that was previously reported by female counterparts.

In Vietnam, the income from agriculture is not sufficient for families, especially for peri-urban families with very small land plots. Most men have left the farm to take other jobs to gain more income leaving women to oversee most of the tasks at home and in the field. In addition, approximately 70 % of women make decision on what kind of pesticides to buy, engage in mixing, spraying and cleaning the equipment which made Vietnamese women farmers the group with highest risks of pesticides exposure. As a result, the percentage of women participating in the program activities are higher compared to most other countries. Specific program interventions include creation of vegetables garden, growth of indigenous herbal and vegetables plants to supply to pre-schools and markets as well as bio-mats and compost to reduce chemical inputs and gain more incomes. In 2018, ICERD continued to support Women's Cooperatives to supply their agricultural produce to private supermarkets and markets in Hanoi.

KemI has consistently encouraged the member countries to assign gender balanced delegations to take part in trainings and regional forums. Statistics show that over the years, the share of female participants at regional forums has gradually increased (see below diagram). To make sure that both mens' and women's perspectives are considered in decision making it is important to continue working towards more gender balanced institutions. Observations show that women are quite well represented at technical level in most member countries but at senior level women are still under-represented.



Poverty and human rights perspective

The poverty perspective has always been an integral part of the planning and prioritization of various programme interventions. Programme partners have continuously explored and learned more about the connection between chemicals and human rights and have increasingly integrated the human rights approach in their work.

FAO's IPM/pesticide risk reduction programmes explicitly targets smallholder farmers - especially women - and in particular, communities with intensive and misuse of agro-chemicals. These farmers are poor and without or with minimal access to information or education programmes, resulting in continued application of indiscriminate and non-productive pesticide application practices that keeps them in a vicious cycle of debt and poverty. Recognizing the important contribution of rural women to food security and nutrition at household and community levels, women are placed at the center of any action - from an initial FFS - to promote sustainable agriculture and eradicate food insecurity as well as poverty. Farmer education on IPM/pesticide risk reduction goes beyond providing the opportunity to gain new

knowledge and skills on sustainable production. This education helps farmers raise land productivity, reduce production costs and allows them to attain higher profits. It also helps produce safer food, protect the environment and improve livelihoods for better quality of life. Follow up FFS activities include establishment of Farmer Clubs moving into marketing, value chains and formalized cooperatives as well as Self-help Groups covering aspects of savings and loan services. Work in 2018 focused on development of case studies to document poverty allevation impact on rural communities that took part in IPM-FFS/pesticide risk reduction capacity building. For example, in China with Programme support, the International Poverty Reduction Center in China (IPRCC) developed case studies to document the impact of IPM Farmers Field Schools on poverty alleviation in Guangxi. These case studies have entered a national contest for demonstrating best poverty allevation efforts, with the winning entries to be announced by mid 2019. In Lao PDR, case studies were published to document results of the Save and Grow for Sustainable Intensification of Rice Production FFS interventions in northern Laos, demonstrating the poverty alleviation impact.

PANAP and partners have continuously explored and learned more about the connection between chemicals and human rights and have started integrating the human rights approach in their work. Pesticide use has thorough going implications for the people's right to health, right to food, rights of women and children, right to a safe workplace, and other universally enshrined human rights. We use the human rights framework in our work, from our analysis of local CPAM results to our critique of the global chemical-intensive agricultural model and pesticides trade. This framework underscores the fact that the deleterious effects of pesticides actually constitute gross human rights violations, and provides an even stronger impetus for concerned international bodies to take action.

PANAP made submissions to the UN Special Rapporteur (UNSR) on the Right to Food, and to the UNSR on Human Rights and Hazardous Substances, which pointed to the increasing number of scientific studies on the negative impacts of pesticides, especially on women and children. These provoked alarm from UNSRs Hilal Elver and Baskut Tuncak, and in 2017, they delivered a joint report to the UN Human Rights Council (UNHRC) detailing how pesticide use transgresses human rights. They called on the global community to work towards a comprehensive, binding treaty to regulate hazardous pesticides throughout their life cycle along the human rights framework; explore agroecology and other non-chemical alternatives in agriculture; immediately establish buffer zones to protect communities adjacent to pesticide using plantations and/or farms. The report to the UNHRC is a major contribution towards the global advocacy for a toxic-free environment. In 2018 PANAP, on behalf of PAN International, drafted and distributed the proposal for a treaty on HHPs[15] at SAICM meetings based on the Special Rapporteur's recommendations.

In addition, the documentation in the report *Of Rights and Poisons: Accountability of the Agrochemical Industry* synthesises key findings used the human rights framework. Covering seven countries—Bangladesh, India, Indonesia, Malaysia, Pakistan, Philippines, and Vietnam—the report highlights how pesticides use and exposure leads to violations to the right to life and health; right to access to information; right to a safe and healthy environment; right to livelihood; as well as children's rights, women's rights, and indigenous peoples' rights. It focuses on the accountability of agrochemical transnational companies and their subsidiaries, as well as local pesticide manufacturers and distributors producing and distributing HHPs.

[15] http://www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_8_PAN_Global_Governance_HHPs_f.pdf

In October 2018, PANAP launched the report "Of Rights and Poisons: Accountability of the Agrochemical Industry"[16]. Of Rights and Poisons is a comprehensive study using CPAM, a participatory action research approach to document and create awareness of pesticide impacts on human health and the environment. Community members themselves undertake the research, and integrate it with organisation and action. The study involved 20 partner organisations from seven Asian countries—Bangladesh, India, Indonesia, Malaysia, Pakistan, the Philippines, and Vietnam. It revealed the rampant use of HHPs in these countries, with 50 pesticides in PAN International's list of HHPs recorded to have been used. With a total of 2,025 respondents, seven out of 10 of the respondents said that they have suffered ill-effects due to pesticide exposure. The report also detailed and was able to provide an over-all picture of hazardous conditions of pesticide use in the region. This includes the lack of personal protective equipment and training; lack of proper labeling; improper storage and disposal; lack of washing and medical facilities for sprayers, etc. Of Rights and Poisons revealed how pesticides use, especially in the Asia Pacific region, is a human rights issue that thoroughly pervades all aspects of life for its users and their communities.

TFA continues to select rural target sites for the REAL program to increase income for poor families and reduce the input costs in farming through various program activities. In addition, TFA and partners have been collecting and using field data to advocate for children rights for safe food and environments through the development of community action plans and measures to reduce pesticides exposure to children and communities. The data on testing pesticide residues in vegetables and fruits used for school lunches and as well as testing for residues detectable in blood samples provided evidence used to raise awareness among community members, concerned government agencies, and local authorities. Thai Education Foundation was invited to present these results at the first National Conference on Chemical Management in Thailand and received overwhelming responses from the audience who advocated for improvement of the current situation. Subsequently, the program was integrated into the draft of the National Strategic Chemical Management Plan (2018 – 2028) and received additional support from the Thai government to further expand the program in 2018.

In 2018 the joint study between TEF and Chiang Mai University on the impact of pesticides on school children in high-risk areas continued in 2018 with support from The Field Alliance, National Health Fund, and Greenpeace Thailand and provided additional data and enabled advocacy on regional and national levels. TEF presented the study results on pesticides impacts to school children at various workshops in Thailand, Cambodia, Lao PDR, Myanmar and Vietnam. TEF also formulated a National School Lunch Policy at a Forum together with the Ministry of Education in Thailand and the Deputy Permanent Secretary in January 2019. Over 100 people attended this meeting from all concerned ministries and agencies and provided input for the policy.

KemI has had a continuous dialogue with the Raoul Wallenberg Institute of Human Rights and Humanitarian Law in order to learn more on human rights related issues and how to integrate this in the work on chemicals management. KemI has also been in contact with the UN Special Rapporteur on Human Rights and Toxics, Mr Baskut Tuncak. In 2017, the relationship between chemicals management and human rights was highlighted for the first time at a regional Forum. With support from experts from Raoul Wallenberg Institute and the Center for the Study of Humanitarian Law (CSHL), Royal University of Law and Economics in Phnom Penh, participants at the Forum were introduced to basic principles of human rights and environment and discussed a number of issues related to this topic in country groups. A

[16] http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf

large majority of the participants (92 %) found that the linkage between sound management of chemicals and human rights is beneficial or very beneficial for their work.

The links between human right and chemicals was also highlighted during the 3-day trainings that were organized in Cambodia, Lao PDR and Myanmar in 2016-2017.

In order to increase KemI's internal knowledge on this issue, KemI has taken part in various activities together with other Swedish government agencies working with development cooperation (Nätverket för Lärande, N4L). In 2018, all staff at the international and staff together with other experts taking part in development cooperation, took part in a one-day training on human rights (organized by Uppsala University) in order to further increase their knowledge in this field.

The UN Special Rapporteur on Human Rights and Toxics was invited to take part in the final regional Forum but had to renounce his participation at the last moment due to other obligations.

Sustainability

In most programme countries, government's increased attention and support to sustainable intensification of agriculture production has brought about policy changes translated into concrete financial support and mechanisms to upscale training on IPM and pesticide risk reduction. At field level, as FFS groups mature, they have moved from focusing on crop production and protection issues to becoming Clubs with revolving funds to continue to support the development of sustainable agriculture and marketing as well as other community concerns, such as health and sanitation. FFS alumni groups and IPM Clubs move on to become registered Cooperatives. In Vietnam, inter-groups, associations of commune-based groups of IPM alumni farmers, are formed to be able to systematically plan production and meet the quantity and quality of produce needed by buyers. Economic benefits from premiums obtained from better quality produce motivate FFS alumni farmer groups to continue applying sustainable production practices with reduced or no chemical use and enhancing benefits from ecosystem services. In Lao PDR, the programme has supported a policy process at local and national level for generating political support for greater and sustained investments by government and resource partners in capacity building programmes for adoption of sustainable agriculture practices by smallholder farmers in rice-based landscapes. As part of and input to this process, innovative communication products have been developed based on the successful Save and Grow Farmers Field School work implemented in 6 Lao provinces within context of FAO's Regional Rice Initiative[17] during the 2015-17 period. Aligned with the Lao Government's Green Growth Strategy, the Programme supported capacity building work done in Lao PDR was recognized during the 2018 World Food Day celebration held at FAO in Bangkok when one of the FFS Graduate farmers, Mrs. Phonexay from Phaxay, XiengKhouang, received a Model Farmer Award[18]. Documentation efforts at FAO-RAP continued into 2018/19 with the intention to report to Asia and Pacific member countries on RRI results achieved in all 3 countries (Indonesia, Lao PDR and Philippines) and to finalize communication products, including videos, posters, brochures and case studies, to be published in early 2019.

The REAL program continues to attract policy support and funds, which contributing to possibilities to expand the program. In Laos, program activities are being co-funded by international organizations in 2

[17] http://www.fao.org/asiapacific/perspectives/regional-rice/en/
[18] http://www.fao.org/asiapacific/events/award-citations-to-fao-asia-pacific-model-farmers/model-farmers2018/en/

provinces and the provincial and national Non-Formal Education offices are preparing materials on the awareness of pesticides impact to health and the importance of Agrobiodiversity to be distributed nationwide.

In Thailand, results of the tests on pesticide residue and impacts to children have provoked a strong reaction and support from the local and national government. In January 2019, The Minister of Education in Thailand signed an order for all schools under the Ministry of Education to be freed from pesticides. As part of a working committee to develop a national chemical management plan, TEF also integrated the Safe School Lunch Program and the implementation of a buffer zone (where chemicals can not be sprayed or otherwise applied) for school and communities in the 10-year national plan, ensuring the consideration and integration of chemical management strategies into the future.

In Vietnam, three of six provinces received funding from the REAL program while the remaining three provinces sustained their projects by mobilizing funds from local sources and farmers themselves. Likewise, among the forty-six schools now maintaining PIA and ABD activities in Vietnam, only twenty-six schools were supported by REAL in 2018, while the remaining twenty schools supported their PIA and ABD activities with internal government funding. This government support is a result of local and national advocacy efforts by ICERD and TFA and demonstrates true programmatic sustainability. In order to secure a stable and sustainable financial situation, PANAP and partners have continued to search for various methods to fund raise.

PANAP has continued to explore other donor sources. SRD , SAEDA and CEDAC are offering consultative services to local government extension offices and various organization for research and training for farmers. PEAC in China is still managing their eco-stores and is using the internet to sell products from their project sites. SAEDA has had ongoing training with new farmers on marketing of their products. As of 2019, SEADA has facilitated three markets with the financial support from the district and provincial governments in northern Laos.

At regional level the Programme continued to support the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention. Following Programme support for participation of relevant government staff in the latest Commission meeting, held in New Zealand in November 2017, the Programme provided technical support and facilitate participation in regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides in 2018. This included a *Bactrocera* Fruit Fly Regional Workshop hosted by the Royal Government of Thailand in March 2018. This support is highly valued by the APPPC Secretariat and its 21 contracting member governments and contributes substantially towards promotion of IPM and better management of pesticides in the Asia Pacific region. The secretariat is hosted and supported by the regional office of FAO in Bangkok securing a long term commitment for experience sharing and regional collaboration on matters pertaining to IPM and pesticide management.

FAO convened a Global Workshop on Impact Assessment and Monitoring and Evaluation of Farmer Field School programmes in Bangkok,Thailand during period 17-20 September 2018. The workshop, jointly organized by FAO AGP and Programme implementing partners, the Asia Regional IPM/Pesticide Risk Reduction Programme and Thai Education Foundation/TFA, brought together FFS practitioners from around the world to review and update the Impact Assessment framework and toolbox for FFS programmes. A total of thirty-three participants (9 women) attended the Global Workshop representing national governments, private sector, civil society organization (CSO) partners and FAO staff from 24 countries in Asia and the Pacific, Latin America, Near East and Africa.

In 2017-18, work on soil health with FAO's Regular and Trust Fund project support (including this programme) saw the preparation of a draft FAO position paper and a policy paper from the Philippines for submission to the ASEAN Working Group on Agriculture Training and Extension (AWGATE). The policy paper, presented at various international workshop and meeting events in 2018, endorses the development of a regional programme on soil health for funding support from the ASEAN + 3 partnership. Work in 2018 focused on development of a Farmers Field School Manual on Soil Health, to be finalized/published in early 2019.

Since the beginning of phase 2, KemI has been seeking dialogue and collaboration with regional actors with a mandate in chemicals management. After some initial struggling to identify key organizations and persons, KemI now has well established contacts with the ASEAN secretariat and UN Environment Regional Office for Asia and the Pacific. Regular meetings and invitations to take part in relevant activities and workshops organized by each organization has created a better understanding of the mandate and expertise of each organization as well as ideas for how to support each other's work. At the 3rd annual meeting of the ASEAN working group on chemicals and waste (May 2018) a representative from KemI, presented ideas for future collaboration between ASEAN and KemI to the member states. The proposal was positively received by the member states and KemI is now in the process of developing an ASEAN cooperation project focusing on support for implementation of GHS in the ASEAN region.

The KemI-supported regional collaboration on chemicals management has been an important complement to the work/support from regional actors such as ASEAN and UN Environment Regional Office for Asia and the Pacific. KemI has, since the beginning of phase 2, been providing practical advice on various aspects of chemicals management (enforcement, pesticide registration, development of registries, financing etc.) and have contributed to increased awareness and capacity of government agencies in the region. With chemicals laws in place and focus on implementation of the laws, this kind of practical advise is requested by many countries in the region. Organisations like UN agencies and ASEAN rarely have practical experience from mananagement of chemicals and cannot provide training or guidance on such issues. The regional chemicals management forum provides a platform for informal dialogue on issues connected to chemicals management and participating countries have during the years developed a very open communication and dialogue. The possibility to assign country delegations with participants from several concerned ministries/agencies have contributed to improved national coordination in addition to the regional networking. This is a good foundation for further advancement of sound chemicals management in South-East Asia.

Anti-corruption

All partners are well aware of the risk of corruption and have worked actively to reduce and eliminate risks in all parts of the operation, from internal systems for checks and balances to advice on development of legislation, enforcement etc.

Farmer Field Schools (FFS) empower farming communities. FFS alumni become more articulate in what they accept and what they do not accept from extension services and other government services. This tends to increase accountability and improve quality of services of service providers. Community education programmes on IPM/PRR have seen local governments and farmer groups formulate policies and empowered to address issues such as selling of banned and illegal pesticides, e.g., closure of shops that do not comply with government regulations.

In order to improve transparency and accountability of duty bearers, TFA and partners continue to monitor the status of pesticides use and particularly the banned and illegal pesticides and disseminate the information to the public.

When supporting development of legislation, the programme always highlight the importance of having clear and transparent criteria that makes laws and regulations easy to interpret and avoid risks of "grey areas" and risk for corruption. Robust and transparent systems for enforcement of regulations are supported and manuals for inspectors provide clear and straightforward information that is easy to understand. Transparent reporting from inspections is supported as well as systems of working in pairs etc.

All regional and local partners are required to audit their funds under Kemi support and selection of auditors are reviewed and recommended by Sida. Regional partners are having continuous discussions with local partners on issues related to book keeping and financial reporting in order to further strengthen this area and make sure that appropriate control measures and systems are in place.

FAO's Anti-Fraud and Anti-Corruption Policy, approved in 2015, was updated in 2017[19]. Each country office is mandated to put into place a country-specific control plan based on the FAO corporate policy and pushes for strict adherence to counter-fraud principles, objectives, roles and responsibilities, including zero tolerance for fraud and corruption. FAO has internal auditors in its headquarters and regional offices. At country level, FAO engages in contracts with local auditing firms. Annual and random audits – financial, management and performance - are carried out on all activities and projects including the Trust Fund GCP/RAS/229/SWE project supported within context of this Sida funded Programme.

In 2018, PANAP began discussions with PANAP's Steering Council on best practices to ensure anti-corruption that looked both at governance and financial management issues. PANAP also requests all partners to do external financial audits to ensure best practices in financial management.

Communication/information

The FAO Asia Regional IPM/Pesticide Risk Reduction Programme have continued to share information through the programme's existing website (http://www.vegetableipmasia.org). During 2018, some eight news releases were published on a variety of different activities supported by the Swedish funded project. The regional IPM programme website has been regularly updated and used widely and frequently, with some 124,000 hits as of January 2019. The e-list serve is constantly updated and new participants added, with relevant news articles shared at an almost daily basis. After the completion of the regional programme, the website was closed and the content transferred to FAO's main website (since the programme website was separate from FAO's own website and continued maintenance was not possible when the programme was closed). Useful information will continue to be available to the region through different FAO webpages. Some information will, however, not longer be available.

During the reporting period, two chapters outlining results of capacity building interventions for development of agroecology, integrated farming systems and sustainable intensification of crop production were published (May 2018) by the UK-based Earthscan from Routledge in a well-received book entitled "*Agricultural Development and Sustainable Intensification: Technology and Policy Challenges in the Face of Climate Change*". Programme staff intensified efforts to develop innovative communication products for

[19] http://www.fao.org/aud/43301-0e63753e918fd9395cfa276ffbd275f03.pdf

the purpose of communicating programme results during the Final Regional Forum held in Bangkok in November 2018. Also published, jointly by CAAS and FAO in 2018, were the Proceedings of the International Symposium on Agroecology, held in Kunming, Yunnan, China in 2016 [20]. This publication included 2 chapters documenting results of the IPM/Save and Grow FFS work in China and elsewhere in the AP region. The programme also continued to communicate with a broader audience using Facebook and Twitter.

All participants that have attended FAO Pesticide Registration Toolkit trainings get access to a global Forum for pesticide registrars. The on-line Forum is maintained by FAO HQ. Members of the Forum receive news on updates of the Toolkit and can discuss pesticide related issues with pesticide registrars from other countries/regions. Updates in 2018 included learning modules on HHPs.

TFA continues to share and disseminate program information in various national and regional meetings and workshops. The TFA website[21] and Facebook was updated with information of program activities and pesticide related risks to human health and the environment. TFA has also been maintaining active communication through the digital channels of Facebook and LINE. In Thailand, various awareness raising materials were produced by students in Thai language. These materials were printed and used for dissemination to communities, meetings and forums in all levels. Some schools also developed video clips for learning and dissemination. Several news stories were printed by local and national newspapers and there were at least four televised broadcasts covering this issue as a result of the students efforts. In Cambodia, TFA's partner ATSA organized several meetings and workshops to create networking opportunities among individuals in the educational, community service, and governmental sectors. This included a provincial workshop as well as two meetings between authorities and stakeholders to discuss action plans for further pesticide risk reduction. ASTA also organized two pesticide risk awareness campaigns involving 131 participants (local authorities, farmers, students and teachers) and coordinated with an external consultant to produce one assessment and four case studies. They also published seventy-five guide books on Pesticide Risk Reduction, Agrobiodiversity and Integrated Pest Management for teachers as well as printing 150 informational posters on pesticide risk to be distributed and displayed at schools and community spaces. In Lao PDR, TFA presented the results from the study of "Pesticide Impacts to School Children" and provided recommendations for safe school lunch programs to the World Food Program in Laos on July 9, 2018. In Vietnam, ICERD, TFA, and the National Institute of Occupational Environmental Health organized a national workshop on pesticides impacts to health and residues testing with over fifty participants from government, international organizations, and CSOs having participated. The Department of Continuing Education and ICERD also organized a national workshop on PIA and ABD for over 100 participants from eighty CLC's in Hanoi to disseminate and share program results.

PANAP and partners continue to expand social media tools, use conventional media; making television and radio appearances, and being featured in newspapers. Blogs, newsletters and press releases have been used to get the attention of local and international media as well. PANAP has continued to share memes of women from the Stories of the Field Booklet., which has garnered traction on social media.

KemI has continued to develop and add information to the specific webpage on regional collaboration in South-East Asia (http://www.kemi.se/en/about-us/our-work/international-work/regional-cooperation-in-south-east-asia). In addition to the pages related to regional collaboration and the regional Forum, there

[20] http://www.fao.org/3/CA0153EN/ca0153en.pdf
[21] http://www.thefieldalliance.org/

is now an entry to information on international cooperation at the start page of the KemI website, making it easier to find information and guidance relevant for government authorities and other stakeholders[22].

All partners have gradually increased the production and use of filmed material as a way to reach additional people and new groups of beneficiaries. For the final regional forum, KemI and partners developed a number of films (in some cases with support from external consulats) to spread information on results and achievements in an easy accessible way.

The regional programme was highlighted in a Chemical Watch article[23] in June 2019.

A list of publications and filmed materials that have been developed with full or partial financing from the programme can be found in section 11.

Results and risk management

The aggressive marketing strategies of pesticide companies have continued during the entire programme period. However, with the banning of most WHO Class I pesticides in all the project countries, there has been a marked reduction in the use of highly hazardous pesticides. The risk of substitution, albeit to less toxic chemicals, could also lead to intensive and misuse of these products. This risk is addressed in the curriculum of farmer education programmes as well as other communication strategies of FAO-supported IPM/pesticide risk reduction programmes.

Martial Law in Mindanao and political changes in the rest of Philippines have caused some delays in PANAP's and local partner's work. Bills on paraquat and glyphosate bans which gained traction in 2017 has slowed down due to the overall political situation in the Philippines. Many Human Rights defenders, including even the UN Special Rapporteur on Indigenous Peoples Rights, and farmer leaders have been placed on a "terrorist" list and are fearing for their lives. This also effected mass outreach activities. In addition, political changes in Cambodia has curtailed some activities by CEDAC. Since 2018 was an election year in Cambodia, many policy advocacy related events and meetings were not organized. More focus and emphasis went to organising awareness raising workshops for farmers and consumers.

PANAP has experienced staff turnover in Cambodia which has caused some program implementation delays till new staff were employed and trained. PANAP continues to support and monitor their work.

Political changes in China has also made it more difficult for CSO to accept funding from international organizations and implement policy advocacy work.

As part of working towards greater sustainability of Programme results beyond completion of the Programme, FAO staff identified and pursued strategic opportunities for take up and scale out of successful capacity building work pioneered with Programme support. FAO continued work with GMS member country government and other resource partners as to ensure sustained investements in IPM and Pesticide Risk Reduction farmer training. In Laos, IFAD and World Bank funding continued for the up-scaling of the pesticide risk reduction field training work in 6 Lao provinces with capacity building and technical support provided by the programme. Whereas FAO Regular Programme funding for the Regional Rice Initiative came to completion in 2017, some RP funds were set aside in FAO-RAP for RRI results analysis and communication of results in 2018. In both Laos and Vietnam, Save and Grow for

[22] https://www.kemi.se/en/international-cooperation
[23] https://chemicalwatch.com/78635/swedish-chemicals-agency-works-on-asia-support-proposal

Sustainable Intensification of Rice Production and Integrated Agro-Aquatic Biodiversity and Integrated Farming Systems development work continued in 2018. In Cambodia, the implementation of the IFAD-funded Project for Agriculture Development and Economic Empowerment to upscale IPM within integrated farm management and sustainable agricultural production continued. In Vietnam, the implementation of two World Bank projects with farmer education/FFS components continued during the reporting period: the Vietnam Agricultural Improvement Project - VIAIP (WB Project 7) and Mekong Delta Integrated Climate Resilience and Sustianable Livelihoods Project - MD-ICRSL (WB Project 9). The National IPM Programme provided technical support to both projects and in particular the component capacity building to improve productivity and quality of agriculture, increase farmers' incomes, and reduce vulnerability to adverse climatic events. In China –with Programme support- successful project formulation discussions led to the approval of a Guangfa Securities project which intends to support interventions on Farmers Field Schools and use of novel ICTs for the benefit of smallholder farmers and connecting to the national and local government's priority Poverty Allevation targets and programmes. The project, with a geographic focus on Yunnan and Sichuan, aims to help government deliver on their national SDG action plans, most notably focused on achieving SDG-1 on poverty reduction. Efforts by FAO Programme staff continued into 2018 for the development of concept notes for several initiatives at global, regional and country levels proposed for Green Climate Fund and Global Environment Fund. The latter included technical assistance for development of the "Inclusive Rice Landscapes" and the HHP proposals, intended for GEF-7 funding cycle submissions in 2019.

TFA has continued to monitor changes of key government counterpart personnel in order to ensure effective communication and related to policy support etc.

For the FAO and KEMI implemented Pesticide Management policy work, as in previous years, some delays of scheduled inspection and enforcement activities were experienced in 2018. Whereas in both Cambodia and Laos inspection and enforcement activities were scheduled to restart in 2018, internal government delays necessitated the Programme to halt implementation in Cambodia and delay the implementation of activities in Laos until such a time that is was no longer possible for the Programme to technically support and fund the planned work within still available timeframe of Programme implementation. Development and adoption of new national legislation naturally tends to follow a slow and somewhat opaque process with limited scope for outsider's influence, both in terms of content as well as timeframes. To adjust to this fact and other new situations and opportunities, the programme has worked with rolling work-plans that are updated on regular basis in dialogue with the countries. This allowed for adjustment of support from the programme to current situation and priorities.

Finally, a planned FAO-OED evaluation of the FAO-Trust Fund GCP/RAS/229/SWE project, originally scheduled for 1st half of 2018, was delayed until last quarter of 2018 due to reasons beyond Programme control. The Evaluation eventually started in November 2018 and the entire mission met with key Programme partners, FAO staff, government and CSO representatives during the Final Regional Programme Forum, held in Bangkok in late November 2018. Field mission are now scheduled to be conducted in Lao PDR, Myanmar and Vietnam during March/April 2019 with a report to become available by late April/early May 2019.

For more details on risk levels and implemented risk mitigation measures during 2018, see risk matrix in Annex 1.

Private sector collaboration

FAO has explored various partnerships with the private sector and facilitated linkages of farmers to the private sector, ranging from issues like sources of high quality seeds, alternatives to pesticides to better market access. Since markets have a great deal of influence on what and how farmers produce, FAO have continued to provide technical advice to the international multi-stakholder platform (UNEP/IRRI led Sustainable Rice Platform) where private and government sector partners have been brought into discussions on the development of standards for sustainable production that would be applied and market access preference given to farmer groups complying with the standards. As of January 2019, SRP's membership list counts over 90 public and private sector partners. A revised set of SRP standards and Performance Indicators were adopted at the SRP Plenary Assembly Meeting held in Siem Reap, Cambodia in January 2019. Private sector collaboration is foreseen also in future (beyond Programme completion) within context of the several "Inclusive Rice Landscapes" proposals developed for the GEF-7 replenishment cycle and endorsed by GEF-OFPs in member countries.

At country level, FFS alumni groups have continued to evolve into contract farming groups and/or formalized cooperatives as to be able to engage in value chains or marketing initiatives. In China, consultations were held with major local private sector partners (Guangfa Securities, Alibaba, JD) with regards to investing in Farmers Field Schools and innovative ICT applications (including e-commerce facilities) in support of the government's poverty allevation programmes. Subquently (in early 2018), a project concept note was developed and funding approval from Guangfa Securities was obtained

TFA and partners also continue to seek collaboration with the private and public sectors. In 2018, the Hanoi Department of Continuing Education organized a workshop on "Linking CLCs with Schools and Markets on Green Products" for over 100 leaders from eighty-eight Community Learning Centers across four districts in Hanoi. Representatives from the Field Alliance and ICERD shared experiences from Thailand and Vietnam and provided recommendations for future program development.

PANAP's partners in Cambodia, Vietnam, Laos and China have collaborated with organic and eco-markets to sell their farmers' products from their project sites. The rice mill of CEDAC is expected to be completed by March 2018. The rice mill is one first civil society and community led innovations in Cambodia. The mill will process organic rice from CEDAC's project sites and network of partners and export it to various countries in the US and Europe. CEDAC supports farmer markets in 7 provinces, and 8 shops in Phnom Penh.

With SRD, products like probiotics, eco-honey, antibiotic-free fish and organic chickens are being marketed through local television channels and on their website. SRD has partnered with Tia Ga Fish Company to sell farmers products from the projects sites.

CEDAC in Cambodia and SEADA in Laos are involved in various marketing certification schemes like Participatory Guarantee System (PGS), Fair Trade making it easier for farmers to access local and international markets. While organic certification is expensive for farmers, PGS and other systems provide farmers with an easier process of certifying that their products are organically produced. Often these systems are done by a process of peer to peer review or through local cooperatives, local government or even a local NGO and target local markets and communities. In Laos, the local government has given financial and logistical support for three organic markets. CEDAC has partner with a local restaurant Okra to sell products from their project sites to the restaurant. The restaurant also features information materials and photo exhibits to their customers to raise awareness.

As for PEAC in China, there are several eco-restaurants and shops to help sell organic or pesticide free products. The products are also sold online and through an Eco-Farmers' Market, which is organized every last Saturday of the month in Kunming to build direct links between consumers and farmers. PEAC has organized consumer to farmer exchanges to enhance consumers trust in organic products.

PAN Philippines managed to negotiate with a banana plantation company for a long-term CPAM project, including biodiversity assessment and an oversight role in the implementation of a sustainability code to guide plantation practices, particularly in the use of pesticides. A memorandum of agreement with the banana plantation was signed.

KemI has established a cooperation with a ASEAN Chemical Industry project. [24]A large group of major chemical producers in the region has started a project aiming at increasing regional cooperation and promoting harmonization of regulations. They have welcomed an informal cooperation with KemI and its partners and they participated in the last regional chemical management forum in Bangkok.

6.2 Regional collaboration

A Final Regional Forum was convened in Bangkok, Thailand in November 2018. A total of 129 participants (67 women) attended the Final Regional Forum of the Swedish-supported Programme " *Towards a Non-toxic South-east Asia*" held from 27-29 November 2018 in Bangkok, Thailand. The forum was jointly organized by programme partners (i.e., Swedish Chemicals Agency, The Field Alliance/Thai Education Foundation, Pesticide Action Network-Asia Pacific and the FAO Asia Regional IPM/Pesticide Risk Reduction Programme). Participants comprised of representatives from national governments, civil society organization (CSO) partners and other stakeholders who came together to summarize the accomplishments and lessons learned from more than 10 years collaboration, highlight remaining challenges for the region and discuss ideas, priorities and strategies for continued work to strengthen chemicals management and reduce health and environmental risks from pesticides, industrial and consumer chemicals beyond the current phase of the regional programme that came to a completion in early 2019.

The FAO component of this Programme has continuously supported the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention. In particular, the Programme has provided technical support and facilitated participation in the regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides. Under the plans for the bi-ennium 2018-19, a regional workshop on Management of *Bactrocera* Fruit Flies in Mango Production was held in Bangkok during 19-23 March 2018. The workshop, jointly hosted by FAO and the Department of Agriculture of the Royal Thai Government, facilitated exchange and learning among key plant protection staff from 14 South and Southeast Asia countries. The Programme support is highly valued by the APPPC Secretariat and its member countries and contributes substantially towards spread prevention and management of invasive crop pests and diseases while promoting IPM and better management of pesticides in the Asia Pacific region.

In 2018, the FAO component of this Programme supported the development of draft curriculum and exercises for pilot activities on soil health to advocate for policy and development of a regional programme for funding support from the ASEAN + 3 partnership.

[24] https://scic.sg/asean/index.php

Since 2013, TFA has organized annual regional exchange and curriculum workshops for partners and counterpart government officials. The workshops provide updated progress of programs, innovations and development on Pesticides Impact Assessment, agrobiodiversity and various ecological agricultural practices from government and the private sector.

TFA and partners has also been participating and sharing expertise in the annual Mekong Extension and Learning Alliance (MELA) workshop which includes policy makers, academia, civil society, private sector and farmers in 2016 and 2017. The MELA network and workshops provide opportunities to learn and share knowledge and experiences from the REAL program to a broader audience and learn about innovations and new development in rural advisory services to communities. In 2018, TFA co-hosted the MELA workshop with Department of Agricultural Extension in Thailand.

In order to raise public awareness on risks with pesticides and to attract policy makers' attention, TFA initiated a regional study on pesticide residues in children and farmers in high risk areas in 2016. Key officials from the ministry of health from 4 countries were trained on how to take simple blood test and in-turned surveyed thousands of farmers, consumers and children in Laos, Philippines, Thailand and Vietnam. This study was continued in Thailand in 2018 to further investigated the pesticide residues in school lunch and urine through laboratory analysis and data were used for national and regional dissemination and policy formulation.

The Field Alliance and ICERD also organized an exchange visit specifically regarding pesticide container waste management for nine officials from the Ministry of Agriculture and Ministry of Natural Resources and Environment from Cambodia, Lao PDR, and Thailand from October 8-9 in Hanoi, Vietnam. The exchange visit provided opportunity for concerned officials to share issues and efforts in drafting and/or developing related laws for the region.

PANAP and partners have continued the regional campaign "Protect Our Children from Toxic Pesticides". Since the beginning of phase 2 of the programme, more than 118,000 people have been made aware of the impacts of pesticides on children and the environment. Since 2013, PANAP and partners have organized several workshops to build capacity and to strengthen the network on CPAM as well as work connected to media and human rights. PANAP has collaborated with 34 groups from various countries in Asia Pacific, mainly in Laos, China, Vietnam, Malaysia, Indonesia, Philippines, Sri Lanka, India, Pakistan, Nepal and Cambodia. This has led to several regional campaigns and one joint regional report[25].

Since 2009, KemI in collaboration with the member countries, have organized regional chemicals management Forums and specialized workshops focusing on specific topics releted to management of chemicals. Participants from Cambodia, Lao PDR, Myanmar, Thailand, Vietnam and other invited countries have been introduced to a large number of different topics on chemicals management and have shared country updates with their neighboring countries. The Forums has served as an important regional platform for capacity building, information exchange and dialogue on sound chemicals management in the absence of a regional arena for this kind of collaboration and networking. Collaboration and dialogue between the member countries within this group of countries has evolved during the years and the atmosphere and communication is open and friendly. Since all member countries have the possibility to assign country delegations with participants from several concerned ministries and other stakeholders the

[25] https://panap.net/2018/10/of-rights-and-poisons-accountability-of-the-agrochemical-industry/

Forums have contributed to improved communication and coordination on national as well as on regional level.

The ASEAN working group on chemicals and waste, AWGCW, (created in 2015) has evolved as an important regional platform with a possibility to replace and/or complement the regional collaboration supported by KemI. Since the creation of the working group, KemI and representatives from the ASEAN Secretariat have had a continuous dialogue and in 2017, 2018 and 2019 KemI has been invited to take part in the open session of the annual meeting of the ASEAN Working Group on Chemicals and Waste (AWGCW). At the 3rd annual meeting (in May 2018) KemI presented initial ideas for future collaboration between ASEAN and KemI and at the 4th annual meeting KemI shared more concrete plans for continued support on chemicals management to the regiona as well as a draft collaboration proposal focusing on support for implementation of GHS within ASEAN. The suggestions were positively received by the ASEAN member states. KemI is mentioned as a potential partner in the ASEAN Strategic Plan on Environment (ASPEN) 2016-2025 and KemI was encouraged to submit the collaboration proposal for comments and formal endorsement..

Since the beginning of phase 2, KemI has also had continuous dialogue and collaboration with UN Environment Regional Office for Asia and the Pacific. Regular meetings to update each other on on-going and planned work and extension of invitations to take part in relevant meetings and workshops organized by respective organization has created a better understanding of the mandate and expertise of each organization and contributes to more effective use of resources in the work towards improved chemicals management in South-East Asia. Discussions on how to further strengthen collaboration between the organisations was initiated in 2018 and is on-going.

6.3 Long-term and short-term objectives

Programme Objective: Strengthened capacity and regional collaboration for efficient pesticide risk reduction and chemicals management within and among partner countries

The capacity for efficient pesticide and chemicals management has gradually been strengthened through various kinds of support from the programme, such as trainings for government officials, general awareness on risks from pesticides, dialogue and support to the development of legislation on pesticides, industrial and consumer chemicals etc. Several regional trainings on the use of the FAO pesticide registration toolkit, the latest such training held in Bangkok in August 2018, has contributed to improved capacity of pesticide registration authorities to assess and take scientifically based decisions on whether to approve pesticides or not. The toolkit contains a specific module supporting identification, assessment and mitigation of risks connected to highly hazardous pesticides (HHPs). Since HHPs are available and used in all the member countries this module can support the countries in the work to identify, assess and mitigate the risks connected to HHPs.

Phase I of the project focused on baseline data gathering through the Community-based Pesticide Action Monitoring (CPAM). Introduced and continuously being developed by PANAP, CPAM is a participatory action research approach to document and create awareness of pesticide impacts on human health and the environment. Community members themselves undertake the research, and integrate it with organising

and action. The results, as documented in the book Communities in Peril (PANAP, 2010[26]), revealed that HHPs and banned pesticides were being used extensively in Cambodia, Vietnam, Laos and China. These pesticides were being applied without proper protective equipment; study participants exhibited various symptoms of pesticide poisoning.

Early into the project, PANAP spearheaded the global campaign for a ban on endosulfan, which culminated in its listing in the Rotterdam Convention or the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, as well as the Stockholm Convention, an international environmental treaty that aims to eliminate or restrict the production and use of Persistent Organic Pollutants.

Community capacity-building commenced in Phase II. This enabled local partners not just to further expand the pesticide database, but to also generate greater public awareness on the hazards of pesticides, initiate the movement for the adoption of ecology-based agriculture, and strengthen farmer organisations. The gains accumulated during this phase provided unassailable evidence that non-chemical farming results in better income and over-all quality of life. The collected data from across the region served as a strong basis for policy advocacy at the local, national and international levels of governance. Farmers, agricultural workers and other community members took direct action for safer workplaces and homes, especially for the sake of children, whose rights were routinely being violated through pesticide exposure.

PAN AP has consistently worked to improve on or create new policies and regulations on pesticides, and has accumulated successes along the way. Research and community empowerment at the local and national levels feed into advocacy and campaign work in the regional and international arena.

From 2013 to 2018, PANAP submitted a total of eight well-documented case-reports of pesticide poisoning to regulatory authorities in various countries, and platforms and fora for policy-making at all levels. In October 2018, PANAP published the study, Of Rights and Poisons: Accountability of the Agrochemical Industry. This comprehensive study revealed the rampant use of HHPs in Bangladesh, India, Indonesia, Malaysia, Pakistan, the Philippines, and Vietnam. With a total of 2,025 respondents, seven out of 10 of the respondents said that they have suffered ill-effects due to pesticide exposure.

PANAP focused on the inclusion of additional HHPs in the Rotterdam and Stockholm Conventions. PANAP also pushed for the recognition of HHPs as issues of concern under the Strategic Approach on International Chemicals Management (SAICM), a policy framework to foster the sound management of chemical by using pesticide monitoring data from the ground.

The number of farmers in the region that are implementing better pesticide management continues to grow due to efforts by FAO, PANAP, TFA and their partners. By 2013 (end of Phase 1), some 58,716 farmers had adopted better risk reduction practices and by end of 2018 more than 25,000 additional farmers - directly reached by the programme - have adopted IPM after having participated in FAO supported season-long IPM FFS and intensive pesticide risk reduction training. This number does not include farmers who were not directly trained but benefited nevertheless from participation in field days, media exposure, access to information on IPM/PRR. The numbers also do not include substantial numbers of additional farmers trained by other projects working in tandem with this programme under the umbrella of National IPM Programmes. Continued work on enhancing and utilizing goods and

[26] https://panap.net/2010/02/communities-peril-asian-regional-report-community-monitoring-highly-hazardous-pesticide-use/

services from healthy landscapes and ecosystems has brought additional food, improved nutrition and more income to poor farmers.

TFA has continued to build capacity to expand the Rural Ecological Agriculture for Livelihood (REAL) program during Phase 2 in all participating countries. The Agrobiodiversity (ABD) Conservation and Utilization helps create awareness on the importance of ABD to communities' livelihood and promote conservation and sustainable utilization of various indigenous species for food, income and herbal medicines.

The Pesticides Impacts Assessment (PIA) curriculum has been adapted to identify gender roles in agriculture with the emphasis on decision making and handling of pesticides in addition to the assessment of the status of the pesticides use and impacts to health and the environment. The data collected was used to create awareness and used as baseline data for communities to develop pesticides reduction plans and track the progress of the project implementation through periodic ongoing surveys.

Ecological agriculture practices such as integrated farming, IPM, and agroecology has been promoted to help communities reduce the use and risks of pesticides and to increase production and income. REAL activities have been promoted, adopted and implemented in over 150 schools and 100 community learning centers with over 20,000 students and farmers participating in the program. REAL activities are also being integrated into other interested governments' and international organizations' plans and projects.

The regional chemicals management Forum, supported by KemI, has provided an important regional platform for capacity building, information exchange and dialogue on sound chemicals management. Since all member countries have the possibility to assign country delegations with participants from several concerned ministries and other stakeholders, these forums have contributed to improved communication and coordination on national as well as regional level. From 2013 to 2018, 6 regional forums have been organized with a total number of almost 350 participants (56 % women) from the member countries and other invited country delegations (excluding lecturers and other experts). The group of countries taking part in the regional collaboration on chemicals management has increased from an initial 3 member countries (Cambodia, Lao PDR and Vietnam) to 5 permanent member countries (Myanmar joined in 2013 and Thailand in 2014). In addition, participants from Bhutan, Democratic People's Republic of Korea (North Korea), the Philippines, Indonesia and Singapore have taken part in Forum meetings. Participants have been introduced to a number of different topics related to chemicals management and have shared country updates with their neighboring countries. Apart from chemical specific topics, participants have increasingly been introduced to cross-cutting issues such as gender aspects, links between human rights and chemicals, corruption etc.

The dialogue and interactions with the ASEAN secretariat and the ASEAN Working Group on Chemicaks and Waste (AWGCW) has gradually evolved and KemI is now specified as a potential partner in the latest ASEAN Strategic Plan on Environment (ASPEN) 2016-2025. Regular meetings and discussions have contributed to a better understanding of each organization's mandates and resources as well as possible options for continued cooperation and support for sound management of chemicals within the ASEAn region.

The Programme has also continued to support the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention. In particular, the Programme provides technical support and facilitate participation in the regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides. Under

the plans for the bi-ennium 2018-19, a regional workshop on Management of *Bactrocera* Fruit Flies in Mango Production was held in Bangkok during 19-23 March 2018. This support is highly value by the APPPC Secretariat and its member countries and contributes substantially towards promotion of IPM and better management of pesticides in the Asia Pacific region.

Immediate objective 1: Reduced risks associated with pesticide use and enhanced use of alternatives through increased awareness and enhanced capacity in farming communities, schools and institutions and among consumers in partner counties.

Summary of results 2013-2018, TFA and partners

During phase 2 of the programme, TFA and partners have been building capacity for schools and communities on assessment and monitoring of pesticides impact to health and the environment. Ecological agricultural practices and conservation of biodiversity to reduce the risks and improve farmers' livelihood has also been promoted. The process has been embedded in the REAL program since the beginning of the program until present.

Since 2013, TFA has continuously been expanding the REAL program and at present more than 150 schools and 100 community learning centers participate in the program with over 20,000 students, teachers and farmers have been trained by the program.

Agrobiodiversity conservation and utilization program continue to create awareness on the importance of biodiversity to communities and other international programs. Aquatic habitat rings in the rice field have been installed for 108 families in Cambodia with almost 2,000 kg. Of aquatic species collected for foods and income. More than 30 conservation projects on aquatic species, herbal medicine continue to be implemented in Laos. The rice-fish farming and growth of indigenous vegetables have helped farmers gain 4-7 times more income than conventional rice farming in Vietnam.

As a result, the activities have been integrated into the training curriculum for the Community Learning Centers under the the Non-Formal Education department in Laos, Thailand and Vietnam. Pesticides impact assessment surveys have continued to be conducted by schools and communities to assess and track the status of pesticides impacts to health and the environment.

The data has been used to create awareness and has helped communities to plan and adopt ecological agriculture practices to minimize the uses and risks from toxic pesticides. After having received training, individual farmers have improved their personal protective equipment, such as wearing rubber boots and gloves, and have adopted improved spraying practices, spraying downwind and avoid eating and smoking while spraying.

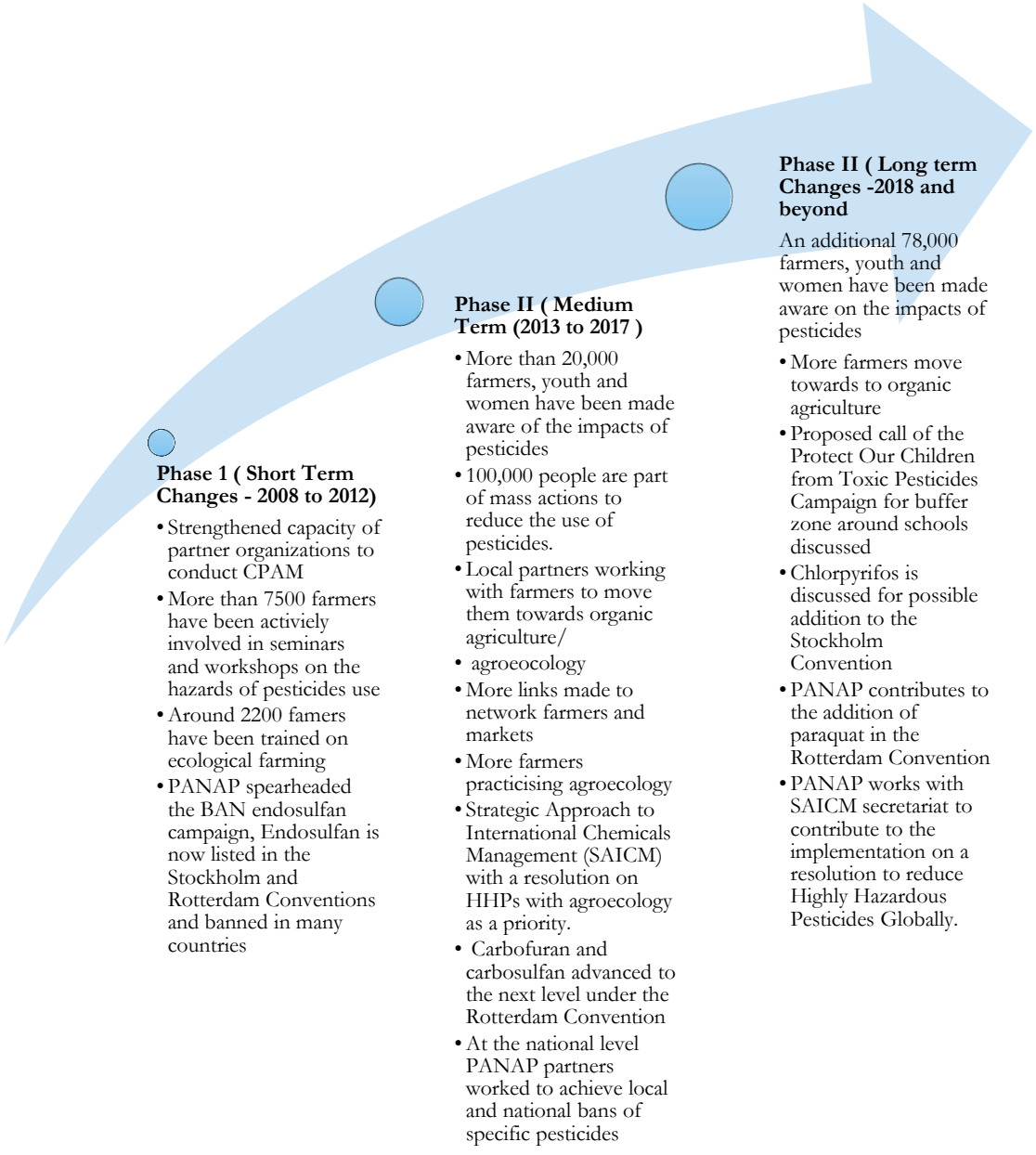
Through group discussion, communities have improved their storage and disposal behaviors to minimize the risks to foods, water, children and animals from pesticides. Pesticide concrete disposal tanks were built in communities in Cambodia and Vietnam to minimize the risks to children and the environment with over 3,000 containers being disposed in the disposal tanks each year in Cambodia. The project helped draft the ministerial order for "management of pesticide container" and the Joint Circular on Guidelines of collecting, transporting and processing waste pesticide container (No. 05/2016/BNN-BTNMT TTLT), issued in May 2016 by the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment in Vietnam. Ecological agriculture practices such as IPM, SRI, use of

botanical pesticides, liquid fertilizers and compost have continuously been promoted as alternatives to chemical pesticides and fertilizers in all countries.

A majority of REAL schools have implemented school vegetable gardens, and some cases herbal gardens, where the produce is used for school lunch and sold to markets to create income for the school and poor students. Cooperatives were set up in Vietnam to help farmers gain access to market with over almost 150,000 kg. of indigenous vegetables supplied to markets, by Na Hoi Cooperatives, with a revenue of around 80,000 USD in 2017.

TFA has been organizing annual regional workshops for sharing progress, exchanges of innovations and networking for partners and counterpart governmental agencies from 5 countries. TFA has also co-organized regional workshops with FAO; one Agroecology Curriculum Workshop in 2016 and FFS's.

Summary of results 2013-2018, PANAP and partners



PANAP has further expanded CPAM trainings and surveys in communes and villages in China, Cambodia, Laos and Vietnam and Philippines. 400 farmers, local facilitators and researchers have been trained on CPAM and the impacts of pesticides on human health and the environment. This resulted in eight CPAM cases. In Laos, there in an increased use of pesticides in Mandarin oranges, most likely from China. In Vietnam, farmers still do not use full protective equipment while spraying pesticides due to the humidity, heat and cost of the equipments. In China, 61 % of farmers surveyed still use glyphosate, a highly hazardous pesticide. In Philippines, oil palm workers have reported being poisoned by paraquat.

In October 2018, PANAP launched the report Of Rights and Poisons: Accountability of the Agrochemical Industry. Of Rights and Poisons is a comprehensive study using CPAM, a participatory action research approach to document and create awareness of pesticide impacts on human health and the

environment. Community members themselves undertake the research, and integrate it with organising and action. The study involved 20 partner organisations from seven Asian countries—Bangladesh, India, Indonesia, Malaysia, Pakistan, the Philippines, and Vietnam. It revealed the rampant use of HHPs in these countries, with 50 pesticides in PAN International's list of HHPs recorded to have been used. With a total of 2,025 respondents, seven out of 10 of the respondents said that they have suffered ill-effects due to pesticide exposure. The report also detailed and was able to provide an over-all picture of hazardous conditions of pesticide use in the region. This includes the lack of personal protective equipment and training; lack of proper labeling; improper storage and disposal; lack of washing and medical facilities for sprayers, etc. Of Rights and Poisons revealed how pesticides use, especially in the Asia Pacific region, is a human rights issue that thoroughly pervades all aspects of life for its users and their communities.

Supporting family farming and agroecology via capacity building and linking farmers to markets

PANAP and partners have supported family farming and agroecology by training and building capacity. This intervention has led to better health and the environment, better income, improved agricultural value chains, which leads to community resilience and overall sustainability.

Over the span of five years, more than 60,000 farmers, women, youth and other sectors have participated in schemes to apply alternative and ecological agricultural practices and 30 to 60 percent of them are women. The CPAM questionnaire has been translated into Lao and Vietnamese.

PANAP has further expanded CPAM trainings and surveys in communes and villages in China, Cambodia, Laos and Vietnam and Philippines. 337 farmers, local facilitators and researchers have been trained on CPAM and the impacts of pesticides on human health and the environment. This resulted in eight CPAM cases.

At national and international level, chemical frameworks have been strengthened leading to the ban and phase out of several highly hazardous pesticides in a number of countries, especially in India and China. Paraquat and 2,4-D (herbicide, main ingredient of agent orange) was phased out in Vietnam in February 2017.

PANAP and PEAC's work on documentation of impacts of pesticides and sharing these with the Chinese government has contributed to the ban of liquid paraquat and endosulfan and chlorpyrifos was restricted for vegetable use in China in 2016. In 2017, ministry of agriculture has already issued a notice banning the highly toxic methyl bromide by 2019. Three others – aldicarb, phorate and isocarbophos – would be withdrawn 2018, while substances including omethoate and aluminum phosphide should be removed by 2020 according the South China Morning Post. Chloropicrin, carbofuran and methomyl will be phased out by 2022[27].

48,200 new farmers have been trained in ecological animal raising, eco-pesticides, pest management like IPM, fertilizers and composting, impacts of pesticides through community mobilizing and exchange of knowledge. In 2017, Partners have continued to train farmers on ecological agriculture and organic farming. 5200 new farmers have been trained in various methods such as system of rice farming, vermi composting, bio-pesticides, marketing skills and product branding.

[27] http://www.scmp.com/news/china/policies-politics/article/2122904/china-phase-out-more-pesticides-improve-food-safety

As of 2017, CEDAC has a broad network of 22,000 farmers who are members of CEDAC's network (with counterpart funds). CEDAC has facilitated the formation of a community rice mills and a larger organic rice mill in Phonm Phenh. This mill supports local communities to process their organic rice and to be sold in US and EU. CEDAC has institutionalized the pesticide issue & CPAM in their organisation. Approximately 3,500 famers have been trained directly in this project.

CEDAC in Cambodia and SEADA in Laos are involved in various marketing certification schemes like Participatory Guarantee System (PGS) and Fair Trade so that farmers can access local and international markets. While organic certification is expensive for farmers, PGS and other systems provide farmers with easier processes of ensuring that their products are organically produced. Often these systems are done by a process of peer to peer review or through local cooperatives, local government or even a local NGO and target local markets and communities. In 2017, 1,414 farmers in Laos are awaiting organic certification and PGS certification from the government.

For the past 8 years, CGFED has been working closely with the Women's Union in Hai Hau District, North Vietnam, to empower women farmers through various capacity building initiatives. Members of the Women's Union in Hai Hau District have been trained in monitoring via Community Pesticide Action Monitoring (CPAM), agroecology and women's leadership. After on-going trainings women participants formed the Women's Pioneer Group in 2015.

In north Vietnam, SRD has continued to train farmers on vermi composting and SRI. SRD has also been invited as resources person by the local extension officers which increased their outreach. Women farmers from Vietnam have organized themselves and conduct CPAM monitoring and market their chemical free products in the market.

Campaign and media outreach

The campaign entitled Protect Our Children from Toxic Pesticides (POC) has been organized annually for the past four years. Campaigns are organized on the 5th of June for World Environmental Day, the 20th of November for International Children's Day and from 3rd to 10th of December for No Pesticide Use Week. Activities have been organized in 8 countries (Vietnam, Laos, Cambodia, Philippines, Malaysia, India, Bangladesh, Nepal and China). The campaign continued to call for a pesticide free buffer zone around schools and safer environment for children. PANAP and partners have mobilized more than 178,000 persons have been made aware and are part of mass actions to reduce the use of pesticides and to practice agroecology. The original baseline of Phase 1 was 7,500 persons.

In Cambodia, partner CEDAC pushed for pesticide-free buffer zones around schools as part of the campaign. CEDAC found out that pesticide drift caused the poisoning of 30 students in Po Ampil Primary School, Takeo Province in Cambodia. They also recorded the use of over 20 hazardous pesticides in agricultural fields surrounding schools in the said province. This spurred teachers, students and local officials to take action and call for pesticide-free buffer zones.

In Vietnam, a pesticide-free buffer zone was successfully developed around Dong Dat Secondary School in 2017. Due to awareness raising activities in the area, farmers became concerned about the impact of pesticides on children, and supported the school in growing banana trees as a buffer to protect the children. "We received positive response from students' parents. We also create awareness by organising talks, events, as well as put up posters and banners, so that people passing by the school can read," said Nguyen Tien Than, principle of Dong Dat.

In 2017, the Protect Our Children (POC) Watch was launched to closely monitor pesticide poisoning cases among children all over the world. It is a listing of online media and news articles, new studies and journals, as well as videos documenting pesticide poisoning of children. That year, the POC social media contents garnered a total of 2,769 Facebook reach and 156 Facebook engagements, using the hashtag #ProtectOurChildren. Consequently, the hashtag #PesticidesFreeWorld reached a total of 94,464 accounts with 127,903 impressions, 3,781 reaches and 63 engagements in Twitter.

In 2014, PANAP held a workshop on the use of social media and approaches to conventional media for various partners. Partners are now actively using social media. CEDAC's Facebook pages has garnered over 100,000 likes. SRD in Vietnam has spread the news on the ban of paraquat and was interviewed in the local news. PANAP and partners hit social media with the #PesticidesFreeWorld hashtag. This campaign has gathered 178,000 impressions (viewers) on Twitter and Facebook. In 2017, the POC social media contents garnered a total of 2,769 Facebook reach and 156 Facebook engagements. Consequently, the hashtag (#PesticidesFreeWorld) reached a total of 94,464 accounts with 127, 903 impressions, 3,781 reaches and 63 engagements in twitter.

Some notable highlights in 2017 include a paper entitled Understanding the Impacts of Pesticides on Children by UNICEF that condenses a wealth of evidence that supports the urgent need to safeguard children's rights to life, survival, development and highest attainable standard of health as pertains to pesticide use.

Drawing out from the 2017 Pesticide Action Network (PAN) submission to UNICEF, key PAN publications and references are included in the paper. The paper calls for urgent action to establish effective pesticide use regulation and monitoring mechanisms and encourage and enforce more productive and safer farming techniques.

Since, 2013 more than 25,000 materials on HHPs, agroecology and impacts of pesticides have been distributed and translated to Khmer, Mandarin, Laotian, Vietnamese and Tagalog. Various campaign materials include posters on the *Cycle of Pesticides*. Infographics and posters were produced and translated into local languages. CPAM reports and factsheets on Highly Hazardous Pesticides are now being used as references for journals on public health and recommendations for better pesticide regulations and laws.

PANAP and partners have increased their overall email listserv reaching out to more people. Support from consumers is slowly growing and their use of WeChat, another social media platform is also effective in highlighting benefits of organic food and harms of pesticide use.

PANAP and partners are part of larger network of CSOs and have formed alliances with other relevant stakeholders to amplify and upscale the programme. PANAP has 110 partners and are part of three coalitions.

Immediate objective 2: Enhanced international, national, and local advocacy on sustainable pest management/agriculture

Summary of results 2013-2018, TFA and partners

TFA and partners have been using field data collected from project sites to share and develop measures and/or action plans to reduce or improve the situation regarding handling and use of pesticides.

Information has also been disseminated and advocated through various exhibitions, meetings and workshops at local, national and regional level, including printed, non-printed and digital materials.

Since 2013, participating schools continue to disseminate their survey results to communities and concerned agencies. Schools' and communities' campaigns have been organized annually to promote pesticide reduction and proper disposal of waste containers in Cambodia. Green environment day campaigns were organized annually by participating schools to promote pesticides reduction and agrobiodiversity conservation in Vietnam.

In 2013, TFA trained partners from 5 countries on incident reporting for the Rotterdam Convention with an aim to link the reporting system with data generated from PIA surveys. In 2015, TFA co-organized a regional training workshop for representatives from Ministry of Health from 5 countries on the study of pesticide impacts to children and communities in high risk areas. Studies were then carried out during 2016-2017 and extended in 2018 to allow further investigation of pesticide residues in laboratory (supported by the Thai National Health Promotion Fund and Greenpeace, Thailand).

TFA and partners continue to disseminate the status of pesticide impacts to health and the environment to communities and authorities at provincial, national and regional levels on a regular basis. These efforts have attracted vast interests and support for integration of PIA awareness raising activities into Lao Upland Rural Advisory Services by Helvetas (an international network of independent affiliate member organisations working in the field of development cooperation and emergency response), the curriculum of the Non-Formal Education and Continuing Education in Laos, Thailand and Vietnam. Program activities were also integrated in Thailand's new National Chemical Management Strategic Plan.

Summary of results 2013-2018, PANAP and partners

Ongoing campaigns and advocacy work have advanced the progressive ban of HHPs, promoted safer alternatives, including agroecology. PANAP and partners have also challenged the power of agrochemical companies in influencing agricultural policies and practices through various interventions, briefing papers and campaigns.

CPAM results and reports feed into advocacy work and campaigns at international, national and local levels to improve existing policies and regulations on pesticides or create new policies. During 2013-2017, 39 cases and reports of pesticide poisonings and health impairments were submitted to regulatory authorities and forums at the local, national and international levels.

During Phase I of the project, PANAP had spearheaded the global campaign for a global ban of endosulfan, which is now listed in the Rotterdam Convention and Stockholm Convention. Advocacy work in Phase II has been focused on including additional pesticides in these conventions and on pushing for the recognition of highly hazardous pesticides (HHPs) as an "issues of concern" under Strategic Approach on International Chemicals Management (SAICM). Given the need for efforts on a global scale to address HHPs, PANAP worked with FAO to get a resolution on HHPs adopted within the framework of SAICM. In the preparations, PANAP drafted two papers on HHPs and endocrine-disrupting (ED) pesticides, which were included in the SAICM website in 2013.

A letter from nearly 120 concerned toxicologists, epidemiologists and physicians from 24 countries and was also delivered to the heads of UNEP, FAO and WHO. The letter called on government leaders to halt production and use of HHPs "to protect our children and succeeding generations from an impending

toxic tragedy". PANAP continued to work through SAICM's successive regional and international meetings, stressing the need for urgent action on HHPs and their replacement with agroecology. Initially, these proposals did not receive much support but following persistent efforts and mobilisation of a global demand by PANAP and allies, a resolution recognising HHPs as an "issue of concern" and the need to promote agroecological alternatives was finally adopted at ICCM4 in 2015.

PANAP has also been supporting the work on HHPs through participation in the development of technical guidelines that support the International Code of Conduct on Pesticide Management. These guidelines are developed by a panel of experts appointed by FAO and WHO, called the Joint Meeting on Pesticide Management (JMPM). PAN has observer status at the JMPM. Since 2007, HHPs has been a special focus area for the JMPM in implementing the Code. PANAP is leading the PAN contributions to this guideline. PAN AP also contributed with advice for the development of guidelines concerning PPE, agroecology, household pesticides and microbial pesticides. In 2015, PANAP continued to provide input into the development of the Guidelines on HHPs. In the JPMP, PANAP supported FAO positions to retain phase-out as the first order of action in dealing with HHPs and to have a needs assessment for HHPs, instead of a benefits assessment to retain nonchemical approaches as the first priority in replacing HHPs. PANAP has also participated in the UN Environment process that led to the UN Environment Assembly in Nairobi in December, 2017. In Asia, we made interventions at the Second Forum of Ministers and Environment Authorities of Asia Pacific Bangkok, in September 2017. In addition, we worked with partners in Europe to suggest additions to the Resolution on Health and the Environment including "Requests the Executive Director to present a report on the environmental and health impacts of pesticides and fertilizers and ways of minimizing them" at UNEA 5. PANAP also participated and gave interventions in the regional and international review workshops of the upcoming UNEP's Global Chemicals Outlook- II report. The workshops brought together more than 100 experts from five regions around the world, including from government, research institutions, the and civil society organizations.

The problem of pesticide impact on health and the environment is compounded by the lack of global pesticide regulations. There is still a need for globally legally binding treaty on pesticides to strengthen global pesticide regulations. Thus, PANAP as part of PAN International, drafted and distributed a proposal for a legally binding pesticide treaty[28]. PANAP's recommendation was featured in UNEP Asia Pacific YouTube Chanel[29].

Over 558 organisations have also signed a global petition to ban HHPs, pushing agroecology as an alternative. A comprehensive book "Replacing Chemicals with Biology: Phasing out highly hazardous pesticides with agro-ecology" was produced and launched globally. It gave examples of successful small and large scale farming based on ecological principles, and described its benefits for farmers in terms of increased yields and incomes, improved health, greater food security and resilience in the context of climate change.

These ongoing campaigns and advocacy sought to advance the progressive ban on HHPs, promote safer and sustainable farming practices and to challenge the power of agrochemical companies. Advocacy went beyond interventions to involvement in influencing the agenda and outcomes on issues of HHPs and alternatives at international forums.

PANAP has been very active also in the work connected to the Stockholm and Rotterdam conventions and have participated in meetings on regional as well as global level. As an example, PANAP participated

[28] http://files.panap.net/resources/Global-Governance-of-Highly-Hazardous-Pesticides-PAN.pdf
[29] https://www.youtube.com/watch?v=sf_D8lHzeaQ

in the technical review committees of both the Stockholm and Rotterdam Conventions – the POPs Review Committee (POPRC) and the Chemical Review Committee (CRC), providing information on agroecological alternatives to dicofol to POPRC, and information on the adverse effects of a number of pesticides to the CRC. One major outcome of the POPRC is the proposed listing dicofol under Annex 1 of the Stockholm Convention with a focus on replacing it with agroecological approaches to pest management in its place.

Within the work connected to the Stockholm Convention, PANAP and PAN Intl have been backing a European Union proposal to list dicofol, a highly hazardous organochlorine pesticide, as a persistent organic pollutant for global ban. Since India, the largest producer of dicofol blocked the proposal contending that it did not meet the threshold criteria to be a POP, PANAP and PAN Int have been providing information to the POPs Review Committee to support the drafting of the Dicofol Risk Profile. This profile is part of the requirement for listing of POPs.

PANAP, has also produced a consolidated list of banned pesticides –a list of pesticides banned in various countries. The list, which is based on official data from 98 countries, showed that 316 currently used pesticides have been banned by one or more countries. This shows that countries are able to ban many hazardous pesticides if they have the will. PANAP made several interventions and submitted various technical papers on several highly hazardous pesticides.

PANAP together with other organisations organised a side-event on paraquat in the COP which was coming up for listing again in the Rotterdam Convention. While all parties agreed that paraquat met the criteria for listing however, three countries opposed its inclusion into annex 3. Other outcomes include the listing of carbofuran and trichlorfon under the Rotterdam Convention, increased awareness of the production and use of POPs-listed sulfluramid, awareness about HHPs in small Island developing states and the existence of alternatives, and awareness that sustainable chemistry is not an appropriate framework for phasing out HHPs.

PAN AP also provided a presentation on an ad hoc monitoring report on Bayer and Syngenta regarding serious issues relating to pesticide sales and use in the Punjab region of India, drawing particular attention to Code violations with respect to paraquat.

Campaigns and advocacy on related issues such as food security/food sovereignty, human rights (especially women's and children's rights) and agrochemical companies' corporate responsibility and accountability continued at various forums.

PANAP has continued to distribute, "Stories from the Field" and "Replacing chemicals with biology: Phasing out highly hazardous pesticides with agroecology". Success stories of women who have benefited from agroecology including savings on agrochemical inputs and from improving their overall farm productivity have been useful tool to distribute and campaign to policy makers.

Immediate objective 3: Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries

Summary of results 2013-2018, FAO

Managed by the FAO Regional Office for Asia and Pacific, the IPM component continued its support for strengthening the capacity for innovation and scaling up of training for IPM, pesticide risk reduction and sustainable intensification of production in four programme member countries (Cambodia, China, Lao PDR and Vietnam). In addition to the 58,716 farmers trained by FAO with Sida/KemI funding at the beginning of the Programme phase 2 in 2013, an additional 25,399 farmers had participated in IPM/pesticide risk reduction education/training programmes by the end of 2018 (see Chart 1). Governments and resource partners helped scale up the pesticide risk reduction training with additional funding in most of the GMS countries (e.g. in Vietnam with World Bank and in Cambodia and Lao PDR, with IFAD funds).[30]

Confirmed by science-based longer-term impact studies, IPM adoption among FFS graduate farmers has led to a >50% reduction in total pesticide use; elimination of use of WHO Class I pesticides; reduced exposure due to less mixing of pesticides; improved disposal of pesticide containers; increased use of protective clothing. Regulatory control of pesticides was strengthened through capacity building interventions aimed at strengthening registration process, development of functional inspection and enforcement systems and updating laws and regulations pertaining to pesticide management in 4 Greater Mekong Subregion countries.

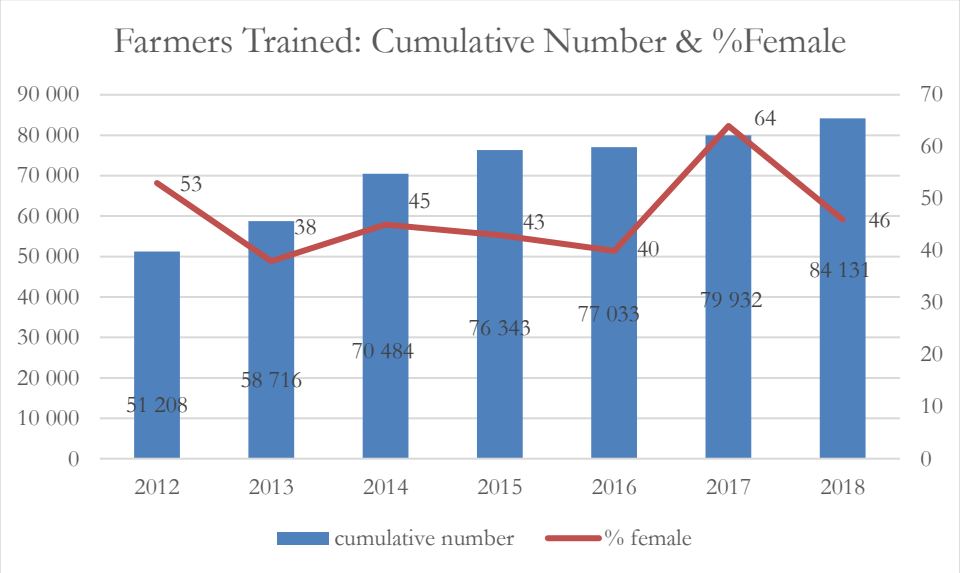


Chart 1: Farmers Trained – Cumulative Number and % Female, 2012-2018

All member countries have continued to innovate, strengthen and invest in their national IPM/pesticide risk reduction programmes supported by policy declarations and allocation of financial resources.

[30] For details on these contributions, see relevant table in MTR-2016 final report.

A good example is Vietnam's 2015 Directive 2027/QD-BNN-BVTV on strengthening and scaling up of IPM in crop production mandating local governments to increase their investments in IPM and farmer field schools. The need to scale-up farmer training on IPM/PRR has become stronger after receiving priority attention from the Prime Minister over concerns about food safety - including increased poisoning cases from overuse of chemicals. In Vietnam, the push from the highest administrative office has come amidst the reported impact of IPM/PRR training in Hanoi where pesticide cost is US$ 11.46-14/ha compared to the national average of US$ 33.48/ha (i.e., 34-42% lower) and 346 kg/ha of chemical fertilizer use in Hanoi compared with the national average of 1.1 tons/ha (i.e., US$ 90/ha vis-à-vis US$ 281/ha) that was confirmed in an unannounced visit to farmers in the province.

Vietnam Prime Minister Nguyễn Xuân Phúcand Deputy Prime Minister **Vu Duc Dam** visit IPM-FFS alumni farmers' fields, Hanoi, September 2016

In Cambodia, implemented through the GDA's National IPM Programme, the Programme supported 470 rice and vegetable Farmers Field Schools and some 491 post-FFS training, involving a total of 20,827 farmers (44% female) during the life time of the TF-GCP/RAS/229/SWE project. Some 91 IPM Farmers' Clubs Farmers were established as part of post-FFS activities and farmers continue to invest their own money through savings to continue IPM Club group learning activities and support sustainable production (See Chart 2).

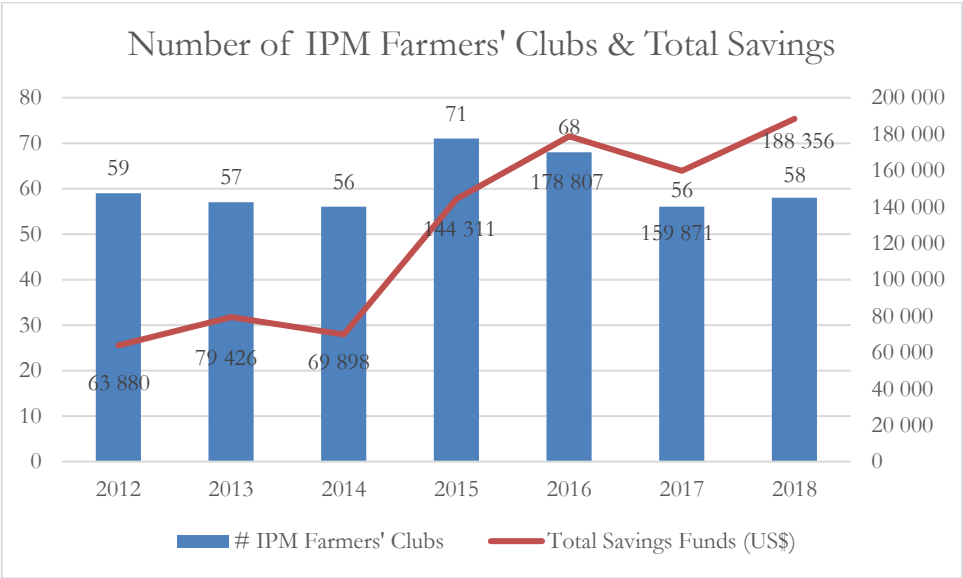


Chart 2: Number of IPM Farmers' Clubs and Total Savings, Cambodia, 2018

In Lao PDR, the government at national level is keen to develop an umbrella policy for clean and green agriculture development in line with the Government's Green Growth Strategy, finalized in early 2019.

FAO was recently requested by the government to develop a national Clean Agriculture strategy with supported to be provided within context of a soon-to-be approved TCP. In March 2017 the Lao government formally recognized FAO for the substantial capacity building support provided for thousands of Lao farmers to adopt sustainable farming practices and work towards the realization in practice of clean and green agriculture[31]. Aligned with the Lao Government's Green Growth Strategy, the Programme supported Sustainable Intensification of Rice Production (SIRP) capacity building work in Lao PDR. This support was recognized during the 2018 World Food Day celebration held at FAO in Bangkok when one of the Save and Grow-SIRP FFS Graduate farmers, Mrs. Phonexay from Phaxay, XiengKhouang, received a Model Farmer Award[32].

In Myanmar, momentum for more consolidated work on pesticide risk reduction is building with the initiation of a Parliamentary Inquiry on Agro-Chemical Residues in late 2018. This builds on earlier Programme interventions and engagement with the national government, PPD in particular, to strengthen pesticide management and promote IPM. FAO-IPM support was provided for development of an effective IPM-based system for management of *Bactrocera* Fruit Flies within context of an export-oriented mango value chain, involving mango farmers in Southern Shan State. In 2018, with Thai government technical assistance, 50 (13 women) vegetable farmers in Southern Shan State participated in a biological control training, aimed at capacity building for reduction of pesticide use and adoption of eco-friendly alternative management options for pest managment.

In China, the IPM/PRR programme was successfully implemented in 3 provinces (Yunnan, Guangxi, Hainan) in southern China, generating good policy support and increased investments by local government for scaling out this important training work. After years of piloting IPM FFS programmes implemented by NATESC/PPS stations and FAO, the good IPM-FFS impact is recognized by government stakeholders at local and national level. At central level, FFS has been adopted by the Minstry of Agriculture and Rural Affairs as an important approach for agricultural technology extension system reform at the grass root levels. At local levels, several municipalities, like Chongqing and Beijing, expanded FFS rapidly. The FFS concepts and associated good educational practices have been institutionalized and have become more of a government-led activity instead of a project-led activity. Work in 2018 focused on results analaysis and sharing, including through the development of case studies on successful Programme supported interventions.

The FAO-IPM component has also worked with the Secretariat of the Asia and Pacific Plant Protection Commission (APPPC) to support implementation of the Standing Committee IPM Workplans, including technical assistance for regional workshops, participant travel and information exchange.

The FAO-IPM component also supported implementation of the FAO Trust Fund project (GCP/RAS/288/AIT) within context of the EU-funded and AIT managed Regional Project on System of Rice Intensification in the Lower Mekong River Basin countries. This regional project, completed in September 2018, supported farmer participatory action research (FPAR) in rain-fed rice production in 3 project countries (Cambodia, Lao PDR and Vietnam) during 2013-2018[33].

[31] http://www.fao.org/farmer-field-schools/news-and-events/detail-events/it/c/900282/

[32] http://www.fao.org/asiapacific/events/award-citations-to-fao-asia-pacific-model-farmers/model-farmers2018/en/

[33] For video links on this SRI-LMB regional project, including its field operations in Lao PDR:
https://www.youtube.com/watch?v=xBZf42TyOyo&feature=youtu.be
https://www.youtube.com/watch?v=k8VzdM46fMY

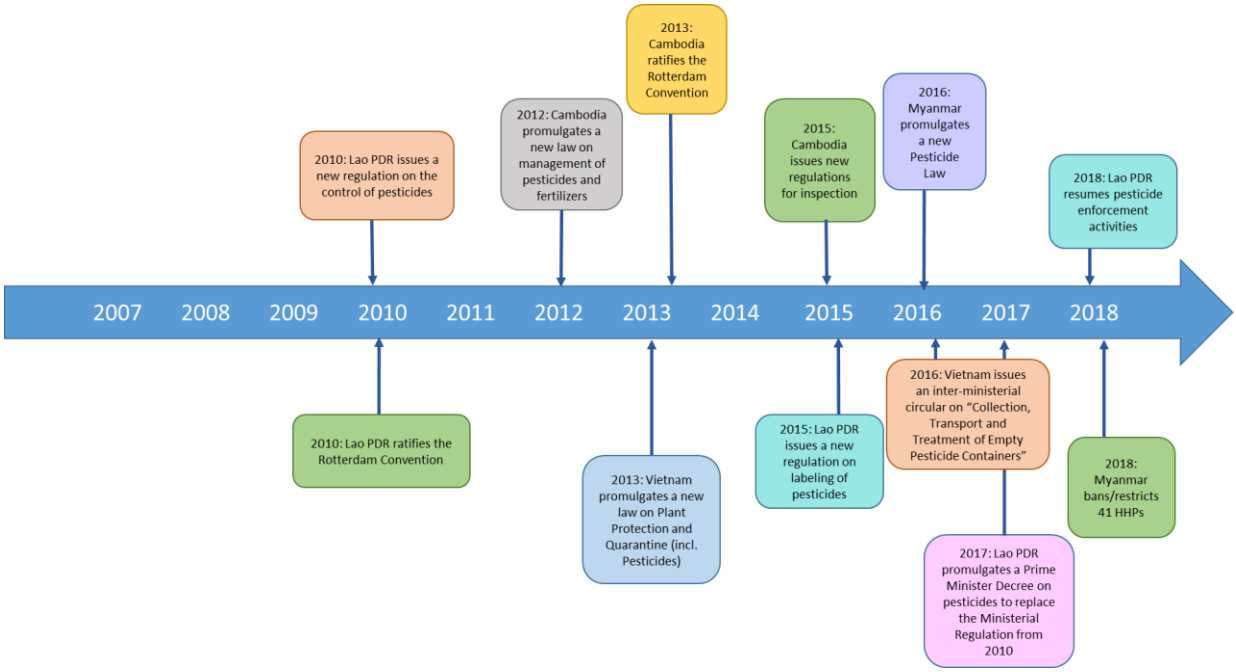
Finally, the FAO-IPM component also helped deliver FAO's flagship Regional Rice Initiative in three pilot countries (Indonesia, Lao PDR and Philippines). This initiative, operational since 2013 and completed in 2018, the RRI focused on assisting countries develop policies and promote good practices for the *sustainable* intensification of rice production through Save and Grow-based Farmers Field School training interventions. In 2018, aside from continued results analysis and development of communication products for purpose of RRI results sharing, attention was given to the importance of soil health in farming systems and the development of an FAO position paper, policy paper and Soil Health and FFS manual for submission to/use by the ASEAN AWGATE and associated national programmes.

No major implementation challenges have been experienced under this objective.

Immediate objective 4: Strengthened regulatory framework for the control of pesticides in selected partner countries.

Summary of results 2013-2018, FAO and KemI

Since the beginning of phase 2 of the programme, all member countries have improved their legislative framework for the management of pesticides (see timeline below). Today, four countries (Cambodia, Lao PDR, Myanmar and Vietnam) have new or revised pesticide legislation. The programme has provided continuous support to the development of legislation by translating draft legislation into English and by providing comments on technical as well as legal issues.



In Myanmar, following promulgation of a new pesticide law in 2016, the programme has supported capacity building for improved pesticide registration process following the latest FAO guidance[34]. The Plant Protection Department actively continued the development of a priority list of potential HHPs

[34] http://www.fao.org/pesticide-registration-toolkit/en/

proposed for deregistration process. Technical assistance was also provided as input to a Parliamentary Inquiry on Agrochemical Residues, launched in late 2018.

In Lao PDR, a Prime Minister Decree on Pesticide Management was developed and promoted with programme support[35]. The decree was finalized and promulgated in 2017 and aims to better protect the environment and human health and calls for inter-ministerial collaboration to strengthen pesticide management. In 2018 policy/regulatory work continued with the MAF/DOA Regulatory Division, in joint action with the World Bank, on development of a secondary legislation, including for better regulation of the pesticide retail sector. The programme also supported the implementation of a survey aimed at making an inventory of pesticide use in melon production in central/southern provinces (Savannakhet/Khamouane) with a focus on methomyl, a banned insecticide but reportedly still in use as confirmed by the study. The study was followed up by field studies aimed at working with melon farmers to identify effective alternatives to methomyl use. Survey results were shared with the Rotterdam Convention for possibly incident reporting and/or follow up in-depth studies for same purpose.

In Cambodia, the programme supported surveys of pesticide retail shops in 2 provinces bordering with Thailand and Vietnam with the purpose to assess availability of pesticides, including taking stock of inventories of banned and non-registered pesticides. Results of these surveys were published and used as input to updating pesticide inspection booklets and other guidance materials prior to planned continuation of inspections with programme support during 2nd half of 2018. Unfortunately, due to internal DAL issues, the inspection work did not materialize.

Programme experiences from the review of pesticide legislation development and establishment of inspection schemes in project countries have continuously been used to improve draft international guidelines on pesticide legislation and contributed to the development of new international guidelines on licensing and inspection of pesticide retailers and distributors. This use of project experiences to strengthen important international FAO/WHO Guidelines enhances sustainability and broad applicability of programme results in the region. Another example of where programme information and experiences have been able to feed back into FAO's international normative work on pesticide management is the development of the SAICM/ICCM4 initiative on Highly Hazardous Pesticides (HHPs). The latter involved the preparation of a SAICM Strategy to address HHPs and the drafting of an ICCM4 resolution to recognize HHPs as an issue of concern and to call for concerted international action to address HHPs based on the strategy.

The programme has also provided support for implementation of the Rotterdam convention. After ratification of the convention in Cambodia and Lao PDR, experts from the Rotterdam secretariat organized workshops with an aim to raise knowledge on the convention, how it can support sound management of chemicals and how to submit import responses to the secretariat. The Rotterdam convention can serve as an important system to receive information on trade of pesticides that are banned

The programme has also contributed with important input and advice in the development of FAO's Pesticide Registration Toolkit. The toolkit is an on-line decision support system for pesticide registrars in countries around the world, especially developing countries with limited resources (see brochure on the Toolkit website[36]). It assists registrars in the evaluation and authorization of pesticides. Registration staff can use the Toolkit to support several of their regular tasks, including: finding data requirements, evaluating technical aspects of the registration dossier, choosing an appropriate pesticide registration

[36] http://www.fao.org/3/ca3814en/ca3814en.pdf

strategy and procedures, reviewing risk mitigation measures and getting advice on decision making. The Toolkit also links to many pesticide-specific information sources such as registrations in other countries, scientific reviews, hazard classifications, labels, MRLs and pesticide properties. With support from the programme a detailed guidance document on how to access and interpret assessments from the EU registration system for pesticides and biocides was developed and the document is now part of the guidance in the Toolkit. The programme has also arranged a number of regional and national workshops on use of the toolkit. The latest such regional workshop was organized in Bangkok in August 2018. Hosted by the Royal Thai Government's Department of Agriculture the workshop participants also included key plant protection/pesticide regulatory staff from DAL in Cambodia and DOA in Lao PDR. These workshops have contributed to increased knowledge on registration strategies, risk assessments etc. among pesticide registration staff in the participating countries. Feedback from the participants has also provided important input to FAO for further development and adaption of the Toolkit to meet countries' needs.

The programme has made use of rolling work plans that are adjusted each year to the new situation. This enables a step-by-step approach that directly addresses newly arisen impediments, and also captures newly arising opportunities. An example is the inspection work in Lao PDR. After establishment of a national inspection scheme and three rounds of nation-wide inspections it was found that the legal mandate for inspectors to punish pesticide retailers who continue to violate the pesticide legislation was not sufficiently clear and led to non-action. During 2015, a process was implemented to patch-up this problem. This involved a national legal consultant and a national technical consultant who worked under guidance and supervision of FAO\HQ and KemI, and national consultative meetings among relevant government departments. The result is an agreement on a new enforcement mechanism that is laid down in a new manual. The discussion also led to a conclusion by the Government that it is time to upgrade the National Pesticide Regulation (under the Ministry of Agriculture and Forestry) into a Prime Minister Decree, which would enhance inter-ministerial cooperation. Legislative impediments hampering effective enforcement of the pesticide regulation in Lao PDR have been largely resolved and new manuals for inspection and punishment in case of violations have been developed. Now that the PM Decree is promulgated, finalization of the manuals was achieved in 2018 and action plans were agreed for subsequent training of inspectors and pilot inspections. Unfortunately, due to internal DOA delays, the Programme was no longer in a position to support implementation of the inspection work given the necessity to close down operations in December 2018.

Finally, this Programme component supported the development of Status Reports on Pest and Pesticide Management for each of the GMS member countries. The reports are intended to facilitate design of follow up interventions to strengthen pest and pesticide management in each of the countries by governments, KemI, FAO and other resource development partners. The key findings and recommendations were shared at the Final Regional Forum in Bangkok in November 2018.

Immediate objective 5: Strengthened capacity for chemicals management within authorities, industries and among relevant CSOs in the partners countries

Summary of results 2013-2018, KemI

Since the fact finding and development stage (2004-2006) of the first regional programme managed by the Swedish Chemicals Agency (KemI), member countries in South-East Asia (Cambodia, Lao PDR,

Myanmar, Thailand and Vietnam) have made steady progress on the management of chemicals. At that time, only Thailand had some degree of organised set-up in the government for chemicals management. Overall, there was a lack of proper legislation, institutional capacity and general awareness. Now all the current member countries, except Cambodia, have adopted new or revised basic chemicals legislation. Regional collaboration and information exchange, supported by the programme, has been instrumental in some of the later developments of legislation etc. (e.g. exchange of experiences between Lao PDR and Vietnam during the drafting of Lao's chemicals law).

Multilateral Agreements governing chemicals such as the Montreal, Basel, Stockholm, Rotterdam and the new Minamata Conventions are being ratified and implemented and application of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS) is slowly gaining a foothold (see table 1). An increasing number of government staff has been trained in chemicals management, both within the regional collaboration and within KemI's International Training Programme (ITP) on strategies for national chemicals management.

Country	Rotterdam convention	Stockholm convention	Minamata convention	GHS implementation[37]
Brunei	-	-	-	No
Cambodia	Party	Party	-	No
Indonesia	Party	Party	Party	Fully
Lao PDR	Party	Party	Party	No
Malaysia	Party	Party	-	Partly
Myanmar	-	Party	-	No
Philippines	Party	Party	-	Partly
Singapore	Party	Party	Party	Fully
Thailand	Party	Party	Party	Partly
Vietnam	Party	Party	Party	Fully

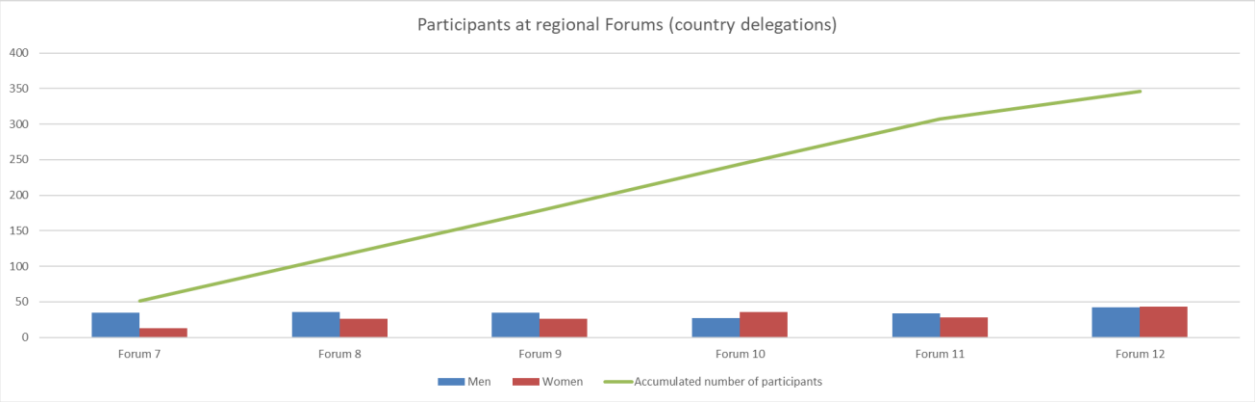
Table 1: Status of ratification of international chemicals conventions and implementation of GHS

The overall capacity for management of chemicals has been strengthened with support from the programme. Government staff has been trained in various aspects of chemicals management and KemI have organized specialized workshops on subjects such as GHS and enforcement, development of legislation, key element and principles of chemicals management, databases and registers, financing etc. Almost 360 persons (39 % women) have participated in these workshops and evaluations show that a majority of the participants find the workshops useful or highly useful for their work. The external evaluation in 2019 confirms the value of these capacity building intervations.

The regional chemicals management Forum, supported by KemI and organized in collaboration with the member countries, have provided an important regional platform for capacity building, information exchange and dialogue on sound chemicals management. Since all member countries have had the possibility to assign country delegations with participants from several concerned ministries and other stakeholders, these forums have contributed to improved communication and coordination on national as well as regional level. From 2013 to 2018, 6 regional forums have been organized with a total number of

[37] Persson, L., Karlsson-Vinkhuyzen, S., Lai, A., Persson, Å. & Fick, S. (2017). The Globally Harmonized System of Classification and Labelling of Chemicals—Explaining the Legal Implementation Gap. http://www.mdpi.com/2071-1050/9/12/2176

almost 350 participants (56 % women) from the member countries and other invited country delegations (excluding lecturers and other experts).



The accumulated number of new participants at these 6 forums is 219 persons (63 % women). The group of countries taking part in the regional collaboration on chemicals management has increased from an initial 3 member countries (Cambodia, Lao PDR and Vietnam) to 5 permanent member countries (Myanmar joined in 2013 and Thailand in 2014). In addition, participants from Bhutan, Democratic People's Republic of Korea (North Korea), the Philippines, Indonesia and Singapore have taken part in Forum meetings. Participants have been introduced to a number of different topics related to chemicals management and have shared country updates with their neighboring countries. Apart from chemical specific topics, participants have increasingly been introduced to cross-cutting issues such as gender aspects, links between human rights and chemicals, corruption etc. Below is a list of the topics covered at Forum 7 to 12 (final).

Forum	Topic
7 (2013)	EU regulations on chemicals in products
	SAICM project on Chemicals in Products (CiP)
	The Minamata Convention
	Overview of the Rotterdam Convention.
	Enforcement
	Action plan and forms for future collaboration
8 (2014)	Experience from the development and implementation of the REACH regulation in EU
	Vietnam's positive and negative experiences of its chemicals law
	Overview of Thailand's chemicals management and it's challenges for future development
	Presentation of the LIRA guidance developed by UNEP
	UNEP regional office in Bangkok, presentation of plans for activities in the region
	Substitution of Asbestos chrysotile, practical examples
	Chemicals legislation and waste legislation. How do they connect?
	Examples of e-waste handling in Cambodia
	Presentation of the Stockholm and Basel Convention Regional Centre, special focus on activities connected to e-waste
	Presentation of the International Training Program (ITP) on Chemicals Management
9 (2015)	Waste management in Sweden
	Presentation of project on collection of pesticide containers in Vietnam
	Presentation of the Regional Enforcement Network for chemicals and waste (REN)
	Presentation about good governance, transparency and anti-corruption
	General introduction to pesticide management and challenges in the region
	Towards a non-toxic South-East Asia, presentation of programme activities and results from regional and local partners in Vietnam • Food and Agriculture Organisation of the United Nations (FAO), Integrated Pest Management and development of legal framework on pesticides

<table>
<tr><th>Forum</th><th colspan="2">Topic</th></tr>
<tr><td></td><td colspan="2">• Pesticides Action Network Asia & Pacific (PAN AP)
• Centre for Sustainable Rural Development (SRD)
• The Field Alliance (TFA)
• Centre for Initiatives on Community Empowerment and Rural Development (ICERD)</td></tr>
<tr><td rowspan="12">10 (2016)</td><td colspan="2">Introduction to Chemicals in Products – Challenges and approaches</td></tr>
<tr><td colspan="2">Addressing chemicals in products in the region, Results from a study on Polybrominated diphenyl ethers (PBDEs) in Electrical and Electronic Equipment (EEE) and related Wastes (WEEE) in selected ASIAN and Pacific Countries</td></tr>
<tr><td colspan="2">EU legislation on chemicals in products</td></tr>
<tr><td colspan="2">SAICM Chemicals in Products Programme, CiP</td></tr>
<tr><td colspan="2">Enforcement of legislation on chemicals in products</td></tr>
<tr><td colspan="2">Chemicals management at H&M</td></tr>
<tr><td colspan="2">Chemicals management at Beiersdorf</td></tr>
<tr><td colspan="2">Carbon Roadmap Project at Tesco Lotus</td></tr>
<tr><td colspan="2">GEF project on chemicals in textiles</td></tr>
<tr><td colspan="2">A planned project on chemicals in toys</td></tr>
<tr><td colspan="2">Swedish examples of collaboration with industry</td></tr>
<tr><td rowspan="11">11 (2017)</td><td colspan="2">Update on the Minamata convention and support from UNEP connected to implementation of the convention</td></tr>
<tr><td colspan="2">Results from a pilot project on mercury in ASGM</td></tr>
<tr><td colspan="2">Presentation of KRICT-ASEAN Chemical Cooperation Center</td></tr>
<tr><td colspan="2">Asia-Pacific Forum on Health and Environment - An introduction</td></tr>
<tr><td colspan="2">Asia-Pacific Forum on Health and Environment - Thematic working group on toxic chemicals</td></tr>
<tr><td colspan="2">Introduction to human rights and environment</td></tr>
<tr><td colspan="2">Chemicals and human rights</td></tr>
<tr><td colspan="2">Chemicals management and the sustainable development goals (SDGs)</td></tr>
<tr><td colspan="2">Strategy for Sweden’s regional development cooperation in Asia and the Pacific region</td></tr>
<tr><td colspan="2">Introduction to ASEAN Working Group on Chemicals and Waste (AWGCW)</td></tr>
<tr><td colspan="2">Gender equality and chemicals</td></tr>
<tr><td rowspan="4">12, final (2018)</td><td colspan="2">Panel discussion on how to move from awareness to action, including short presentations on the following topics:
• Taking the lead on sound management of chemicals in ASEAN
• ASEAN priorities on chemicals management
• The FAO perspective on sound management of chemicals in Asia
• The UN Environment perspective on sound management of chemicals in Asia
• Global chellenges calls for global action (KemI)
• CSO perspective on chemicals management</td></tr>
<tr><td colspan="2">Learning from the past – looking into the future.
• Short presentation on lessons learned and plans for the future from all regional partners
• Global Chemicals Outlook II (GCO II)
• SAICM beyond 2020</td></tr>
<tr><td>Sessions on pesticides</td><td>Sessions on industrial and consumer chemicals</td></tr>
<tr><td>Protection of vulnerable communities from Highly Hazardous Pesticides (HHPs)
• Monitoring of pesticide residues in school children, consumers and farmers and future collaborations.
• Pesticides containers waste management. Results from pilot activities in Cambodia, Laos and Vietnam, future development and collaboration.
• Short Film : Pesticides in Schools, Case Study in Cambodia</td><td>Mercury management, implementing the Minamata convention
• Short update from Minamata Convention CoP2
• Results from pilot project on ASGM, implemented by Ban Toxics
• Results from pilot project implemented by Health care Without Harm: Phase out of mercury in health care in Vietnam
• Experiences from implementation of the Minamata convention in the region (Thailand and Vietnam)</td></tr>
</table>

Forum	Topic	
	• Launch: Of Rights and Poisons: Accountability of the Agrochemical Industry • CPAM Mobile Application: Sharing and Testing • Legally binding treaty on Highly Hazardous Pesticides	• Minamata Initial Assessments in the region
	Agro-ecology in support of greening agriculture • Stories from the field: Women working towards a Non Toxic Environment in South East Asia • Agroecology • Agrobiodiversity, sustainable conservation and utilization (examples from Cambodia, Laos and Vietnam). • Case Study: Green Rice Landscapes in Lao PDR – Communicating Results for Policy Support and Investments for Scaling Out (screening of short film) • ASEAN Initiative on Soil Health • Enabling policy frameworks, incentives and investments for sustainable crop protection – A European perspective with Global Relevance	Updates on current status and priorities for chemicals management in the region • Short presentations by Thailand, Cambodia, Myanmar, Lao PDR, Vietnam and Singapore
	Continued discussions on "learning from the past and looking into the future" • Introduction of FAO project evaluation team and mandate • Achievements and Challenges for pest and pesticide management – highlights of status reports • Lessons learned from the ground (CSO) • Priorities on pest and pesticide management at country and regional level	Continued discussions on "learning from the past and looking into the future" • Experiences from phasing out chrysotile asbestos in Thailand • Updates from the ASEAN Working Group on Chemicals and Waste, AWGCW • Continued collaboration with the Swedish Chemicals Agency in the region • Group discussion on setting priorities for the future

The usefulness of the regional Forums was confirmed by the external evaluation made in 2019.

7 Organisation and coordination

7.1 Collaboration with other projects and organisations

The Sustainable Rice Platform (SRP) is a multi-stakeholder partnership to promote resource efficiency and sustainability, both on-farm and throughout the rice value chain. SRP currently involves about 90 members, representing both private and public sector stakeholders and the NGO community. The SRP is led by UN Environment Regional Office for Asia and the Pacific based in Bangkok and the International Rice Research Institute (IRRI) based in Los Banos, Philippines. Whereas FAO is not a member of SRP[38], FAO provides technical assistance and participates in collaborative activities, including revision of the SRP

[38] FAO had to withdraw membership in 2017 following concerns with the membership composition of the SRP consortium and selected private sector partner participation in this global platform.

standards as well as participation in SRP workshop and conference events. A revised set of SRP standards and Performance Indicators were adopted at the SRP Plenary Assembly Meeting held in Siem Reap, Cambodia in January 2019. Private sector collaboration is foreseen also in future (beyond Programme completion) within context of the several "Inclusive Rice Landscapes" proposals developed for the GEF-7 replenishment cycle and endorsed by GEF-OFPs in member countries.

TFA has disseminated programs in various workshops hosted by Unesco, Annual Asian Corporate Social Responsibility Forum, Chulalongkorn University, Mahidol University.

The Field Alliance and Thai Education Foundation organized a study visit of "Community-based Chemical Management and Safe School Lunch Forum and Materials Development Training" in Sakonnakorn and Udornthani provinces for 16 participants from LURAS, TABI, FAO, REAL and NFE Lao PDR in August 2018.

The Thai Education Foundation organized a study visit and co-organized the Global Workshop on Impact Assessment and Monitoring and Evaluation of the Farmer Field School Programme for thirty-four FAO, government and civil societies representatives from twenty-seven countries from October 17-20, 2018 in Bangkok, Thailand.

The Programme also continues to support the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention. In particular, the Programme provides technical support and facilitate participation in the regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides. Under the plans for the bi-ennium 2018-19, a regional workshop on Management of *Bactrocera* Fruit Flies in Mango Production was held in Bangkok during 19-23 March 2018. This support is highly valued by the APPPC Secretariat and its 21 member countries and contributes substantially towards promotion of IPM and better management of pesticides in the Asia Pacific region.

PANAP is a network of 100 partners including broad coalition of farmers, rural women and agricultural workers. Through the network PANAP supports its partners, their campaigns and struggles on ground. PANAP is also part of Asian Rural Women's Coalition (ARWC), Coalition of Agricultural and Workers International (CAWI).

PANAP has participated in UN Environment's Regional Enforcement Network (REN)and country level trainings in Cambodia, Malaysia, Myanmar and China. REN is a project that combatted environmental crime through strengthening the capacity of 25 participating countries in Asia Pacific to control illegal trade in chemicals and waste. During this events PANAP has built capacity on the human rights perspective, impacts of illegal pesticides on human health and the environment especially on women and children.

Since the creation of the ASEAN working group on chemicals and waste (AWGCW) in 2015, KemI and representatives from the ASEAN Secretariat have had continuous contact to discuss support and collaboration in the area of chemicals management. The last three years, invitations to take part in major regional meetings have been extended to respective organization. In May 2018, a representative attended the open session of the annual meeting of the AWGCW and presented ideas for future collaboration between ASEAN and KemI. The suggestions were well received by the ASEAN member states and KemI has since then developed an ASEAN collaboration project proposal that has been shared with the secretariat. The suggested focus of the project is support for implementation of GHS in the ASEAN region. The proposal will be further discussed at a meeting between the ASEAN secretariat and KemI in

March 2019. Next possible step is endorsement from the member states and subsequent preperations for launch of the project.

Since the beginning of phase 2, KemI has also been having continuous dialogue and collaboration with the UN Environment Regional Office for Asia and the Pacific. Regular meetings and invitations to take part in relevant meetings and workshops organized by respective organization has created a better understanding of the mandate and expertise of each organization and contributes to more effective use of resources in the work towards improved chemicals management in South-East Asia. The possibility to enter into a more formalized collaboration during the planned new regional programme is currently being explored.

7.2 Internal collaboration/coordination

KemI has during the entire programme period been responsible for overall coordination of the programme and contacts with regional partners. During the stationing of KemI's programme manager in the region (August 2014-December 2016), the possibility for KemI to interact with partners and take part in various activities organized by regional and local partners increased substantially. Frequent and informal communication was also facilitated. The return of KemI's programme manager to Sweden affected the possibility to take part in some activities and meetings in the region. The frequent every day contact has, however, continued and contributed to efficient communication on implementation issues of the programme. Programme partners have regular contact by e-mail and Skype to discuss and solve issues that arise during the everyday work.

Since the overall experience from having a programme coordinator in the region, closer to partners, the governments in the member countries and other key actors in chemicals management, was very positive, this set-up will be suggested in the new programme proposal.

All regional partners have met on at least two occasions every year to discuss planning of activities, progress, risk management etc.

7.3 Bi-annual meetings with Sida/the Embassy

Programme partners have, since the beginning of phase 2, met regularly with representatives from Sida HQ and the Development Cooperation Section at the Embassy of Sweden in Bangkok. The organization and content of the bi-annual meetings have evolved over the years and they now provide an important arena for dialogue on achievements, areas for improvements etc. All regional partners are present at the annual meeting in May/June when results and progress is discussed. Since a few years back, KemI represents all partners at the second annual meeting with Sida/the Embassy in Bangkok in November/December when major deviations from the current work-plan and work plan for the coming year is discussed. This model has proven to be resource efficient and at the same time providing time for in-depth discussions on development of the programme.

8 Budget follow-up 2013-2019

8.1 Divided by objective

The budget follow up is based on audited final financial reports from all programme partners and reflects spendings during the entire programme period. Detailed budget follow-up for 2018 and 2019 can be found in Annex 2.

During the implementation of the programme, requirements on budget follow-up have evolved. Sida have asked for more details and annual reports have been modified accordingly to contain more information.

Overall budget+follow up			Sept-Dec 2013 (SEK)	2014 (SEK)	2015 (SEK)	2016 (SEK)	2017 (SEK)	2018 (SEK)	2019 (SEK)	TOTAL (SEK)
Objective										
1	Increased awareness and enhanced capacity in farming communities, schools, institutions and among consumers within partner countries to	Expenditures PAN AP	809 817	2 084 662	2 071 779	2 506 503	1 575 007	1 849 075		**10 896 844**
		Expenditures TFA	393 231	1 648 976	2 577 113	1 741 191	1 498 331	1 868 812		**9 727 653**
		TOTAL	**1 203 048**	**3 733 638**	**4 648 892**	**4 247 694**	**3 073 338**	**3 717 887**		**20 624 497**
2	Enhanced international, national and local advocacy on sustainable pest management/agriculture	Expenditures PAN AP	250 086	986 672	816 227	860 039	892 817	952 577		**4 758 418**
		Expenditures TFA	20 282	25 340	319 926	357 153	706 478	689 484		**2 118 663**
		TOTAL	**270 368**	**1 012 012**	**1 136 153**	**1 217 192**	**1 599 295**	**1 642 061**		**6 877 081**
		Amount received from KemI (PANAP)	**1 400 000**	**2 800 000**	**2 800 000**	**2 500 000**	**3 100 000**	**2 800 000**		**15 400 000**
		Total expenditure (PANAP)	**1 059 902**	**3 071 335**	**2 888 006**	**3 366 543**	**2 467 824**	**2 615 385**		**15 401 545**
		Balance (PANAP)	**340 098**	**88 241**	**-1 480**	**-868 039**	**-170 540**	**-1 545**		**-1 545**
		Exchange rate	**2,083**	**2,203**	**2,160**	**2,183**	**2,019**	**2,204**		
		Amount received from KemI (TFA)	**1 050 000**	**2 090 000**	**2 090 000**	**1 553 460**	**2 626 540**	**2 100 000**		**11 510 000**
		Total expenditure (TFA)	**413 513**	**1 674 316**	**2 897 039**	**2 098 344**	**2 204 809**	**2 558 296**		**11 464 133**
		Balance (TFA)	**638 168**	**1 196 052**	**545 085**	**34 933**	**459 706**	**45 867**		**45 867**
		Exchange rate	**0,207**	**0,215**	**0,243**	**0,240**	**0,253**	**0,276**		
3	Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.	Expeditures FAO RAP	1 646 315	8 436 590	6 916 528	7 486 817	7 233 413	6 898 443	747 575	**39 017 902**
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	Expenditures FAO HQ and RAP	75 079	1 090 432	1 137 370	514 979	1 919 005	3 512 338	146 430	**8 056 260**
		Amount received from KemI (FAO)	**4 235 000**	**9 134 000**	**9 135 000**	**7 690 000**	**9 390 000**	**7 540 000**		**47 124 000**
		Total expenditure (FAO)	**1 721 394**	**9 527 022**	**8 053 898**	**8 001 795**	**9 152 419**	**10 410 781**	**848 390**	**47 074 162**
		Balance (FAO)	**2 513 606**	**2 137 860**	**3 744 887**	**3 516 394**	**3 774 713**	**892 399**	**49 838**	**49 838**
		Exchange rate	**6,587**	**6,632**	**8,264**	**8,448**	**8,497**	**8,472**	**8,927**	
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	Expenditures KemI	165 147	527 730	340 029	416 230	350 758	523 889	0	**2 323 783**
5	Strengthened capacity for chemicals management within authorities, industries and among relevant CSOs in the partner countries.		1 010 279	2 149 474	2 103 155	2 455 874	2 585 822	1 544 347	167 101	**12 016 052**
General technical support to the programme			131 106	1 196 141	0	0	0	0	0	**1 327 247**
Overall programme coordination (including review,			473 473	659 444	1 107 259	1 688 012	1 122 234	1 327 173	513 557	**6 891 152**
		Total expenditures (KemI)	**1 780 005**	**4 532 789**	**3 550 443**	**4 560 116**	**4 058 814**	**3 395 409**	**680 658**	**22 558 234**
		Received from Sida (KemI)	**1 780 005**	**4 532 789**	**3 550 443**	**4 560 116**	**4 058 814**	**3 395 409**	**680 658**	**22 558 234**
		TOTAL BUDGET								**99 330 000**
		TOTAL EXPENDITURE	**4 974 814**	**18 805 461**	**17 389 386**	**18 026 798**	**17 883 865**	**18 979 871**	**1 529 048**	**96 496 529**
		TOTAL BALANCE								**2 833 472**
		BALANCE TO BE RETURNED TO SIDA								**95 705**

Comments to the overall budget follow up:

On an overall programme level, 97 % of the budget has been used for programme activities. It can be concluded that all FAO, PANAP and TFA have used the majority of their allocated budgets. KemI has not been able to make use of all of their available funds. One reason is that fewer experts than expected were engaged in programme activities. More activities were originally budgeted for but for various reasons it was usually not possible to organize more that 2-3 activities per year (due to other conflicting events, national holidays, availailability of experts, recipient capacity etc.). The original budget also included funds for a number of pilot projects. Due to increased administrative requirements it became impossible to allocate such project funds to ministries in the member countries and KemI only received a limited number of project proposals from other organisations. An increased focus on climate change issues influenced KemI's travels from Sweden to the region during the later part of the programme period. In order to reduce climate impact from long-distance travelling fewer experts were engaged in programme activities and the number of visits was also reduced. All of these reasons resulted in reduced costs for KemI. KemI's unused funds did, however, enable a 6-months no-cost extension of the programme with additional fund allocation to FAO, PANAP and TFA.

It should be noted that regional partners' costs have been converted from local currency to SEK using relevant exchange rates for each year. Expenditures and remaining balance in SEK for each year should therefore only be seen as the relevant figure that particular year. It is not possible to add these figures and arrive at a correct total amount. Total expenditure is based on final financial reports and the amounts repaid to KemI and reflects actual expenditures after closing of the programme.

8.2 Divided by costs kinds

Detailed follow up 2013-2019 Organisation	Type of cost	Sept-Dec 2013 (SEK)	2014 (SEK)	2015 (SEK)	2016 (SEK)	2017 (SEK)	2018 (SEK)	2019 (SEK)	TOTAL
Pesticide Action Network Asia Pacific (PAN AP)	Salaries		442 481	648 208	582 872	566 496	594 380		
	Travel expenses		385 950	228 352	402 389	538 073	453 106		
	Other costs (incl. transfer to local partners)		2 242 903	2 011 446	2 381 282	1 363 252	1 567 899		
Total PAN AP		**1 059 902**	**3 071 334**	**2 888 006**	**3 366 543**	**2 467 821**	**2 615 386**		**15 401 545**
The Field Alliance (TFA)	Salaries		775 565	484 192	684 653	712 713	788 902		
	Travel expenses		75 958	16 151	70 492	59 971	48 331		
	Other costs (incl. transfer to local partners)		822 794	2 396 696	1 343 199	1 432 125	1 721 063		
Total TFA		**413 513**	**1 674 317**	**2 897 039**	**2 098 344**	**2 204 809**	**2 558 296**		**11 464 133**
FAO, IPM component	Salaries		2 700 551	2 536 853	3 265 421	2 681 018	867 456	114 757	
	Travel expenses		683 984	367 799	366 949	539 659	955 154	69 696	
	Other costs (incl. transfer to local partners)		5 519 822	4 011 868	3 912 265	4 012 736	5 153 421	628 083	
Subtotal FAO (IPM)		**1 646 315**	**8 904 357**	**6 916 520**	**7 544 635**	**7 233 413**	**6 976 031**	**812 536**	**39 017 902**
FAO, Policy component	Salaries		686 525	856 465	143 911	714 036	2 197 776	267 763	
	Travel expenses		312 711	101 918	186 160	464 498	294 680	-6 714	
	Other costs (incl. transfer to local partners)		151 655	169 987	188 884	740 471	1 059 378	-101 901	
Subtotal FAO (Policy)		**75 079**	**1 150 891**	**1 128 370**	**518 955**	**1 919 005**	**3 551 834**	**159 148**	**8 056 260**
Total FAO		**1 721 394**	**10 055 248**	**8 044 890**	**8 063 590**	**9 152 418**	**10 527 865**	**971 684**	**47 074 162**
Swedish Chemicals Agency (KemI)	Salaries		2 408 989	1 866 872	2 139 356	2 605 780	2 139 520	621 000	
	Travel expenses		1 185 877	225 437	376 065	307 374	294 610	57 561	
	Other costs		937 922	1 458 134	2 044 695	1 145 659	961 278	2 097	
Total KemI		**1 780 006**	**4 532 788**	**3 550 443**	**4 560 116**	**4 058 813**	**3 395 408**	**680 658**	**22 558 232**
TOTAL	**Salaries:**	**Details not reported this year**	**7 014 111**	**6 392 590**	**6 816 213**	**7 280 043**	**6 588 034**	**1 003 520**	
	Travel expenses:		**2 644 480**	**939 657**	**1 402 055**	**1 909 575**	**2 045 882**	**120 543**	
	Other costs		**9 675 096**	**10 048 131**	**9 870 325**	**8 694 243**	**10 463 039**	**528 279**	
	Total:	**4 974 815**	**19 333 687**	**17 380 378**	**18 088 593**	**17 883 861**	**19 096 954**	**1 652 342**	**96 496 527**

Comments to the detailed budget follow up:

The requirement to report , which is why data for 2013 is missing in the above table. Since data is not available for all years, no total amount for each cost kind has been calculated. In 2014, KemI reported part of the costs connected to the stationing of KemI staff in Bangkok as travel expenses. In KemI's economy system such costs were reported as reimbursable costs, which is not the same thing as travel costs.

FAO's costs for salaries connected to the policy component decreased significantly when the responsibility for this component was moved from FAO HQ to FAO RAP. Once the the regional office had recruited necessary staff, the policy work picked up speed and expenditures returned to what was originally planned.

8.3 Transfer of funds to local partners

PANAP

Country	Organisation	Transfer in 2013 (estimated amount in SEK)	Transfer in 2014 (estimated amount in SEK)	Transfer in 2015 (estimated amount in SEK)	Transfer in 2016 (estimated amount in SEK)	Transfer in 2017 (estimated amount in SEK)	Transfer in 2018 (estimated amount in SEK)	TOTAL (estimated amount in SEK)
Cambodia	CEDAC	165 082	173 737	148 574	157 885	148 641	102 113	**896 032**
China	PEAC	168 387	372 544	256 374	709 962	0	9 392	**1 516 659**
Lao PDR	SAEDA	53 777	152 410	102 372	105 503	102 413	68 059	**584 535**
Myanmar	Metta	0	0	0	44 485	0	0	**44 485**
Philippines	PAN Philippines	70 259	145 610	134 748	150 729	135 737	0	**637 083**
Vietnam	CGFED	115 540	91 076	91 093	103 571	91 250	67 272	**559 803**
	RCRD	109 305	96 620	91 173	101 238	91 276	0	**489 612**
	SRD	0	91 166	91 173	90 383	91 175	52 969	**416 866**
TOTAL		**682 351**	**1 123 162**	**915 507**	**1 463 755**	**660 493**	**299 806**	**5 145 074**

The reason that transfer of funds was significantly reduced in 2018 was that PANAP introduced a requirement on local partners to submit audited financial reports for previous year before disbursement of new funds. Earlier years, financial statements were accepted. Despite reminders, some local partners failed to submit audited financial report, which is why funds were reallocated to other activities. The reason that the local partner (Metta) in Myanmar only received funding during one year was that the officer in charge left the organisation and they couldn't replace her. Metta is fully involved in the peace process and have decided not to continue with CPAM. In addition, allocated funds was a bit too small for them. PANAP reallocated the funds to campaigning and advocacy, including a workshop with health workers and production of two videos for campaigns.

TFA

Country	Organisation	Transfer in 2013 (estimated amount in SEK)	Transfer in 2014 (estimated amount in SEK)	Transfer in 2015 (estimated amount in SEK)	Transfer in 2016 (estimated amount in SEK)	Transfer in 2017 (estimated amount in SEK)	Transfer in 2018 (estimated amount in SEK)	TOTAL (estimated amount in SEK)
Cambodia	ATSA	189 913	116 745	324 678	149 001	280 577	280 140	**1 341 054**
Lao PDR	Rural Development Sole Co. Ltd.	146 757	316 141	379 037	211 129	295 517	226 731	**1 575 312**
Myanmar	MIID	0	0	69 909	192 222	87 735	219 031	**568 897**
Philippines		0	0	106 129	0	0	0	**106 129**
Thailand	TEF	258 538	202 053	374 766	299 606	315 992	259 048	**1 710 004**
Vietnam	ICERD	125 845	335 702	403 565	324 889	317 929	259 707	**1 767 637**
TOTAL		**721 053**	**970 641**	**1 658 084**	**1 176 848**	**1 297 750**	**1 244 658**	**7 069 033**

TFA's mechanism for supporting local partners replicates the procedures of Kemib in relation to regional partners, i.e. requesting proposals and submission of annual workplans and budgets for approval within the availability of funds for partners each year. The monitoring of budget implementation included periodic site visits, trainings and financial audits by international recognized auditing firms.

The network of schools in the programme has been part of the REAL network since 1998 through the support of FAO and local governments. In 2016, the network requested funding contribution from TFA to pilot blood testing of pesticides residues and to develop a draft organic curriculum for schools under the support of the National Organic Agriculture Board. The project was completed in one year. Due to limited funding, TFA was not able to continue the works in Philippines as Myanmar was added to the program.

FAO

FAO Country Office	Transfer in 2013 (estimated amount in SEK)	Transfer in 2014 (estimated amount in SEK)	Transfer in 2015 (estimated amount in SEK)	Transfer in 2016 (estimated amount in SEK)	Transfer in 2017 (estimated amount in SEK)	Transfer in 2018 and 2019 (estimated amount in SEK)	TOTAL (estimated amount in SEK)
Cambodia	357 608	1 393 354	836 012	774 129	1 377 180	1 483 167	**6 221 451**
China	140 441	359 343	536 811	15 851	24 796	696 372	**1 773 615**
Lao PDR	119 580	746 754	205 084	523 433	826 806	1 129 008	**3 550 665**
Myanmar	0	0	0	65 498	59 890	73 869	**199 257**
Vietnam	79 123	915 108	440 083	452 341	658 556	0	**2 545 211**
TOTAL	**696 753**	**3 414 560**	**2 017 991**	**1 831 252**	**2 947 227**	**3 382 416**	**14 290 199**

All partners

Country	Transfer in 2013 (estimated amount in SEK)	Transfer in 2014 (estimated amount in SEK)	Transfer in 2015 (estimated amount in SEK)	Transfer in 2016 (estimated amount in SEK)	Transfer in 2017 (estimated amount in SEK)	Transfer in 2018 (estimated amount in SEK)	TOTAL (estimated amount in SEK)
Cambodia	712 603	1 683 837	1 309 264	1 081 015	1 806 397	1 865 420	**8 458 537**
China	308 828	731 887	793 186	725 813	24 796	705 764	**3 290 274**
Lao PDR	320 115	1 215 305	686 493	840 066	1 224 736	1 423 798	**5 710 512**
Myanmar	0	0	69 909	302 205	147 625	292 900	**812 639**
Philippines	70 259	145 610	240 878	150 729	135 737	0	**743 213**
Thailand	258 538	202 053	374 766	299 606	315 992	259 048	**1 710 004**
Vietnam	429 814	1 529 671	1 117 087	1 072 421	1 250 187	379 948	**5 779 129**
TOTAL	**2 100 157**	**5 508 363**	**4 591 582**	**4 471 855**	**4 905 470**	**4 926 879**	**26 504 307**

The overall summary show that around 27 % of the programme funds were transferred to regional partners and FAO's country offices in the programme counrties. Cambodia and Lao PDR have received the largest amount of funds, followed by Vietnam and China. Transfer of funds have been relatively stable over the years. The slow start of activities in Myanmar resulted in limited fund transfer to the FAO country office and TFA's and PANAP's local partners in Myanmar.

9 Follow up of audit issues (2017)

In August 2018, KPMG performed a financial audit of KemI's regional collaboration in South-East Asia. Below are KPMG's observations and KemI's proposed measures to solve the issues (in Swedish).

KPMGs kommentar och rekommendation:	**Åtgärd på KemI:**
Vid vår granskning noterades att när fakturaunderlag har attesterats via mail så har det dokument som attesteras ej bifogats till mailet. Detta innebär att vi inte kan säkerställa vilket dokument som har attesterats. Eftersom det i fakturaunderlagen även framgår nedlagda timmar av de anställda som är delaktiga i projektet har ingen attest av dessa timmar kunnat styrkas. Vi *rekommenderar* en översyn av attestrutinen så att Kemikalieinspektionen säkerställer att samtliga kostnader samt nedlagda timmar som belastar projektet har blivit skriftligt attesterade innan fakturering.	Kemikalieinspektionen har uppdaterat sin interna rutin och infört skriftlig attestering av fakturaunderlagen.
Kemikalieinspektionens samarbetspartner PANAP har transfererat totalt 327 148 MYR till lokala samarbetspartners. KPMG har ej kunnat verifiera att dessa medel har granskats av revisor i efterföljande led. Enligt Kemikalieinspektionen ska detta granskas av PANAP:s revisor men granskningsåtgärden omnämns inte i revisorns rapport. Vi *rekommenderar* att i de fall samarbetspartners har överfört medel till lokala partners att det framgår av revisorns rapportering att även dessa organisationers användning av medel har granskats av revisor.	Kemikalieinspektionen ska påtala detta till sina samarbetspartners. Enligt kommentar från Sida i samband med årsrapporteringen för 2017 så behöver ingen separat revision göras om tredje part mottager belopp mindre än 500 000 SEK.
Vi noterar att överförda belopp till organisationen "Health Care Without harm" om 427 878 SEK redovisas som uppdragskostnader för konsultuppdrag. Då detta projekt inte har slutredovisats av organisationen har ingen granskning av användandet av medlen kunnat göras. Vi *rekommenderar* att de medel som inte kan hänföras till återredovisade kostnader under året redovisas på raden för transfereringar.	Kemikalieinspektionen har gjort denna justering i den finansiella rapporten för 2017.
Kemikalieinspektionen har en upprättad rutinbeskrivning "S-0269 Ekonomirutiner för internationella enheten". I rutinbeskrivningen framgår bland annat vilka huvudbokskonton som ska användas för olika kostnader. Rutinen har inte följts för samtliga huvudbokstransaktioner och	Poster som har uppkommit i programmet har också korrekt redovisats i programmet, men i vissa fall har felkonteringar uppkommit som gjort det svårt att härleda bakomliggande uppgifter. De medarbetare som granskar fakturor har tillgång till listor över vilka konton som ska användas för vilka ändamål. I samband med

KPMGs kommentar och rekommendation:	Åtgärd på KemI:
dessa felkonteringar medför att det blir svårt att härleda rapporteringen till huvudboken. Vi *rekommenderar* att Kemikalieinspektionen efterföljer upprättad rutinbeskrivning gällande vilka huvudbokskonton som ska användas för respektive kostnadsslag.	månadsuppföljningar mellan projektledare och ekonomiska sekretariatet avser vi också rutinmässigt att genomföra en kontroll av att konteringen är rätt.
Nedan punkt kvarstår från föregående års revision: Överföringen av finansiell data från bokföringen till de finansiella rapporterna sker via ett Excel ark där data matas in manuellt från redovisningssystemet Agresso. I arket summeras kostnader in under rubriker som stämmer mot kostnadsfördelning enligt avtalet. Detta manuella förfarande ökar risken för omedvetna fel i de finansiella rapporterna och förvårar kontrollen att kostnader redovisas under rätt rubriksättning i de finansiella rapporterna. Vi *rekommenderar* att bokföringen anpassas på ett sådant sätt att det blir möjligt att ta ut rapporter ur ekonomisystemet som matchar posterna i beviljad budget för respektive projekt. Detta kan lösas genom att skapa underprojekt i bokföringen och kontera därefter.	Ett första steg har genomförts så att det nu går att ta ut en rapport i ekonomisystemet (Agresso) för respektive kostnadsslagsgrupp enligt Sidas definition. Kostnad för arvodesdelen går inte att plocka ur Agresso, enbart antal timmar. Arvodeskostnaden styrs av ramöverenskommelsen med Sida. Kostnaden för arvodesdelen får därmed tillsvidare räknas ut separat. KemI har undersökt om det går att koppla arbetade timmar till Sidaarvodet i Agressorapporten. Tyvärr är detta i dagsläget inte möjligt. Det är därför inte möjligt att ta ut en samlad rapport ur Agresso för varje program.

10 Lessons learned and recommendations for the future

The below information is based on partners' own experiences and findings and recommendations from the two exernal evaluations made in 2019.

10.1 General

The long-term implementation of the regional programme has shown that cooperation between organisations with very different mandates and roles is both an asset and and a challenge. It is valuable with different perspectives and possibilities to address issues in a variety of ways and through different stakeholders. It can, however, be challenging to act as a programme since it can sometimes be sensitive for the different organisations to be closely associated with each other. To be successful it is important that everyone share the same overall goal and that there is mutual trust and respect of each others expertise and approaches. Such relationships need time to evolve, which is important to recognize and account for when designing and planning multi-partner programmes.

Presence of KemI staff in the region during part of the programme period proved to be very positive and a good way to use resources more effectively and to strengthen the dialogue and networks with partners and other relevant organisations and stakeholders in the region. This was also highlighted by the final evaluation made by NIRAS Sweden ab.

CPAM, a monitoring and documentation methodology developed by PANAP and its partners, enables communities to measure the effects of pesticides on their health and the environment and take actions to reduce or eliminate pesticide use. Based on participatory action research, this process helps communities to document the adverse impacts of pesticides, raise awareness and motivate them to adopt ecologically sound and sustainable agricultural practices. Further, it prompts them to pressure governments and campaign for better pesticide regulation and implementation of international conventions on pesticides. In the last few years, PANAP has been developing a CPAM mobile application, piloted in Cambodia and Laos, and discussed with all the partners for feedback and suggestions. This CPAM approach at the community level has built a better understanding of the impact of pesticides on health and environment. It also gives the participants the impetus to take action. Even government officials in Laos have found it useful as SEADA has been building their capacity to monitor via CPAM tools.

The reports of the monitoring have also been useful at the policy level. In Vietnam, the reports were useful to target specific pesticides and take action. They spearheaded the campaign against paraquat and chlorpyrifos; and provided the push to move towards agroecology. This experience has been replicated in China, Laos, Cambodia and the Philippines. Interestingly, the monitoring reports were seen to be useful to identify problem pesticides for further investigation by the UN FAO and the Rotterdam Secretariat.

Even now, there is no accurate data on the number of people affected by pesticide poisoning. Even though pesticides have been poisoning farmworkers, their families and communities for over 60 years, yet there is still no accurate estimate of the degree of human suffering from exposure to pesticides. This lack of documentation makes it more difficult to persuade policy makers and government officials to take action to reduce and eliminate these pesticides and to support agroecology. Studies on impacts of pesticides are not available or they are in academic circles and not popularized or made available to policy makers. CPAM's documentation often provides some of the necessary documentation for policy work that is otherwise lacking. In the future, it would be extremely productive if PANAP works with institutions, government agencies and Universities on joint studies to document the impact of pesticides on health of children and the environment. This will further enhance the policy advocacy campaigns to reduce and eliminate the pesticides and promote agroecology, and help to elevate the issues at national and international levels.

While national, regional and global policy advocacy to reduce and eliminate the highly hazardous pesticides and promote agroecology is ongoing, the challenge has been to access, and influence governments to strengthen policies and regulations to deal with HHPs. So regional and global policy advocacy campaigns have been essential in this regard. UN meetings have become the arena for moving more progressive reforms on pesticides and support for agroecology. PANAP has been using these arenas to expose the local realities and the pesticide impacts particularly on children, women, small farmers, agricultural workers and indigenous peoples. It has also contributed to the incremental changes that have the potential to affect national policies. Making use of these incremental changes on environmental and agricultural policies at the global level, PANAP and partners continue to pressure national governments to adopt these improved policies.

However, for PANAP and its partners, agroecology goes beyond just technology or methods of food production. PANAP embraces also the internationally acknowledged social and cultural elements of agroecology. For farming communities and indigenous peoples, these include movement building, and links to spirituality for some. People's movements in agroecology provide the strength and influence to pressure governments to do research, set up markets, provide credit and trainings, support ecological inputs and deliver other basic services. Farmer to farmer learning exchanges enhance the knowledge, the

skills and practices of agroecology. PANAP thus will be facilitating a broad network of farmer's and women's groups, agricultural workers organisations, indigenous peoples' groups, scientists, academicians, health professionals and workers, and even government officials to support agroecology and have the network be a strength to drive for more support for agroecology.

A video on PANAP's lessons learned from the programme is available on Youtube[39]

TFA's strategies of expanding the Rural Ecological Agriculture for Livelihood (REAL) program with the aim to create awareness on the impacts of pesticides to health and environment through the "Pesticides Impacts Assessment" (PIA) and promote the conservation and sustainable utilization of the agrobiodiversity has proved successful in all target sites. The PIA process that involved schools and communities to survey and collect data on pesticides uses and it's impact to health and environment and utilize the data for planning, dissemination, and campaigns has helped create awareness and build local capacity for planning and implementing alternative ecological agriculture practices to reduce the use of toxic pesticides. Various measures were undertaken to reduce the exposure of pesticides to schools from local to national level and resulted in contribution of funds from the district, provincial and national level to expand the program through the community learning centers (under the Continuing Education Department and the Non Formal Eduation Departments) and through international organization programs. Focus on pesticides impacts to school children proved to be an effective way to attract attention from media, academics and policy makers from concerned agencies and the ministry of education issued. In Thailand, results from studies on children resulted in an order for all schools to be freed from pesticides on January, 2019.

The Agrobiodiversity conservation and utilization had also proven to be successful in creating awareness on the importance of the various farmland species used by communities for their livelihoods. The process helped build capacity for schools and communities in documenting the status of the Agrobiodiversity and to develop action plans to conserve species deemed important to their communities. The process also helped bridging knowledge gaps among young generations and elderlies on the utilization of the various species for foods, income, medicines, household materials, tradition/culture and for aesthetical values.

The work by FAO has shown that season-long IPM FFS and short-duration farmer trainings on pesticide risk reduction lead to improved knowledge and skills and a change of attitude among trained farmers and that risk to their health and the environment is reduced. Access to high quality education is important to make this happen. FAO's office of evaluation concludes in its final evaluation that the number of master trainers for FFS and ToT is quite limited and quickly reducing further and it is therefore important to use existing resources as much as possible for training of future master trainers.

Experiences from collaboration with the partner countries have shown that the cross-ministerial nature of chemicals management is a big challenge. This issue need to be addressed in order to use the limited government resources in good way and further advance chemicals control in the region. This is also recognized by the FAO evaluation team in its final evaluation.

Regional collaboration in South-East Asia is not yet used to its full potential and could contribute to improved use of resources, expertise and experiences (such as data sharing, joint assessments, alignment of legislation etc.). It is important to find the right incentives for countries to invest time and resources for regional collaboration. Without common regional legislation and requirements or established work-

[39] https://www.youtube.com/watch?v=7oWKR76zSg4&t=2s

sharing procedures, work and priorities on national level tend to limit resources that are set aside for regional collaboration. This need to be addressed in the future.

10.2 Gender issues

During the long-standing collaboration in the region gender issues have become more integrated into every day activities and discussions. There's a general acceptance that chemicals may affect women, men and children differently and that different measures are needed to protect these groups from harmful effects from chemicals.

PANAP learned that the women's leadership training of facilitators strategy, organised at the regional level, was a successful way to improve gender equality. The training had a cascade effect as trained facilitators were able to train others at the community level. As a consequence, the best results were from women's groups that were part of this programme for example, CGFED in Vietnam replicated the training and the process at the local level. Another PANAP partner, Eco-women, a women's group in Yunnan, China working with PEAC worked with local communities on strengthening women's participation in the project. However, there is still a need to work with other partners in the project to ensure that gender perspective and leadership and participation of women are not only part of the implementation but it is also becomes integrated in the organisational perspective.

TFA's assessment of gender roles in agriculture has helped trainers, teachers, students and farmers to acknowledge the inequality between men and women and there is now a more positive perceptions towards working with women. As a concequence, TFA and partners have adjusted the program to include issues such as women saving groups in Cambodia, income generation for women groups in Laos and indeginous vegetables groups and cooperatives for women groups in Vietnam.

FAO has during the programme period increased its gender sensitivity in planning and implementation of activities. The final evaluation acknowledges this but in light of the increased feminization of agriculture the evaluation team suggests that even more needs to be done in the future.

To make sure that both mens' and women's perspectives are considered in decision making it is important to continue working towards more gender balanced institutions. Observations show that women are quite well represented at technical level in most member countries but at senior level women are still under-represented.

10.3 Poverty and human rights perspective

The links between human rights and management of pesticides and other chemicals are obvious and programme partners have during the programme period realized that highlighting these links can be a good way to push the chemicals agenda. In some countries it is, however, still sensitive to raise human rights issues and it can be more fruitful to frame chemicals management as a technical matter.

PANAP has learned that it is important to use the human rights principles and the human rights framework in the work, from analysis of local CPAM results to critique of the global chemical-intensive agricultural model and pesticides trade. This framework underscores the fact that the deleterious effects of pesticides actually constitute gross human rights violations, and provides an even stronger impetus for concerned international bodies to take action. PANAP made submissions to the UN Special Rapporteur

(UNSR) on the Right to Food, and to the UNSR on Human Rights and Hazardous Substances, which pointed to the increasing number of scientific studies on the negative impacts of pesticides, especially on women and children. These provoked alarm from UNSRs Hilal Elver and Baskut Tuncak, and in 2017, they delivered a joint report to the UN Human Rights Council (UNHRC) detailing how pesticide use transgresses human rights. They called on the global community to work towards a comprehensive, binding treaty to regulate hazardous pesticides throughout their life cycle along the human rights framework; explore agroecology and other non-chemical alternatives in agriculture; immediately establish buffer zones to protect communities adjacent to pesticide using plantations and/or farms. The report to the UNHRC is a major contribution towards the global advocacy for a toxic-free environment. In 2018, PANAP on behalf of PAN International drafted and distributed the proposal for a treaty on HHPs at SAICM meetings based on the Special Rapporteur's recommendations. Therefore, it is important to continue to use this platform to highlight the link between human right violations and corporations.

TFA's ABD program has helped farmers increase their income from conservation projects in addition to their main farming crops. As a result, the rice-fish farming in Vietnam has helped farmers gain more than 3 times of the income they normally get from the main crops. This model has potential for up-scaling in the region.

Increased collaboration and dialogue with organisations working with human rights issues could further strengthen the rights perspective in relation to chemicals management, such as right to information, right to justice, right to a healthy environment etc. This should be further explored in the future.

10.4 Sustainability

The possibility to collaborate on a long-term basis is a precondition for developing trustful relationships and achieving sustainable results. The regional programme has had the opportunity to work this way and its achievements are being recognized by governments, regional bodies, private sector and media. KemI is now specified as a potential partner in the latest ASEAN Strategic Plan on Environment (ASPEN) 2016-2025 and the regional programme was recently recognized in a Chemical Watch article[40].

As communities reduce their pesticides use, agroecology facilitates the move away from pesticides much more effectively than other approaches. So as a result, PANAP has been advocating for agroecology for more than two decades and is now being recognised by the UN FAO as necessary for a safe and sustainable food production. Agroecology is being appreciated as well for bringing a range of benefits to farming communities such as better income, improved health, enhanced community unity and in the environment, enhanced soil health and increased biodiversity. Farmers involved in the project that have shifted to agroecology are attesting that they are receiving these benefits from this shift. PANAP partners in the project are emphasising not only campaigning on pesticide reduction but also to move communities towards agroecology.

10.5 Anti-corruption

This is an area that need continuous attention in future work. Corruption is widespread in the region and continues to counter-act measures aiming to reduce poverty and protect human health and the

[40] https://chemicalwatch.com/78635/swedish-chemicals-agency-works-on-asia-support-proposal

environment. Organisations need good and effective tools to address this sensitive issue, both on a cultural level and on a technical level.

10.6 Communication

PANAP has learned that stories are an important tool for campaigning and advocacy. Human stories helps the general public and policy makers relate to farmers as people. It also helps contextualize complex issue of pesticides, poverty and the long-term impact it has on our health. PANAP and partners used case studies and meme's on social media to garner support in an immediate and meaningful way. Stories of women farmers in the "Stories from the Field" were featured and well received by government officials and the public. Having reports and case studies also make it easier for journalist to pick up the issue and write featured articles. It is also important to access and review websites on a bi-annual basis to stay relevant and updated. Social media tools like Facebook and Twitter and WeChat in China has been useful to distribute information despite political restritions in certain countries.

The structure of REAL programme activities to included local, provincial and national exhibitions had helped generate attention and interest from various stakeholders including farmers, schools, policy makers, academics, NGOs and international organizations. The exhibitions provided field based data and information of the status of pesticides uses and it's impacts to public which normally are not available or systematically collected by concerned agencies.

In addition, TFA started to use Facebook to disseminated program activities and Line to communicate with partners and participants from the programs. This proved to be an efficient way to reach out to and communicate. Use of TV news to broadcast results from the REAL activities also helped create public awareness and solicited much interests from other media channels.

Having a specific budget for communication activities and access to expert support in this area is important for high quality communication with different target groups.

10.7 Results and risk management

One big challenge is the shrinking spaces for CSOs in most Asian countries, which is becoming worrying. Partners have been successfully working at the community level and local communities' response has been good. However, new government regulations are being enacted to curtail the work of CSOs and NGOs and shrinking the spaces for CSOs to function effectively. In order to address these difficulties, partners have developed new ways, for example, to work with government agencies to organise workshops, or to move towards income-generating projects and marketing. Within these new methods, discussions on rights and organising communities for change continues.

Possibilites to adjust work-plans and associated budgets is important when collaborating with governments that are highly influenced by political changes in priorities and resources. Use of rolling work-plans within the regional programme was an efficient way to channel support and resources to the right issue ant the right time and avoid unnessecary stand-stills.

10.8 Private sector collaboration

Within the regional programme, dialogue and involvement of the private sector was very limited and could have been used better. Most government officials in the region are not used to involving the private sector in their work and has low understanding of possible benefits from this kind of dialogue. Since industry should take the main responsibility for chemical safety it is important to support governments to increase cooperation with the private sector.

PANAP and partners learned that is important to stay innovative and relevant by building capacity of organic farmers in their respective project sites. After the many years of awareness raising, there is a steady change of consumer behavior; whereby consumers are beginning to trust and purchase organic products. This has motivated farmers to learn how to market their products and form farmer cooperatives.

The establishment of women cooperatives by ICERD in Vietnam helped farmers gain access to various markets and restuarants and eliminated the needs for each farmers to deal with marketing themselvses. This model is now being expanded to other areas by provincial plant protection in Lao Cai province. In Thailand, Thai Education Foundation has been piloting social marketing by supporting farmers to supply their produce to schools, hospitals and other governmental agencies.

11 Publications and filmed materials

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
Of Rights and Poisons: Accountability of The Agrochemical Industry [Report]	PANAP and partners	2018	https://panap.net/2018/10/of-rights-and-poisons-accountability-of-the-agrochemical-industry/	Partial
Women in Agroecology: Stories from the Field [Video]	PANAP	2018	https://www.youtube.com/watch?v=vh6jpXqWbuY&feature=emb_logo	Full
Pesticide Free Schools [Video]	PANAP	2018	https://panap.net/2019/06/pesticide-free-schools/	Full
On Rights and Poisons [Infographics]	PANAP	2018	https://www.facebook.com/panasiapacific/photos/a.157477657625450/2245393582167170/?type=3&theater https://www.facebook.com/panasiapacific/photos/a.157477657625450/2245395195500342/?type=3&theater	Partial
Towards A Non-Toxic Environment In South-East Asia: "Lessons Learned – PANAP Component" [Video]	PANAP	2018	https://www.youtube.com/watch?v=7oWKR76zSg4&t=2s	Full
(POC Watch) Cases, Studies and Newspaper Articles On Children Being Poisoned By Pesticides [Meme]	PANAP	2017- 2018	https://panap.net/2017/06/cases-studies-newspaper-articles-children-poisoned-pesticides/	Full
PAN International Consolidated List of Banned Pesticides	PANAP	2015- 2018 (updated annually)	https://panap.net/2015/08/pan-international-consolidated-list-of-banned-pesticides/	Partial
Short film about the programme [Video]	All partners	2018	https://www.kemi.se/en/international-cooperation/global-regional-and-bilateral-cooperation/regional-and-bilateral-cooperation/regional-cooperation-in-south-east-asia	Full
Pesticide impacts to health and school. [Animation English]	TFA/ TEF	2018	https://youtu.be/Y8dEL_aM5VY	Full
Pesticides impacts to school children [Animation Thai]	TEF	2018	https://youtu.be/DL8NOaR2pXU	Full

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
REAL Achievements 2007-2018 [Video]	TFA	2018	https://www.facebook.com/thefieldalliance/videos/233402150939057/	Full
Vietnam REAL Project [Video]	TFA/ICERD	2018	https://www.facebook.com/thefieldalliance/videos/2023720574589139/	Full
How safe are school lunches? [Poster English]	TFA/ TEF	2018	https://www.facebook.com/thefieldalliance/photos/a.954388811357860/1464087290388007/?type=3&theater	Full
How safe are school lunches? [Thai Poster]	TEF/TFA	2018	https://www.facebook.com/217566144979092/photos/a.493209130748124/1914199021982454/?type=3&theater	Full
Pesticides impact to school children [Briefing note]	TFA/TEF	2018	http://www.thefieldalliance.org/wp-content/uploads/2016/06/Persticides-Impact-to-Chirldren-Briefing-Note-TFA-2018_Oct.-10-2018_Acrobat.pdf	Full
Country Status Reports – Pest and Pesticide Management (Cambodia, China, the Lao People's Democratic Republic, Myanmar and Viet Nam).	FAO	2018	Not available online, FAO can make available copies upon request	Full
Results presentation of FAO-TF-GCP/RAS/229/SWE [poster]	FAO	2018	Not available online, FAO can make available copies upon request	Full
Alternatives To Synthetic Chemical Herbicides [Booklet]	PANAP	2017	https://panap.net/2017/08/alternatives-synthetic-chemical-herbicides/	Full
Global Governance of Hazardous Pesticides to Protect Children: Beyond 2020 [Position Paper]	PANAP	2017	https://panap.net/2017/02/global-governance-hazardous-pesticides-protect-children-beyond-2020-2/	Full
Agroecology In Action: The Women Of Kampong Speu, Cambodia [Video]	PANAP	2017	https://panap.net/2017/03/agroecology-action-women-kampong-speu-cambodia/	Full

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
Imagine a #PesticideFree World [Poster]	PANAP	2017	https://www.facebook.com/panasiapacific/photos/a.157477657625450/1488320817874454/?type=3&theater	Full
Farmer Lien: Stories from the field [meme]	PANAP	2017	https://www.facebook.com/panasiapacific/photos/a.157477657625450/1465312240175312/?type=3&theater	Full
Farmer Zhang: Stories from the field [meme]	PANAP	2017	https://www.facebook.com/panasiapacific/photos/a.157477657625450/1467319379974598/?type=3&theater	Full
Farmer Kham Keng: Stories from the field [meme]	PANAP	2017	https://www.facebook.com/panasiapacific/photos/a.157477657625450/1457546547618548/?type=3&theater	Full
Farmer Sovenry: Stories from the field [meme]	PANAP	2017	https://www.facebook.com/panasiapacific/photos/a.157477657625450/1459664937406709/?type=3&theater	Full
General: Stories from the Field	PANAP	2017	https://www.facebook.com/panasiapacific/photos/a.157477657625450/1472018196171383/?type=3&theater	Full
Knowledge, Attitude And Practice (KAP) Towards The Use Of Chlorpyrifos And Paraquat And Their Impact On Human Health And The Environment (Report)	PANAP / CGFED/ RCRC/ SRD	2016	https://panap.net/2016/07/knowledge-attitude-practice-towards-use-of-chlorpyrifos-and-paraquat/	Full
Community Pesticide Action Monitoring in Mindanao, Philippines (Report)	PANAP/ PAN Philippines	2016	https://panap.net/2017/01/community-pesticide-action-monitoring-mindanao-philippines/	Full

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
Handbook For Community Based Pesticide Action Monitoring, Corporate Accountability And International Advocacy	PANAP	2016	https://panap.net/2016/07/handbook-community-based-pesticide-action-monitoring-corporate-accountability-international-advocacy/	Full
The Vicious Cycle Of Pesticides	PANAP	2016	https://panap.net/2016/10/vicious-cycle-pesticides/	Partial
Herbicide Resistant Crops: The Truth About The World's Most Widely Grown Engineered Plants	PANAP	2016	https://panap.net/2016/12/herbicide-resistant-crops-truth-worlds-widely-grown-engineered-plants/	Partial
Glyphosate Monograph	PANAP	2016	http://files.panap.net/resources/Glyphosate-monograph.pdf	Full
Talk on phasing out highly hazardous pesticides with agroecology	PANAP	2016	https://www.youtube.com/watch?v=7OUxFZJ1CHE	Full
PANAP Submission To The UN SR On The Right To Food	PANAP	2016	https://panap.net/2016/12/panap-submission-un-sr-right-food/	Full
Stories from the Field [Report]	All partners	2016	http://files.panap.net/resources/Stories-From-The-Field.pdf	Full
TFA Compiled Narrative Cases 2014-2015 [Report]	TFA	2016	http://www.thefieldalliance.org/impacts/resource/documents/	Full

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
A Community-Based Pesticide Action Monitoring Report By The Hai Hau's Women's Pioneer Group, Women's Union Of Hai Hau & CGFED	PANAP	2016	https://panap.net/2015/12/community-based-pesticide-action-monitoring-report-by-hai-haus-womens-pioneer-group/	Partial
PANAP Submission To The UN SR On The Right To Food	PANAP	2016	https://panap.net/2016/12/panap-submission-un-sr-right-food/	Full
Guidance on Highly Hazardous Pesticides	FAO/WHO	2016	http://www.fao.org/3/i5566e/i5566e.pdf	Partial
Story of Zee the Bee	PANAP	2015	https://panap.net/2015/05/story-zee-bee/	Full
Conditions Of Paraquat Use In India	PANAP/PAN India	2015	https://panap.net/2015/04/conditions-of-paraquat-use-in-india/	Partial
How Are Children Exposed [Postcard]	PANAP	2015	https://panap.net/2015/05/how-are-children-exposed/	Full
World Environment Day [Posters]	PANAP	2015	https://panap.net/2015/06/world-environment-day-posters/	Full
20 Terrible Pesticides That Are Toxic To Children	PANAP	2015	https://panap.net/2015/11/20-terrible-pesticides-toxic-children/#	Full
Information brochure "Towards a non-toxic South-East Asia"	All partners	2015	https://www.kemi.se/en/global/broschyrer/towards-a-non-toxic-south-east-asia.pdf	Full
Teacher's Statement about Pesticide [Video]	PANAP/ CEDAC	2015	https://www.facebook.com/pesticidesincambodia/videos/1082548488452401/	Full
Water Contamination in Cameron Highlands [Video]	PANAP	2014	https://www.youtube.com/watch?v=9GKNX2aeBS4	Partial
Protect Our Children From Toxic Pesticides [Infographic]	PANAP	2014	https://panap.net/2014/06/protect-children-toxic-pesticides/	Full
Children & Pesticides: Protect Our Children from Toxic Pesticides	PANAP	2014	http://files.panap.net/resources/children-and-pesticides-booklet.pdf	Full

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
Poisoning Our Future: How pesticides undermine our children's health [Video]	PANAP	2014	https://www.youtube.com/watch?v=Zl-idGiCY-I&list=PLI1gghUnSr_99ALeZN2awHNUXhMUARz4l&index=5&t=0s	Full
Pesticide Harm Children	PANAP	2014	https://www.youtube.com/watch?v=rg6SFNaPTJ0&list=PLI1gghUnSr_99ALeZN2awHNUXhMUARz4l&index=6	Full
Children & Pesticides: Protect Our Children From Toxic Pesticides (Mandarin/ Booklet)	PANAP/ PEAC	2014	http://files.panap.net/resources/children-and-pesticides-booklet-chinese-version.pdf	Full
Empowering Farmers to Reduce Pesticide Risks. Impact Assessment Study Report – Cambodia and Vietnam for Period 2007-2012.	FAO	2013	https://www.researchgate.net/publication/259080275_Empowering_Farmers_to_Reduce_Pesticide_Risks/link/02e7e529edd1b34add000000/download	Full
HHP Factsheet Series	PANAP	2013	https://panap.net/2014/06/factsheets-learn-20-pesticide-can-harm-children/	Full
Poisoning Our Future: Children and Pesticides	PANAP	2013	http://files.panap.net/resources/Poisoning-Our-Future-Children-and-Pesticides.pdf	Full
Illegal Pesticide Trade in The Mekong Countries: Case Studies from Cambodia and Lao PDR	PANAP/ SEADA/ CEDAC	2013	http://files.panap.net/resources/Illegal-pesticide-trade-in-Lao-and-Cambodia.pdf	Full
Breast Cancer, Pesticides and You!	PANAP	2013	http://files.panap.net/resources/Breast-cancer-pesticides-and-you.pdf	Partial
Report on Women And Pesticide Survey: Case Study In Sang District Kandal Province	PANAP	2010	https://panap.net/2011/04/report-women-and-pesticide-survey-sang-district-kandal-province/	Full
Pesticides: Sowing Poison, Growing Hunger, Reaping Sorrow (2nd Edition)	PANAP	2010	https://archive.panap.net/sites/default/files/sowingpoisongrowinghunger_2ndedition.pdf	Full
Communities in Peril: Asian regional report on community monitoring of highly hazardous pesticide use	PANAP and partners	2010	https://panap.net/2010/02/communities-peril-asian-regional-report-community-monitoring-highly-hazardous-pesticide-use/	Partial

Publication/filmed material	Organisation	Publication year	Link	Financing from the programme
Communities in Peril: Global report on health impacts of pesticide use in agriculture	PAN International/ PANAP	2010	http://www.pan-germany.org/download/PAN-I_CBM-Global-Report_1006-final.pdf	Partial
Guidance on pest and pesticide management policy development	FAO	2010	http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Policy_2010.pdf	Partial

Annex 1: Risk matrix 2018

Risks		Initial Estimated Risk Value*	Risk during year 2018	Risk mitigation measures taken during 2018	Comments
Short-term objective 1 and 2 (implemented by PAN AP and TFA):					
1	General backlash	Medium-High	Stable Raised	TFA: No major backlash experienced in 2017 PANAP: Continued support of partners through a global campaign. Change of activities to integrate a soft approach.	Due to political pressure mass outreach activities was cancelled in Cambodia. Similarly, due to martial law in Mindanao, Philippines, mass outreach activities could not be organized.
2	People turnover, brain drain (internal and external)	Medium	Stable	Hiring of new staff to replace staff leaving the organisations. On-going capacity building for new partners.	Turnover of partners' staff in Myanmar, Cambodia and Laos.
3	Policy Change	Medium	Stable Raised	TFA: On-going policy dialogue. PANAP: On-going policy dialogue.	TFA: Continuous support from governments PANAP: CSO's activities are futher regulated in China, Cambodia and the Philippines.
4	Funding uncertainties	Medium-High	Raised	TFA and PANAP: Continuous fundraising activities to avoid lack of funds.	TFA: Decreased contributions of funds
5	Aggressive corporate campaigns	Medium	Raised	Continued PPR awareness activities. More monitoring on the ground.	PANAP: Rise of generic brands that are more difficult to regulate. For example, active ingredients in generic brands may not be easily verified. Generic brand may lack safetly labels and information or might be even illegal/not registed.
Short-term objective 3 (implemented by FAO RAP):					
1	Brain drain	Medium	Stable	Provision of refresher training and training of new and young government staff so that the pool of available trainers can be tapped by government to implement farmer training.	
2	Aggressive marketing strategies of pesticide companies	Medium	Stable	Strengthening of the curriculum on pesticide risk reduction and providing access to alternatives to	

Risks		Initial Estimated Risk Value*	Risk during year 2018	Risk mitigation measures taken during 2018	Comments
				chemicals such as biological control.	
3	Limited access to additional donor resources to ensure maximization of implementation capacities	Low	Stable	FAO has continued stressing the importance of IPM and Pesticide Risk Reduction farmer training and investments in policy dialogues with senior government officials. This led for example to IFAD and World Bank funded investments in up-scaling of the pesticide risk reduction field training work in 6 Lao provinces, funding from FAO regular programmes for work on sustainable intensification of crop production – Save and Grow in Laos, and IFAD-funded Project for Agriculture Development and Economic Empowerment in Cambodia to upscale IPM within integrated farm management and sustainable agricultural production. In Vietnam, the government has invested US$ 595,000,000 for projects with IPM/FFS and farmer education components through World Bank loans (MD-ICRSL - WB 9 from 2015-2020 at US$ 385 million and VIAIP - WB7 from 2014-2020 at US$ 210 million) period 2015-2020 in World Bank funded IPM/FFS projects. At Regional level, FAO staff are working with FAO country offices to develop several new proposals to be considered for GEF-7 fundings. This includes proposals for continued work on HHPs as well as proposals for multi-stakeholder partnerships for development of "Inclusive Rice Landscapes" in follow up to Sustainable Intensification of Rice Production capacity building interventions initiated within context of FAO's Regional Rice Initiative and this Swedish funded Programme.	
4	Low interest from Ministry of Agriculture in project participation (Myanmar)	Medium	Lower	A Parliamentary Inquiry on Agrochemical Residues, initiated during 2nd half of 2018, is anticipated to continue to build momentum for strengthened pest and pesticide management. The PPD has shown keen interest to work with KemI, FAO and other partners to pursue work for improving pesticide management including registration process for identification and deregistration of HHPs.	
5	Low potential for programme stakeholder collaboration (China)	Low	Stable	Continue to engage civil society organizations in dialogue with governments. Recently developed partnerships between FAO and private sector (Guangfa Securities) and in support of the Government's efforts to achieve SDG-1 will provide new opportunities for stakeholder collaboration and broader functional partnerships.	
Short-term objective 4 (implemented by FAO HQ and KemI):					
1	Change of key staff within Ministry	Low	Stable	After government staff changes in Laos (DOA) and Cambodia (DAL) during 2015-16, newly appointed counterparts remain in place in 2018. Communication and collaboration efforts with counterparts in both countries as well as in	The programme has reestablished contact with key persons at central level in all countries and there is a good basis for continued collaboration and support.

Risks		Initial Estimated Risk Value*	Risk during year 2018	Risk mitigation measures taken during 2018	Comments
				Myanmar (PPD) have seen continued improvements in 2018.	
2	Countries do not ask FAO assistance for formulation of regulations	Low	Stable	The programme have continued to offer legal support to all countries and have made experts available, also on short notice, in order to respond to requests from the countries.	A new request from PPD in Yangon for assistance in legal development was received in mid-2018. Unfortunately, the request came to late into Programme implementation for FAO to follow up on this during the life time of this Programme. Instead, the suggestions was made to the Dutch Government/Alterra to follow up on this during the recently approved Phase II of their Pesticide Management project with PPD.
3	Abuse in inspections	Low	Stable	New inspection manuals have sections clearly spelling out the duties and obligation of inspectors. The programme continues to highlight the importance of having a transparent process with possibilities to appeal, clear reporting, working in pairs etc.	Support ongoing/offered by the Programme in both Laos and Cambodia for strengthening capacity for implementation of inspections. Unfortunately, internal government processes and interpersonal matters beyond the Programme's control have resulted into further delays in inspection and enforcement activities in both Cambodia and Lao PDR during 2018.
4	Other external risks beyond the control of the project	Low	Stable	The programme has continuously been monitoring the political situations etc. in the member countries in order to be prepared for new demands/changes of priorities etc.	
Short-term objective 5 (implemented by KemI)					
1	Brain drain	Low	Stable	KemI have continued to have two programme managers involved in the programme in order to minimize the risk for loss of important knowledge and experience from the programme.	
2	Lack of resources within partner countries (time and funds)	Medium	Stable	Continuous dialogue with partner countries to make sure that topics of Forums and other activities are in line with their priorities and needs.	

Risks		Initial Estimated Risk Value*	Risk during year 2018	Risk mitigation measures taken during 2018	Comments
3	Lack of political will	Low	Stable	Since the interest in taking part in the regional collaboration on chemicals management remains high in all member countries no specific measures have been taken during 2018.	
4	Conflicts between or within partner countries	Low	Stable	KemI continuously monitor the political situation in the member countries and in the region in general to be prepared for changes of priorities, possibilities to participate etc. No specific measures during 2018.	
5	Suboptimal donor coordination.	Low	Stable	KemI have had continuous dialogue with UN Environment Regional Office for Asia and the Pacific, ASEAN Working Group on Chemicals and Waste and other concerned actors to make sure that activities are coordinated and supporting each other.	
6	Difficult to identify and reach relevant and committed stakeholders	Low	Stable	No specific measures taken during 2018.	

*Risk value 1-8: Low. Risk value 9-17: Medium, Risk value 18-25: High

Annex 2: Detailed narrative reports with results from 2018 and 2019

Summary

Early 2018, Sida approved a 6 months no-cost extension of the programme's activity period, until 31 December 2018. In December 2018, Sida approved FAO and KemI to use existing funds for support to the final evaluations of the programme and for final reporting (until March 31 2019 and May 31 2019, respectively). Below is a summary of results from January 2018 to May 2019.

In 2018, an additional 4,199 farmers (42 % female) switched to more sustainable agricultural practices, adopting IPM with reduced or no use of chemical pesticides with support from the programme (FAO). Case studies, posters and other communication products were developed, shared and made publicly available at national and regional workshops, including at the Final Regional Programme Forum in Bangkok in November 2018.

In 2018, all programme countries continued the development of legislation on pesticides and other chemicals and the programme supported this development by providing continuous advice on technical as well as legal issues.

The programme also continued its support and development of the FAO Pesticide Registration Toolkit[41], an on-line tool made available by FAO headquarter with various modules providing guidance on risk assessment, risk management etc. as well as spread sheets and templates to support evaluation of pesticides by national authorities. The toolkit also offers important guidance in support of countries' efforts to phase out Highly Hazardous Pesticides (HHPs). In 2018, one regional Toolkit workshop was organized with participation from relevant regulatory staff in Thailand, Lao PDR and Cambodia[42]. The workshop contributed to strengthened capacity within national registrations authorities and provided opportunities and tools for increased regional cooperation. The training focused particularly on the new module on HHPs. In 2018 and 2019, several countries in the region continued the phase out of HHPs through bans and/or restrictions of such products. The most recent example is Thailand where the National Committee on Hazardous Substances voted to ban paraquat, glyphosate and chlorpyrifos in October 2019[43].

The collection of data from real life situations in the field also continued in 2018. In Lao PDR, the programme supported the implementation of a survey aimed at making an inventory of pesticide use in melon production in central/southern provinces (Savannakhet/Khamouane) with a focus on methomyl, a banned insecticide but reportedly still in use as confirmed by the study. The study was followed up by field studies aimed at working with melon farmers to identify effective alternatives to methomyl use. Survey results were shared with the Rotterdam Convention for possibly incident reporting and/or follow up in-depth studies for same purpose. At the global level pesticides such as carbofuran and trichlorfon were listed under the Rotterdam Convention. The programme contributed to this development in various ways.

[41] http://www.fao.org/3/ca3814en/ca3814en.pdf
[42] http://www.fao.org/pesticide-registration-toolkit/training/training-detail/en/c/1175311/
[43] https://www.bangkokpost.com/thailand/general/1777739/chemicals-ban-passes-last-hurdle

Using Community Pesticide Action Monitoring (CPAM), PANAP and partners documented the use of Highly Hazardous Pesticides (HHPs) by interviewing more than 2000 respondents in 2018. The report *Of Rights and Poisons: Accountability of the Agrochemical Industry*[44] focused on HHPs and the conditions of their use, including health and environmental effects, as reported primarily by small-scale farmers and agricultural workers in seven countries in Asia. The report was provided to key governments and to the Chair of the Human Rights Intergovernmental Working Group that is elaborating on legally binding instruments on Trans-National Cooperations (TNCs) and other businesses. There is a growing need to involve the health care professionals and workers to strengthen the documentation on impacts of pesticides on human health and to join the struggle to protect children, women and men as well as the environment from harmful pesticides. Therefore, in 2018, a health workshop using the CPAM app was organized in Vietnam. The workshop brought together 40 health workers, Vietnamese government officials and CSO partners to dicssuss and take action to reduce the negative impacts of pesticides and human health.

In 2018, The Field Alliance (TFA) and partners continued to support pesticide risk reduction activities and enhance the use of alternatives through increased awareness and capacity-building in farming communities, schools and institutions, and among the consumer population. Trainings on agro-biodiversity (ABD), Pesticide Impact Assessment (PIA) and agro-ecology were organized in Lao PDR, Cambodia, Myanmar and Thailand. In addition, TFA and local partners supported analyses of pesticide residues in blood samples from children, farmers, consumers etc. Results from the tests were communicated to local and national governments and attracted a lot of attention. In Thailand it resulted in a national "Safe school lunch" policy.

KemI continued its effort to strengthen the member countries' capacity to control chemicals by, e.g. by organizing a workshop focusing on sustainable financing of chemicals control (March 2018). KemI also continued the dialogue with the ASEAN secretariat in order to push for increased attention to chemicals management at regional level. As a step to support the process of implementing the Minamata convention on mercury, KemI supported a pilot project on phase out of mercury containing medical devices at two hospitals in Vietnam.

In November 2018, KemI, together with FAO, PANAP and TFA, organized a final regional Forum to summarize the accomplishments and lessons learned from more than 10 years collaboration, highlight remaining challenges for the region and discuss ideas, priorities and strategies for continued work to strengthen chemicals management and reduce health and environmental risks from pesticides, industrial and consumer chemicals beyond the current phase of the regional programme. A total of 129 participants (67 women) attended the Forum. Participants comprised of representatives from national governments, civil society organization (CSO) partners and other stakeholders.

In 2019, two different evaluations of the programme were performed by external consultants. One evaluation was made by FAO's Office of Evaluation and focused on FAO's part of the programme, i.e. the IPM component (objective 3: Strengthened capacity to innovate and scale up Integrated Pest Managament (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partners countries) and the esticide policy component (objective 4: Strengthed regulatory framework for the control of pesticides in selected partner countries). The evaluation also looked briefly at collaborative actions, complementarity and synergies between the implementing partners. Overall conclusion from the evaluation was positive and the evaluation team acknowledged that FAO's role and

[44] https://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry-highres.pdf

components were relevant for the needs in the region and that FAO had effectively implemented the planned activities. As a result, the programme could achieve better outputs and outcomes than visualized through the results framework. Main conclusions from the evaluation team are summarized below:

- *FAO's components were extremely relevant to the programme objectives and complementary to the other implementing partners, the interventions were timely, needs oriented, important and effective.*
- *Pesticide governance with a focus on PRR is a national and regional priority now within Greater Mekong Sub-region countries, substantial work has been accomplished and is being sustained, in particular pesticide legislation and bans/restrictions on HHPs.*
- *Awareness, consciousness and knowledge on pesticides and related management issues have been widely broadened in all countries, in the region and internationally at different levels ranging from policy makers, high level governmental officials to technicians, to farmers, consumers and to many others. This development has been supported directly and indirectly through FAO and its partner organisations.*
- *The project had a human rights based, gender equality and poverty alleviation approach.*
- *FAO has been an enabler in the PRR sector by helping national governments comply with international standards/conventions. However, a number of challenges remain which should be addressed in the short-term.*
- *The South East Asia context in which the project is implemented, has several new opportunities and threats such as climate change, new pests, diseases, demand for more quantities of food from contract farming, continued production of cheap pesticides, inter-country competition for similar markets, possibility of falsified pesticides (such as hidden active ingredients (AIs)).*

The second evaluation was commissioned by Sida and was contracted to NIRAS Sweden AB. This evaluation focused mainly on KemI's performance as programme coordinator and expert agency. The evaluation also looked briefly at overall achievements of programme objectives. The evaluation concludes that the programme has contributed to sustainable results and KemI's expertise has been highly appreciated. Limited coordination between the partners working on agriculture related issues lead to missed opportunities to develop a critical mass of local CSOs in pesticide management. The regional chemicals management forums organised by KemI were found useful and informative by the member countries but they did not contribute to a strengthened inter-minsterial coordination or a strong regional network. Below are some conclusion from the evalutation report:

- *Keml has been universally appreciated throughout the region as an organisation possessing unparalleled expertise; both as a repository of knowledge on chemicals management but also as a trainer and communicator of best practices on the topics. It is recognised as a government agency with a history of practical implementation. Its methodology of engagement and being responsive to the needs of individual countries are cited as excellent. It has built its trust amongst governments in the region and is classed as neutral, skilled, helpful and trustworthy.*
- *Six regional forums were held during 2013-2018 – one per year. These were venues for networking & experience sharing, orientation to the conventions, information on best practice and current issues. Largely targeted at government, they also included a smaller participation of CSOs and other stakeholders, and were found to be very useful and informative.*
- *There was very good results from the field activities of the three programme partners PANAP, TFA and FAO. They significantly exceeded their targets, even when the targets had been revised upwards. This work has catalysed additional funding from governments in Vietnam, Cambodia and Laos and donors to continue to support farmers trainings, curriculum development (Thailand) and community learning centres (Vietnam). Studies show reduced use of pesticides, improved health, more produce being sold and better incomes.*
- *In fact, ministry staff have appreciated the work of both TFA and PANAP; stating they bring to their attention the realities of the work in the field and advocate in front of policy makers where government officials are unable to.*

- *The programme did also have its shortcomings. Over halfway through implementation, at the end of 2016, the KemI representative and overall programme coordinator, relocated to Stockholm as planned. This led to reduced networking and inability to attend regional meetings/workshops. As project coordinator, KemI had no coordination role to play in the first three components of the programme which related to community level pesticides awareness-raising and its reduced use. The programme was actually four projects under a funding facility: partners continued doing whatever their original organisational objectives were and expanded their activities to newer areas because of this Sida funding being available.*
- *There was little coordination between the four partners; it was the exception rather than the norm. FAO and KemI did cooperate on legal frameworks, trainings and other activities as they were envisaged to under component 4, but there was minor coordination of activities amongst the three partners undertaking field activities resulting in their local national partners not collaborating with one another. Opportunities for developing a critical mass of local CSOs in pesticides management were missed.*

Findings and recommendations from the final evaluation have served as important input to the development of a new proposal for regional collaboration in Asia.

In 2019, KemI continued its dialogue with the ASEAN secretariat (ASEC) in order to strengthen current and future collaboration. In March, two representatives from KemI met three representatives from ASEC to continue the discussion on how future collaboration could be arranged practically. The meeting resulted in better understanding of each organization's mandates and resources as well as available options for implementation of a collaboration project. In May, KemI took part in the 4th annual meeting of the ASEAN Working Group on Chemicals and Waste. One representative from KemI took part in the open session of the meeting and presented plans for continued support on chemicals management to the regiona as well as a concrete collaboration proposal focusing on support for implementation of GHS within ASEAN. The proposal was positively received by the ASEAN member states and KemI was encouraged to submit the collaboration proposal for comments and formal endorsement by the member states.

Programme Objective: Strengthened capacity and regional collaboration for efficient pesticide risk reduction and chemicals management within and among partner countries

Organisation of one regional workshops on the FAO Pesticide Registration Toolkit contributed to increased knowledge among the participants on strategies for registration of pesticides and available tools and resources that can support this process. Around 20 registration officers attended the workshops and got in-depth knowledge on the content and structure of the toolkit and particularly how it can be used to support identification, assessment and risk management of highly hazardous pesticides (HHPs).

In 2018, TFA and partners organized capacity building workshops at the national level in Cambodia, Myanmar, Thailand and Vietnam for officials from ministry of health and other interested agencies included private sectors on the study of pesticides residues in foods and human included the uses of available test kits for field based data collections. The efforts has created a network of concerned agencies and academics to continue exchange and explore efforts to further study the impacts of pesticides to children and environment. In December 2018, TFA and partnes also organized study visits to exchange and learn about development of pesticides waste container management at the local level and development of related governemental regulations and its implementation in Vietnam. The concerned

policy makers also requested future supports for periodical exchange of updates on drafting of the related laws and legislature on pesticides waste container management and private sectors involvement in the efforts.

In March 2018, KemI organized a regional 2-day workshop focusing on financing of chemicals control and discussions on priorities for future work related to chemicals management. 25 participants from the current member countries took part in the workshop. All member countries in the region are struggling with insufficient resources for governments' work on chemicals management and support on this issue was requested by the countries. During the workshop KemI introduced its new guidance on sustainable financing (developed within the framework of KemI's global programme on chemicals management) and the countries then presented and discussed their current financing systems and possible ways forward.

Immediate objective 1: Reduced risks associated with pesticide use and enhanced use of alternatives through increased awareness and enhanced capacity in farming communities, schools and institutions and among consumers in partner counties.

Narrative report, PANAP and partners

General summary of campaigns

Protect our Children from Toxic Pesticides Campaign

PANAP's Protect our Children from Toxic Pesticides campaign was launched in nine countries on World Environment Day last June 5, 2015. Our campaign highlights pesticides' severe effects on children's health and mental development, and focuses on children as an especially vulnerable sector that needs immediate attention and long-term protection from harm.

In 2018, over seven partners from India, Philippines, Laos, Cambodia, Vietnam and China held various activities for the Protect our Children campaign. These were mostly fun, cultural activities dedicated to children. Participated in by a large number of schools, most activities were conducted during the annual International Children's Day (November 20) and No Pesticide Use Week (held every 3rd to 10th December to commemorate the 1984 Bhopal gas leak tragedy in India).

A campaign and online petition on pesticide-free buffer zones around schools is slowly garnering support. Such a zone aims to put children out of harm's way by reducing or stopping pesticide application within a radius of one kilometre or more around schools.

In Cambodia, CEDAC pushed for pesticide-free buffer zones around schools as part of PANAP's "Protect Our Children from Toxic Pesticides" campaign. CEDAC found out that pesticide drift caused the poisoning of 30 students in Po Ampil Primary School in Takeo, Cambodia. They also recorded the use of over 20 hazardous pesticides in agricultural fields surrounding schools in Takeo province. This spurred teachers, students and local officials to take action and call for pesticide-free buffer zones. Local authorities have also encouraged farmers to stop using pesticides during schooling hours and to provide advance warning to school authorities before spraying. As of 2018, Surrounding farmers were also encouraged to switch to agroecology-based agriculture in Takeo. The campaign extended to a new school

in Kirivong district of Takeo province. On December 13, 2018, CEDAC organized a workshop for 74 participants (30 women) including primary students, teachers, commune counselors and village chiefs.

In Vietnam, a pesticide-free buffer zone was successfully developed around Dong Dat secondary school by SRD. Due to awareness raising activities in the area, farmers became concerned about the impact of pesticides on children, and supported the school in growing banana trees as a buffer to protect the children. Teachers have also shared their concerns with parents and surrounding farmers. In Hai Hau, CGFED, conducted a CPAM survey on four teachers and 142 (66 males; 76 female) secondary schools' students from Hải Long and Hai Cuong (Hai Hau district) and 2 secondary schools of Nghia Minh and Hoang Nam (Nghia Hung district). The purpose of the CPAM study is to investigate the methods of pesticide exposure on school going children. Results of the survey will be published at the end of 2019.

16 Days of Global Action on Agroecology

Amid the ever-worsening impacts of climate change and pesticide-based farming on rural communities, PANAP and partners focused on the youth and its unique role in advancing the movement for agroecology. In October 2018, with the theme Youth on the March: Building Global Community for Agroecology and Food Sovereignty, the annual 16 Days of Global Action on Agroecology was launched. Now on its fourth year, the campaign aims to raise awareness on the benefits of agroecology- on food security, health, the environment, and the economy and welfare of food producers and rural communities. Participating partner organisations held a multitude of activities ranging from rallies, youth workshops, fora, discussions, street actions, community dialogues, radio talk shows, podcasts, farmers' markets, exhibits, theatre productions, seed festival, organic farm visits, among others. Over-all, these activities reached out to more than 42,000 individuals in 40 countries in Asia, Latin America, Africa and Europe.

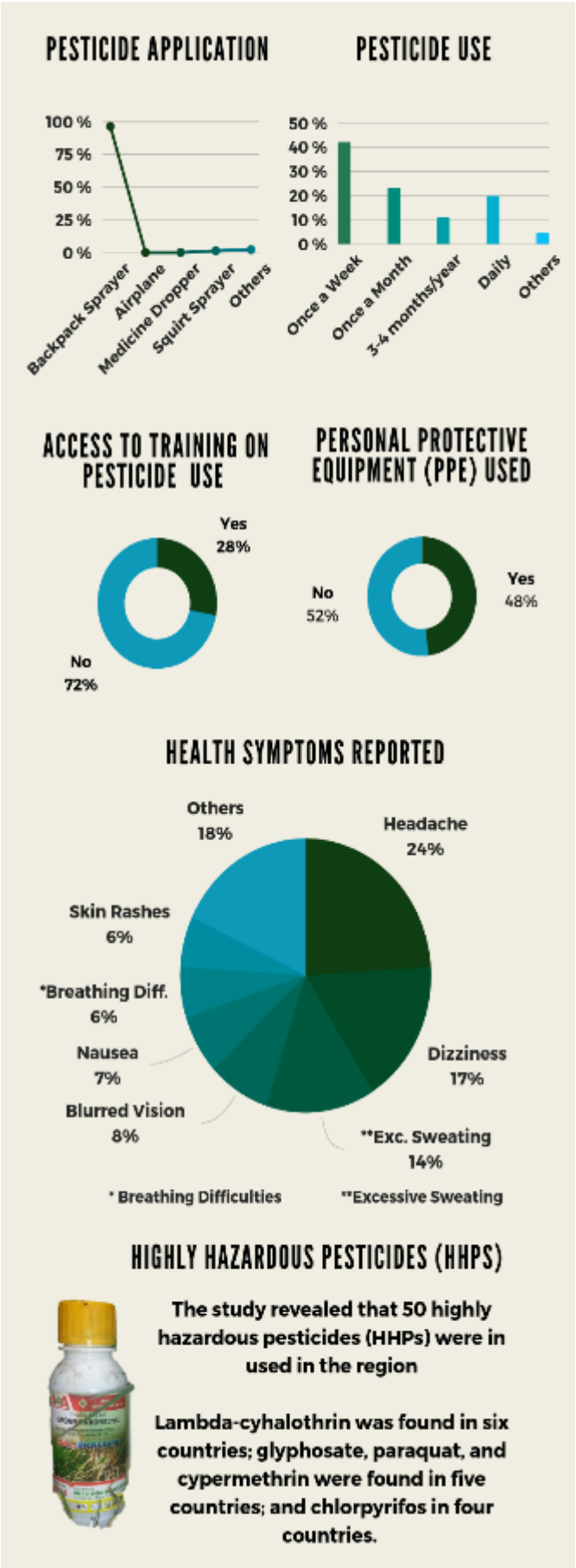
The calls that united various people and organisations during the 16 Days of Global Action on Agroecology were Advance Agroecology! Defend Food Sovereignty! Youth Rise Now! Rural Women Rise Up! Resist Corporate Control on Agriculture! and Pesticides-Free World! The campaign once again proved that the building blocks of a global ecological agriculture movement are sturdily in place, with PANAP proving its capacity to provide a leadership role

Outreach of CPAM reports

Launch of Regional Report

Our documentation and report, *Of Rights and Poisons: Accountability of the Agrochemical Industry* (http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf) was launched on October 17, 2018. It reveals that in South and South East Asia, highly hazardous pesticides (HHPs) such as butachlor, paraquat, fipronil, carbofuran, chlorantraniliprole, chlorpyrifos, cypermethrin, glyphosate, lambda-cyhalothrin, imidacloprid, malathion and morocrotophos – all known for poisoning people and/or the environment – are still used widely in farming.

More than 2,000 farmers and workers in seven countries have been involved in the documentation. Most of these farmers, agricultural workers, indigenous communities and rural women and children are exposed to pesticides while spraying, mixing, loading, decanting, purchasing or transporting pesticides



without any protection. Children are in schools that are in the vicinity of the pesticide spraying or in the fields with their parents being exposed.

Household members are also exposed by washing equipment and clothes used for spraying or mixing pesticides; through contamination of soil and water sources; and through aerial pesticide drift. These pesticides are used on farms, cotton fields, rice paddies, mango and oil palm plantations and in floriculture, violating the rights of plantation workers, farmers, rural women and indigenous peoples to a safe and healthy working environment and the rights of communities to a healthy environment. Rights to information on the pesticides they use or to which they are exposed are constantly violated. Selling of pesticides in unlabeled bags, lack of labels in local languages and the removal of labels in the case of plantation workers are serious violations of the International Code of Conduct on Pesticide Management. Specific cases of violations of women and children's rights, labour rights and right to civil liberties have been documented in India and Pakistan, while violation of labour rights and civil liberties have been documented in Indonesia, Malaysia and the Philippines. Most of the farmers surveyed often fell ill after spraying for the whole day, suffered pesticide spills when opening the lid of container, spills on hands while mixing, and spills on their bodies while loading the sprayer. The respondents suffered health effects from nausea to blurred vision and abdominal pain after spraying the pesticides. Seven out of 10 respondents say that they have been poisoned.

The report was distributed to government authorities, researchers and other civil society organizations. PANAP presented results of the report during the Fifth International Conference of Occupational and Environmental Health (ICOEH5) on 10-12 September 2018, in Hanoi, Vietnam. The conference was attended by government

officials from national occupational health and safety departments, researchers, CSOs and the private sector. CGFED also presented their national report in the same meeting.

The report and campaigns were featured in the three newspapers in India : (1)Hindu Business Line https://www.thehindubusinessline.com/economy/that-pesticide-dressing-for-your-salad-is-to-die-for/article25251770.ece, (2) Fist Post, https://www.firstpost.com/india/yavatmal-pesticide-poisoning-lack-of-accountability-negligence-and-abysmal-medical-facilities-behind-farmers-deaths-5464981.html, (3) The Hitavada newspaper; one newspaper, Eco Business(Indonesia), https://www.eco-business.com/news/women-in-palm-oil-invisible-no-more/ and one newspaper, Business Mirror (Philippines), Link https://businessmirror.com.ph/2018/11/01/eating-pesticide-free-crops-now-possible/

Regional Workshop

A Health Workers Consultation Workshop was held on 3-5 July 2018 in Hanoi, Vietnam was attended by 40 participants consisting of government representatives of Vietnam, health workers, and partners from civil society organisations (CSOs) in ten countries in Asia Pacific as well as by government representatives of Vietnam. The workshop examined the harmful impacts of HHPs on peoples' health and the environment. The workshop highlighted the need to improve the system of documentation at the grassroots level, in order to more effectively raise the level of engagement with the state and of corporate accountability. The Community-Based Pesticide Action Monitoring (CPAM) and the CPAM Mobile App were presented at the workshop. The app, a tool designed by PANAP to facilitate data gathering at the grassroots, was tested in the programmed field visits. This led to valuable suggestions on enhancing the functionality of the app, while also stressing the need for countries to define their research designs. The workshop identified strategies including community organising as the backbone of grassroots documentation; capacity training on CPAM tools and methods; linking medical doctors to village farmers in the monitoring of pesticide poisoning and agroecology initiatives; and engaging governments through policy advocacy.

PANAP's partner Centre d'Études et de developpement Agricole Cambodgien (CEDAC), Cambodia

In 2018, CEDAC has been actively training farmers on agroecology and marketing. CEDAC has been actively setting up a rice mill for the export of organic rice from their project sites. Organic rice from the rice mill are sold in the US and the European Union. Due to 2018 being an election year, many of the mass campaigns and advocacy work was halted. More focus was put into organising workshops and trainings for awareness raising.

To facilitate leadership among community leaders, CEDAC organized a workshop entitled "Strengthening Leadership of Farmer Association" in Takeo's provincial town. There were 44 participants including 39 farmer leaders (6 females) representing 35 Farmer Associations (FA) from Takeo and Kampot province, and five CEDAC staff members. CEDAC facilitated the formation of FA's but leadership are membership positions are determined by the community themselves. During the workshop, various topics including marketing, agroecology techniques, rice quality management, dangers of pesticide use and sustainable financing were discussed.

To engage more youth in agroecology, CEDAC organized a workshop on 'Youth Toward Organic Agriculture' in Phenom Phen,as part of the *16 Days of Global Action on Agroecology* campaign. There were 35

participants (7 females) representing youth farmers, students, consumers, media and CEDAC staff. The purpose of the workshop was to exchange the knowledge and to build solidarity and cooperation between youth farmers, consumers and stakeholders in promoting and supporting organic agriculture in Cambodia.

CEDAC began introducing System of Rice Intensification (SRI) to Cambodian farmers in 2000. Since then, CEDAC has been active in supporting farmer-to-farmer extension of SRI at a national scale. To create more awareness on SRI in Cambodia, CEDAC initiated an SRI national contest for farmers. Six of the ten finalist (2 women) were awarded best prize and others received honorary prize of a one hand tractor, and four-tons of organic fertilizer, respectively. The winners were innovative in their farming practices, which led to better climate resistant yields.

Testimonies from CEDAC trained farmers: -

Prey Veng province said she is happy with earning a good income from organic farming -June, 2018

Khiev Thim, a member of the vegetable producer group who was successful in growing organic leafy. The onions are supplied to the local market. His family earned around 600USD a month from farming (income higher than average Cambodian farmer).
- June, 2018.

Duong Pov, woman member of organic rice producer group in Takeo province is happy with her SRI field which provided high yield of 4.8 ton/ha (SRI Competition finalist, 2017)

Prom I, a member of organic producer group shows his organic rice sacks ready to sell and to be marketed. – January, 2018.

PANAP's partner Pesticide Eco-Alternative Center (PEAC), China

PEAC has continued to raise farmers' awareness on the impacts of pesticides, build capacity for eco-farming and continued to advocate for the phase out highly hazardous pesticides in Yunnan, China.

To raise awareness on the impacts of pesticides on children among farmers, PEAC organized a campaign in six villages (Hei Er village in QuJing City, Cun Zhang Tian village in Chuxiong City, Gui Neng Village in Mo Jiang County, Ma Jia Ba village, Fu Lu Di Village as well as Huang Long Village in Yu Xi City) for 693 people (50% female) was organised. Posters and information leaflets on the impacts of pesticides on children were distributed to attendees.

One preparatory meeting to expand the eco-based farming model was held in Guineng village, Heier village, Cunzhangtian village Heinigou village and Shiliiqng village. PEAC and key farmers discussed planting and cultivation strategies of organic traditional varieties of purple rice, traditional red rice, traditional yam, organic vegetables and native species of duck and chickens.

PEAC has facilitated several eco-restaurants and shops to help sell organic or pesticide free products. The products are also sold online and through an Eco-Farmers' Market, which is organized every last Saturday of the month in Kunming to build direct links between consumers and farmers. In 2018, 200 consumers were also made aware of the impacts of genetically engineered food and pesticides in their diet trough exchange visits to organic farms. The organic farms belong to farmers who were previously trained by PEAC on agroecology. The exchange visits help consumers build rapport and trust with the organic farmers. These learning exchanges also help consumers understand the process of organic farming. This led to more consumers buying organic products which also improves farmers livelihoods.

Three university students conducted CPAM surveys on glyphosate and highly hazardous pesticides for their thesis dissertation. The results were shared with their teachers and to officials of the Ministry of Agriculture.

To share more information on the impacts of pesticides PEAC uploaded 259 articles including 77 glyphosate- related materials on 6weidu.com which was downloaded 3,000 times. Four articles related to glyphosate were shared on WeChat and other media platforms. In total the articles were viewed 479,802 times and forward 2370 times.

PANAP's partner Sustainable Agriculture and Environment Association (SAEDA), Lao PDR

To encourage more farmers to grow organic food, SAEDA has continuously trained farmers and government officers on organic farming methods and marketing. In 2018, 230 new farmers were trained on organic farming and marketing methods. As result of ongoing trainings, SAEDA has reported that more farmer organizations have been set up by farmers in other northern provinces like Phongsaly and Oudomxay and Luang Namtha. This is mainly due to greater awareness of the impacts of pesticides and that agroecological methods have been financially more viable and sustainable.

On World Environment Day, SAEDA organized a workshop for 60 people. Posters on the impacts of paraquat and other highly hazardous pesticide impacts were distributed to all participants.

Photo: Exhibition booth during the World Environment Day event in Laos.

To gain a better understanding of pesticide use, the Department of Agriculture consulted SEADA to conducted CPAM surveys in Naxaythong and Hatxayfong districts, Vientiane Prefecture, Laos. A total 19 pesticide shops and 10 farmers (all females) were surveyed. The objective of the survey was to document the types of pesticides used and methods of pesticide storage. Highly Hazardous pesticides that are particularly toxic to children were found including glyphosate, 2,4-D, acetochlor, cypermethrin, mancozeb, propiconazole and seven other highly hazardous pesticides. Most pesticides sold in shops were not stored in a safe manner and were within the reach of children. The survey, raised awareness among government officials in the DOA to take action on pesticides sales in Laos.

Interview of pesticide seller: Most pesticides sold in shops were not stored in a safe manner and were in the reach of children

PANAP's partner PAN Philippines

Due to Martial Law in the Philippines, many of the CPAM activities and campaigns were halted. Several communities' members from project sites were arrested, are not contactable or are under severe stress.

However, in an effort to continue creating awareness on the issue of pesticides, a video on the impacts of pesticides on human health and the environment was produced by PAN Philippines. Dr. Romy Quijano was interviewed to discuss pesticide poisoning symptoms and prevention methods. The video was posted on Facebook and garner 10,000 views. Video link>>
https://www.facebook.com/panphilippines/videos/696083350587709/

PANAP's partners Sustainable Rural Development (SRD), North Vietnam

SRD in Vietnam has continued their outreach to communities and government officials and created awareness on sustainable rice production with System of Rice Intensification (SRI techniques), eco-honey production, methods of producing ecological pesticides and compost making. From 2017 till 2019, activities from SRD's model have been carried out with the support of local authorities in Dong Dat and On Luong communes (Phu Long district, Thai Ngyuen Province) by 120 famers from 60 households. Two representatives from the Commune People Committees have facilitated meetings with farmers to give them technical support and encouragement.

At district level, Phu Luong authorities acknowledged the positive impacts of SRD's model and organised the formation of more farmer groups. In total 80 farmers were trained and formed two Viet-GAP vegetable plantation groups and two groups for organic poultry raising. In addition, the Phu Luong authorities have taken action by developing integrated agriculture plans (within the district's socio-economic plan) to minimise the use of herbicides like glyphosate. This socio-economic development plan focuses expansion of SRI, safe tea production and Viet-GAP certified vegetables.

SRD continued to gather information on pesticide poisoning cases and conducted CPAM surveys on 101 school students. 21 primary school teachers of 3 communes, Phan Me, On Luong and Dong Dat, and 80 pupils of O Luong and Dong Dat primary schools were interviewed for the survey. SRD and PANAP are in process of data analysis and writing the report.

PANAP's partner Research Centre for Gender, Family and Environment in Development (CGFED), North Vietnam

For the past eight years, CGFED has been working closely with the Women's Union in Hai Hau District, North Vietnam to empower women farmers through various capacity building. Members of the Women's Union in Hai Hau District, have been trained in monitoring via Community Pesticide Action Monitoring

(CPAM), agroecology and women's leadership. After on-going trainings women participants formed the Women's Pioneer Group in 2015.

In 2017, CGFED surveyed 200 farmers in Hai Hau District. The survey found a general reduction of insecticide use but a slight increase on herbicide use, possible due to lack of labour in the fields as compared to the survey done in 2016. Results of the survey was published in *Of Rights and Poisons: Accountability of the Agrochemical Industry* (http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf

In response to the POC campaign, CGFED in collaboration with the Women's Union of Hai Hau district to organized a contest entitled "Women in Hai Hau join hands to protect environment". Contest participants were 600 members of women's unions across the district. The contest was organized to create awareness of the impacts of pesticides on children among the members of the Women's. Examples of agroecology practices were also shared during the event.

During the 16 Days of Global Action on Land and Resources, CGFED coordinated an event with the Women's Union in Hai Hau District and invited women farmers from neighbouring districts. Women from the Pioneer Group, previously trained in Community Pesticide Action Monitoring (CPAM), agroecology and women's leadership, displayed their vegetables and shared their learnings with other women whom attended the event. Vegetables produced by the women's Pioneer Group were produced without pesticides or growth stimulants. This encouraged and motivated other women farmers to grow food without chemicals.

CGFED continued to gather information on pesticide poisoning cases and conducted CPAM surveys on 200 farmers (98 male and 102 females), pesticides sellers and 142 secondary school students. The CPAM survey was conducted in collaboration with Women's Union of Nghia Hung and Hai Hau district, Nam Dinh province. CGFED is in process of data analysis and writing report.

PANAP's partners Research Center for Rural Development (RCRD), South Vietnam

Major activities of RCRD has been completed at the end of 2017. Focus for 2018 in Vietnam was on national policy advice and corporate accountability that was carried out in North Vietnam and the capital Hanoi.

Narrative report, TFA and partners

In 2018, The Field Alliance (TFA) and partners continued to reduce risks associated with pesticide use and enhance the use of alternatives through increased awareness and capacity-building in farming communities, schools and institutions, and among the consumer population.

On a regional level, The Field Alliance and Thai Education Foundation organized a study visit entitled "Community-based Chemical Management and Safe School Lunch Forum and Materials Development Training" in Sakonnakorn and Udonthani provinces for 16 participants from LURAS, TABI, FAO, REAL, and NFE Lao PDR from August 28 - September 1, 2018.

TFA also co-hosted the 4th MELA workshop from August 21-23, 2018 at the Richmond Convention Hotel in Nonthaburi, Thailand. Over 70 participants from international organizations including policy-makers, academics, CSO's, and farmers from Cambodia, Laos, Myanmar, Thailand and Vietnam were in attendance. Panel discussions took place on the topics of national policies, academics and research, the future of young farmers, and the role of the private sector. As part of this event, field visits were organized by the Department of Agricultural Extension to explore and share agricultural innovations. The Fifth MELA workshop is proposed to take place in July 2019 in Vietnam.

The Field Alliance co-hosted the Final Regional Forum of the "Towards the Non-Toxic South-East Asia Programme" with partners from KEMI, FAO, and PAN AP which took place from November 27-29, 2018 at the Sukosol Hotel in Bangkok, Thailand. Over 150 participants from nine Southeast Asia countries as well as India, Sweden and Germany participated, sharing their work and providing recommendations for future development in the pesticides and chemical management arenas.

In Cambodia specific objectives for the second phase of the Rural Ecological Agriculture for Livelihoods (REAL) Project in 2018 were to 1. further encourage participation from local schools, teachers, and students, 2. to lead communities in developing specific pesticide and farmland biodiversity plans, 3. increase community awareness of the risks associated with pesticide and 4. continue to reduce pesticide use. The project concentrated on two provinces, Kampong Chhnang and Battambang, around the Tonle Sap Lake.

In fulfilment of these objectives, Agriculture Technology and Social Action (ATSA) conducted 476 Pesticides Impact Assessments in seventeen villages in Battambang and Kampong Chhnang provinces. There were four bi-annual meetings held with teachers and school directors from thirteen different secondary schools in Battambang and Kampong Chhnang provinces in order to network, discuss program developments, and share lessons learned.

Throughout the year, ATSA continued to facilitate trainings and field experiments in communities and schools including one training on straw mushrooms delivered to 14 farmers (most of whom were women) at Kampong Chhnang province, and three field experiments on using Trichoderma with cauliflower and cucumber. ATSA also continued to provide technical support on IPM concepts to vegetable-growing farmers by request and as determined by need.

ATSA and TFA continued to coordinate REAL programming in schools, reaching thousands of students. Through REAL programs, 2226 students (over half being female) from thirteen target schools were trained on PRR and ABD, and 2460 students from the same schools were trained on IPM/Vegetable & Rice Growing/Composting. Students were taught how to install and maintain school gardens where they could practice growing their own vegetables, making compost/botanical pesticides, and using IPM pest control. The harvested vegetables were mainly given to students, instilling a sense of pride in the students' ability to produce safe foods for their families.

Impacts and developments within the community at large included: constructing eight new pesticide disposal tanks for farmers to safely dispose of their empty pesticide containers; planting 315 endangered trees in public places; and the erecting of sixteen sign boards displaying information on PRR in public place throughout target communities to increase both farmer and consumer awareness on the dangers of chemical pesticide exposure.

In Lao PDR, trainings on ABD, PIA, and the production of herbal liquid soaps and shampoos were organized during March and October of 2018 for 45 teachers (21 females) from primary, secondary, vocational, NFE, district, and provincial staff in Viengxay, Huaphan Province.

In addition, trainings on ABD, PIA, and herbal liquid soaps and shampoos were organized during March, October, and November for 65 teachers (23 females) from primary, secondary, vocational, NFE, district, and provincial staff in Xieng Khuang province. A total of 61 teachers, 2,544 students (1,316 Females) and 685 NFE Young Farmers (410 Females) participated in these programs.

A curriculum review workshop was held in Lao PDR during July 5-7, for 38 teachers (10 females) from Huaphan and Xieng Khuang provinces.

Myanmar Institute for Integrated Development and TFA have worked together under the scope of the Kemi-sponsored regional program since 2016. The Field Alliance supports MIID to build capacity on agroecology practices for farmers in Southern Shan State, Myanmar to balance agriculture productivity with long-term sustainability and maintenance of healthy ecosystems. There are three project villages namely Loi Mon, Thu Kha Loi Di and Htam Hsam located in Ban Yin village tract, HsiHseng Township, encompassing a total of 450 households.

In 2018, MIID conducted a workshop on pesticide residue testing and four trainings on Agroecology. In each of these trainings there were over twenty participants (farmer trainers). Following these ToT's, there were forty-two total Farmer Field Schools organized across five villages with a total of 651 participants and over half were women.

MIID and TFA coordinated a refresher course in December 2018 during which Field Alliance trainers reviewed past lessons and discussed issues relating to soil, plants, water, fertilizer, weeds, insects, and diseases. A total of 23 participants attended the refresher course. MIID also organized two Field Days (community awareness events) with twenty-nine participants attending each event.

To further build capacity and contribute to sustainability of the project, MIID conducted a monitoring and evaluation trip to two Farmer Field Schools in order to document progress, receive feedback from students and community members involved, and provide supplementary education or support. This trip deployed eight key staff members from MIID and TFA. ToT participant trainers gave two trainings related to pesticides to the two schools visited.

In 2018, Thai Education Foundation (TEF) continued to support Pesticide Impact Assessments and ABD Surveys as part of ongoing school/community curricula and activities. In order to ensure the continuation of these activities, a total of seven one-day refresher on ABD trainings were organized in the four provinces involving a total of 248 participants (141 women). Study visits were organized as part of these trainings for teachers to see innovations being used in other schools. Refresher trainings on PIA were also organized in three provinces for 34 schools to help teachers better understand the impacts and data collection process. A total of 96 participants were involved in these PIA trainings.

Three annual meetings were held in three provinces across Thailand with a total of 76 attendees. The objectives of these meetings were to review progress and develop plans for each province to include 1. Continuation of Pesticides Impact Assessments, 2. testing of pesticide residue in school lunch ingredients, 3. administration of blood tests and 4. implementation of alternative agricultural practices. Schools also reviewed the blood and residue test results that had been analyzed and made plans for provincial forum exhibitions to occur during the following school term.

In collaboration with the Non-formal Education Department in Surin province, TEF provided technical support for an Agroecology training for forty teachers after which twenty-nine Farmer Field Schools were organized for 1066 farmers (870 females) across three provinces.

Monitoring visits to participating schools and communities in four different provinces were conducted to follow up with PIA and Agroecology-related activity progress. Additional activities were organized for grades 2-6 and 7-9 to occur from January-March and then May-September 2018.

Approximately forty-three schools were able to successfully implement the activities as trained by TEF. Some schools conducted REAL activities outside of the standard school schedule/curricula, while other schools integrated REAL activities into the national curriculum as part of the basic subjects. Students were trained on how to make herbal soaps, shampoo, all-purpose washing liquid, and bio-fertilizer to replace household chemicals at home. All forty-three schools developed vegetable gardens and raised some small animals (chicken, ducks, fish, or crickets) to supply their own school lunch program.

In addition, 40% of schools were able to sell their produce to communities and earned some income (300-500 Baht per person) and some schools used this income for buying more seeds and materials for following school years. Other schools were able to sell their self-produced liquid fertilizers/worm fertilizers to generate income for school projects.

The REAL program was able to help students increase their vegetable intake in school lunches by 25% (400 grams is the current daily recommendation).

Participating schools from twenty-one communities were also encouraged to purchase surplus vegetables and meats from local farmers who utilize safe/pesticide free farming methods and some communities are now in the process of setting up local 'green markets.'

The REAL project provided test kits to forty-nine schools to test chemical residues in vegetables, fruit, and meat samples used in school lunches in four provinces including Chiangmai, Prathumtani, Sakon Nakorn, and Phanngna. Schools tested a total of 557 samples and found that 292 samples (52%) were unsafe. Common contaminated vegetables and fruits were string beans, coriander, garlic, tomato, white cabbage, onion, cucumber, morning glory, grapes, and watermelon.

All participating schools organized an exhibition before the end of school term to create awareness on the impacts of pesticides within communities and encourage parents and communities to reduce the use of pesticides. Provincial exhibitions and forums were held in four provinces with participation of schools, concerned agencies, and CSOs. During the forums, there were demonstrations of revised school lunch menus, selling of safe products produced schools and communities, and live residue testing of vegetables and blood tests. Students also presented their projects and gave performances. In total, 1894 people attended these forums.

In Vietnam, TFA assisted ICERD to prepare training curriculum and programs on the awareness of pesticide impacts to health and the importance of Agrobiodiversity for eighty Community Learning Centers in Hanoi, supported by the Department of Continuing Education.

The Field Alliance and ICERD also organized an exchange visit specifically regarding pesticide container waste management for nine officials from the Ministry of Agriculture and Ministry of Natural Resources and Environment from Cambodia, Lao PDR, and Thailand from October 8-9 in Hanoi, Vietnam. The program was co-hosted by the Plant Protection Department, Ministry of Agriculture and Rural Development, Vietnam.

The Hanoi Department of Continuing Education organized a workshop on "Linking CLCs with Schools and Markets on Green Products" on December 27th, 2018 for over 100 leaders from eighty-eight Community Learning Centers across four districts in Hanoi. Mr. Marut Jatiket from the Field Alliance and Mr. Ngo Tien Dung from ICERD shared experiences from Thailand and Vietnam and provided recommendations for future program development.

Within the country of Vietnam, Initiatives for Community Empowerment and Rural Development (ICERD) focused on providing support for six project target communes in which they implemented a strategic plan on the promotion of Pesticide Impact Assessment (PIA), Sustainable Conservation (SC), and the use of Agrobiodiversity (ABD). During this period, they also continued to provide support and mobilize local resources and farmers to sustain programs in other project sites.

ICERD continued to promote and educate farmers on Agrobiodiversity, Conservation, and Integrated Farming (rice/fish/duck). From 2013-2018, over 300 households across four provinces implemented Integrated Farming systems.

In Vietnam, a total of 2,115 people (farmers and students) were trained on PIA, SC, and ABD; and 111 communes/Community Learning Centers (CLC's), and 46 schools within 7 Districts of 6 provinces were served in 2018. Three provinces received funding from the REAL program while the remaining three provinces sustained their projects by mobilizing funds from local sources and farmers themselves.

Likewise, among the forty-six schools now maintaining PIA and ABD activities in Vietnam, only twenty-six schools are supported by REAL, while the remaining twenty schools support their PIA and ABD activities with government funding, although technical assistance is still provided by the REAL Project.

Of the 111 communes/Community Learning Centers (CLC's) maintaining PIA and ABD activities, only 23 communes were supported by REAL while the remaining eighty-eight communes/CLC's within Hanoi province, received government funding in 2018 while technical assistance provided by REAL. This government support is a result of local and national advocacy efforts by ICERD and TFA and demonstrates true programmatic sustainability.

ICERD supported young people to return to agricultural production primarily by continuing to educate youth through schools. In one example, students from a boarding school were trained on Ecological Agriculture (cultivation, processing, and use of indigenous medicinal plants; vegetable production; crop-livestock integration; and the use of chemical alternatives). The agricultural products produced by students were then either used for school lunches or sold to local markets, with the proceeds going their collective student fund. In 2018, ICERD also continued to supports Women Cooperatives to supply their agricultural produce to private supermarkets and markets in Hanoi.

ICERD further strengthened partnerships with local and national government agencies to promote PIA, SC, and the utilization of Agrobiodiversity by working intensively with the Ministry of Education & Training and The Ministry of Health to organize national events. ICERD partnered with the Hanoi

Department of Education and Training to conduct a training on building capacity on PIA, SC, and ABD which reached eighty-eight Community Learning Centers and twenty schools over four districts of Hanoi.

On an international scale, ICERD organized a study visit on Pesticide Waste Container Management for delegates from Lao PDR, Thailand, and Cambodia. These government and community service officers were able to use this knowledge to implement effective pesticide container waste management in their respective countries.

Immediate objective 2: Enhanced international, national, and local advocacy on sustainable pest management/agriculture

Narrative report, PAN AP and partners

PANAP

CPAM results and reports feed into PANAP's advocacy work and campaigns at the international, national and local levels in order to improve existing policies and regulations on pesticides, or to facilitate the creation of new ones. PANAP and partners report entitled Of *Rights and Poisons: Accountability of the Agrochemical Industry* was shared with the United Nations Special Rapporteur on the right to food, Hilal Elver and UN's special rapporteur on human rights and hazardous substances and wastes, Baskut Tuncak. The report was also distributed to several government authorities, including national focal points of the Basel, Rotterdam and Stockholm (BRS) in various meetings and electronically.

PANAP has been active in advocacy work connected to the Stockholm Convention on Persistent Organic Pollutants (POPs) and Rotterdam Conventions. It has participated in meetings on both the regional as well as global levels. In 2018, PANAP participated in the **14th Meeting of the POPs Review Committee (POPRC) of the Stockholm Convention that took place from Sept 11-21 in Rome.** PANAP participated in the technical review committees of both the Stockholm and Rotterdam Conventions. In the POPs Review Committee (POPRC), PANAP provided a paper on alternatives to perfluorooctane sulfonic acid (PFOS) derivative, sulfluramid. Sulfluramid is widely used in Brazil and 19 other countries for ant control. The use of sulfluramid should be banned as PFOS was added to Annex B of the Stockholm Convention on Persistent Organic Pollutants in May 2009. PANAP made an intervention to governments to uphold the convention and to regulate the use of PFOS. As a result, POPRC has recommended that the COP clarify the listing of PFOS to include sulfluramid and specify that it is limited to agricultural uses.

National governments often find it difficult to ban specific pesticides, in particular those that are more motivated to priorities support for the pesticide or plantation industries. They would also rather prefer to look for the replacement of HHPs by other pesticides. Recognising this challenge, PANAP distributed to national governments a position paper on the need for a global treaty on HHPs, during the regional and international **Intersessional meetings of the Strategic Approach on International Chemicals Management (SAICM) in February 2018, Bangkok**. PAN also participated in the S**econd meeting of the intersessional process considering the Strategic Approach and the sound management of chemicals and waste beyond 2020 that took place in Stockholm, Sweden, 13-15 March 2018.** PANAP on behalf of PAN International, submitted a paper on Highly Hazardous Pesticides, Sustainable Chemistry and Agroecology. This engagement helped to facilitate discussions, encourage inputs, and contributed to awareness building at the regional and global levels for urgent and focused action on

HHPs. Link to paper >>
http://www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_7_PAN_HHPs_f.pdf

PANAP has also been supporting the work on HHPs through participation in the development of technical guidelines that support the International Code of Conduct on Pesticide Management. These guidelines are developed by a panel of experts appointed by the Food and Agriculture Organization and World Health Organization, called the Joint Meeting on Pesticide Management (JMPM). Since 2007, HHPs has been a special focus area for the JMPM in implementing the Code. PANAP has contributed with advice for the development of guidelines concerning personal protective equipment, agroecology, reporting mechanism, household pesticides and microbial pesticides. PANAP along with PAN UK participated in the FAO/WHO Panel of Experts on Pesticide Management (JMPM) held in Rome, April, 2018. During the meeting PANAP presented current work and CPAM documentation from the Asia Pacific Region including results from the report On Rights of Poisons, and activities in the region. PANAP and PANUK recommended that the JMPM supports the recommendation of the two United Nations Special Rapporteurs (on the right to food, Hilal Elver and the on human rights and hazardous substances and wastes, Baskut Tuncak) whom in 2017 called for a global legally binding treaty on the life-cycle management of pesticides and the phase out of HHPs. As a result, the JMPM acknowledges the reports by the UN special rapporteurs and will in future discuss how to address issues raised in the reports.

Finally, PANAP spearheaded the production of PAN International's Consolidated List of Banned Pesticides, which has proved useful for pesticide regulators as well as researchers. The list of 316 banned pesticides draws on official data from 98 countries. As of 2018, 154 countries have banned, not approved to refused the use of one or more of 365 pesticide active ingredients or groups of active ingredients. The list serves to show which governments have the most political will to protect their citizens from harm, and is used to encourage governments.

PAN leaders from all of the network's regional canters participated in the **UN Food and Agriculture Organization of the United Nations (FAO) second International Symposium on Agroecology in Rome, April, 2018.** PAN highlighted the need to transition from chemical intensive practices to just, thriving and resilient food systems around the world. Sarojeni Rengam of PANAP spoke out in plenary as well, warning that peasant farmers and rural community leaders are frequently harassed or even killed in their struggle for land and agroecology. She went on to highlight the critical leadership role of women and youth — noticeably underrepresented at the Symposium — in the much-needed agroecological transformation, and called on symposium attendees to: "Uphold the rights of peasants, women, agricultural workers, Indigenous peoples and other small food producers to land, resources, livelihood and the right to organise; and stop the criminalisation of their struggle".

Sarojeni Rengam of PANAP in Rome. Photo by PANNA

Video's from the Stories from the Field from PANAP's partners CEDAC and SAEDA was featured in the main exhibition hall of FAO. Stories from the Field and PAN's book Replacing Chemicals with Biology was distributed in the Symposium as well.

PANAP also participated and gave interventions in the regional and international review workshops for the upcoming UN Environment's Global Chemicals Outlook- II report. The workshops brought together more than 100 experts from five regions around the world, including from government, research institutions, the and civil society organizations.

PANAP's partner CEDAC, Cambodia

Since 2018 was an election year, many of CEDAC's activities under Objective 2 was not implemented. Activities focused more on leadership skills for farmers; technical training for agroecology for youth and farmers; and the impacts of pesticides on children for students, consumers, teachers and parents as mentioned in Objective 1 of the report.

PANAP's partner PEAC, China

Due to uncertainty of the NGO laws in China, many of the advocacy work was not implemented. However, information on pesticide impacts and case studies of agroecology-based farming was shared with local authorities in Yunnan. PEAC has continued to submitted findings from CPAM surveys done and shared information on participatory gurantee systems (PGS) in Yunnan to various offices in MOA, China.

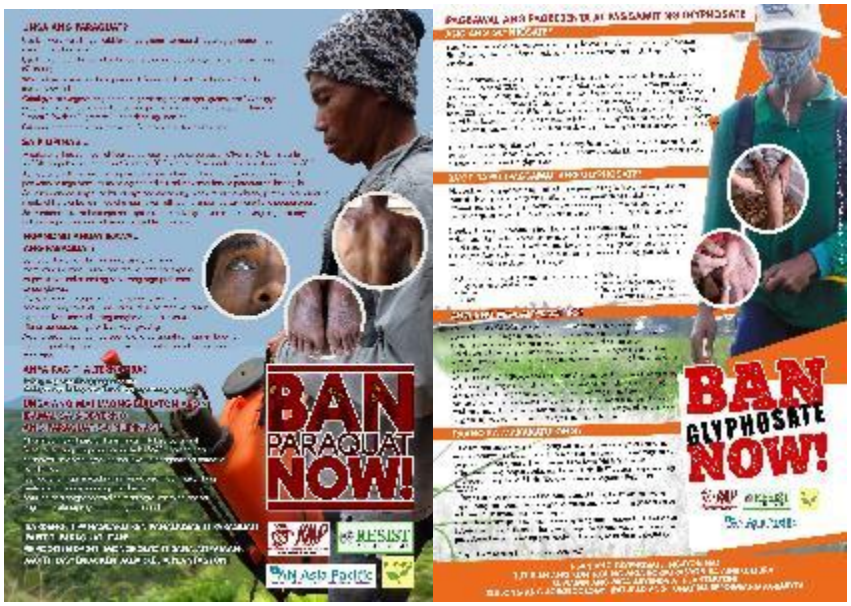
PANAP's partner SAEDA, Lao PDR

A preparatory meeting and consultations were held with various representatives of the Department of Agriculture on pesticide management and agroecology in June, 2018. Future plans include a need for more awareness on the issues of pesticides and a request to distribute SEADA's materials and posters.

SAEDA also participated in UN FAO's 2nd International Symposium on Agroecology (3–5 April 2018, Rome). One video of women practicing agroecology from the book Stories from the Field was featured in the meeting's main exhibition hall.

PANAP's partner PAN Philippines

In 2018 the Philippine government has approved a 12-month extension of martial law in the Mindanao region until the end of 2019. Due to this, many of the policy advocacy activities of PAN Philippines and partners have been halted. Despite these restrictions, PAN Philippines along with PANAP, RESIST and KMP campaigned for the ban and phase out herbicides paraquat and glyphosate. From previous CPAM reports, these herbicides are widely used in banana and oil palm plantations in Mindanao. Fact finding missions to gather data on the impacts of glyphosate and paraquat in Mindanao was restricted due to Martial Law. Two bills on the ban and to prohibit the use of paraquat and glyphosate were drafted and submitted to the House of Representatives. Posters and information materials on paraquat and glyphosate were produced to garner support.



Posters on glyphosate and paraquat in local languages.

PANAP's partners SRD, CGFED and Vietnam

To create awareness on the impacts of pesticides with local authorities, SRD and CGFED co-organised a workshop to share findings from their CPAM report in June, 2018. From 2017, CPAM surveys were conducted in two provinces, Thai Nguyen and Nam Dinh in North Vietnam. Results of the report were compiled in the report *On Rights and Poisons*. The workshop was attended by 97 participants from Sub-Department of Plantation and Plant Protection, Thai Nguyen's Agricultural Extension Center, Phu Luong's District People's Committee Chairman, and heads of district units, local representatives of eight communes, representatives of farmer cooperatives and local farmer leaders. During workshop agroecological products like Viet Gap- certificed tea, eggs, vegetables, herbs and natural honey were displayed during the exhibition.

During the workshop Mr. Pham Binh Cong, the District People's Committee Chairman of Phu Long, said " that due to ongoing campains and capacity building, farmers,students and teachers are more aware of the impact of pesticides on children". He futher extended support for the expansion of SRD's eco model to other farmers. At the end of 2017, DPC continued to provide 800 mil. VND for expansion of the model. In 2018 the provice authorities planned to use 50 ha of land for organic tea production. At the end of workshop, participants agreed that there is a need to reduce highly hazardous pesticides and to upscale the eco-model to more communities.

CGFED also presented their CPAM reports during the Fifth International Conference of Occupational and Environmental Health (ICOEH5) on 10-12 September 2018, in Hanoi, Vietnam. The conference was attended by government officials from national occupational health and safety departments, researchers, CSOs and the private sector.

Narrative report, TFA and partners

Throughout 2018, The Field Alliance (TFA) and partners continued to enhance international, national, and local advocacy on sustainable pest management and agriculture through various channels.

TFA provided support for four participants (three from Vietnam and one from Lao PDR) to attend a training on Pesticides Impacts to Health at Mahidol University from June 5-8, 2018. A draft concept note for a studies on Pesticides Impacts to Health and Environment for Laos and Vietnam were developed following this training.

The Field Alliance, ICERD and the National Institute of Occupational and Environmental Health (NIOEH) jointly organized a workshop on "Pesticides Residues and the Uses of Test Kits for Food Safety" on November 9th, 2018 at the Department of Medical Testing and Environmental Analysis, NIOEH. Over thirty participants from various governmental agencies, international organizations, CSOs, and media attended the workshop.

TFA was invited to present REAL ABD program results at IUCN Regional office on June 7, 2018 with representatives from all UN agencies including FAO present. The meeting was aimed to coordinate efforts and promote Agrobiodiversity development in all ASEAN countries.

TFA presented the study of "Pesticide Impacts to School Children" at the Regional Agroecology Workshop organized by Alisea, along with FAO and PAN-AP, which took place in Siem Reap, Cambodia from November, 6-8, 2018 with over 100 participants from government, international organizations, CSOs.

Within the country of Cambodia, ATSA organized several meetings and workshops to create networking opportunities among individuals in the educational, community service, and governmental sectors. This included a provincial workshop (fifty-five participants including teachers, school directors, farmers, and relevant stakeholders) as well as two meetings between authorities (forty-five participants including commune councils, village leaders, and 'farmer leaders') and stakeholders in Kampong Chhnang and Battambang to discuss action plans for further pesticide risk reduction.

ASTA also organized two pesticide risk awareness campaigns with involving 131 participants (local authorities, farmers, students and teachers).

Regarding the production of data on pesticide use and incidental reports to be used for planning/action from community to national level, ATSA coordinated with an external consultant to produce one assessment and four case studies. They also published seventy-five guide books on Pesticide Risk Reduction, Agrobiodiversity and Integrated Pest Management for teachers as well as printing 150 informational posters on pesticide risk to be distributed and displayed at schools and community spaces.

In Lao PDR, TFA presented the results from the study of "Pesticide Impacts to School Children" and provided recommendations for safe school lunch programs to the World Food Program in Laos on July 9, 2018.

The Field Alliance also joined the panel discussion on "We are What we eat" at the Luang Prabang Short Film Festival held late 2017 which sparked significant interest among the larger community.

The Field Alliance and Myanmar Institute of Integrated Development organized a one day workshop on "Pesticides Residue Testing and Test Kits for Food Safety" with twenty-seven participants from twenty

different government, CSO, private sector, and academic affiliates on March 16, 2018 in Taunggyi, Myanmar.

TFA and MIID also presented and shared the results from the studies of the impacts of pesticides on school children and residue testing results at the National Agricultural Extension Forum hosted by the Ministry of Agriculture in April, 2018 with over fifty policy makers from government, international organizations, and CSOs in attendance.

TEF formulated recommendations for the National School Lunch Fund Committee and received endorsement to develop ministerial order for safe school lunch on October 5, 2018. The Minister of Education signed an order for all schools under the Ministry of Education to be freed from pesticides and sent this order to all schools in January, 2019.

Thai Students presented the data from testing pesticide residues in vegetables and fruits in school lunch products as well as their blood and urine test results to communities and school boards of all participating schools. As a result, most schools and communities worked together to develop MOU's and/or find sources for safe foods to supply to school lunch programs. Eleven schools and communities developed measures to reduce the uses of pesticides.

Various awareness raising materials were produced by students in Thai language. These materials were printed and used for dissemination to communities, meetings and forums in all levels. Some schools also developed video clips for learning and dissemination. Several news stories were printed by local and national newspapers and there were at least four televised broadcasts covering this issue as a result of the students efforts.

The joint study between TEF and Chiang Mai University on the impact of pesticides on school children in high-risk areas continued in 2018 with support from The Field Alliance, National Health Fund, and Greenpeace Thailand and provided additional data and enabled advocacy on regional and national levels. CMU began to collect samples of five most used vegetables for school lunches from four different provinces as well as the urine samples of over 400 children and teachers. A total of 7,807 students and teachers from fifty-three schools received blood tests from local health centers.

The blood test results, using reactive paper, showed that only 34% of samples were normal (no residue) while 36% were considered to be in the 'safe' group (acceptable level of residue), 25% were at risk, and 6% were unsafe. The laboratory analysis of dialkylphosphate metabolites in urine also shown similarly discouraging results- over 90% of urine samples contain residues of Organophosphate while the most frequently chemical detected was Chorpyrifos. The lab results also indicated that nearly 100% of vegetables samples were contaminated with Organophosphate and Pyrethroids pesticides.

TEF presented the study results on pesticides impacts to school children at local, national and regional workshops. The results were also presented in Cambodia, Lao PDR, Myanmar ,and Vietnam at national workshops. TEF organized a national school lunch policy formulation forum at the Ministry of Education with the Deputy Permanent Secretary chairing the meeting on January 29, 2019. Over 100 people attended this meeting from all concerned ministries and agencies and provided input for the policy.

TEF, as part of a working committee to develop a national chemical management plan, also integrated the Safe School Lunch Program and the implementation of a buffer zone (where chemicals can not be sprayed or otherwise applied) for school and communities in the 10-year national plan. Several agencies

such as Chulabhorn Research Institute, Mahidol and Chiangmai University, Department of Disease Control, and the Ministry of Health expressed interest in collaborating on future studies on pesticide impacts to children with the Thai Education Foundation.

ICERD, TFA and National Institute of Occupational Environmental Health organized a national workshop on pesticides impacts to health and residues testing with over fifty participants from government, international organizations, and CSOs having participated. The Department of Continuing Education and ICERD also organized a national workshop on PIA and ABD for over 100 participants from eight CLCs in Hanoi to disseminate and share program results.

Immediate objective 3: Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.

Narrative report, FAO RAP

In 2018, an additional 4,199 farmers (42 % female) switched to more sustainable agricultural practices, adopting IPM with reduced or no use of chemical pesticides with support from the programme. In Cambodia, 1,300 (842 women) farmers participated in seasonlong rice and vegetable Farmers Field Schools and associated post-FFS activities in 7 provinces. And additional 365 (194 women) farmers participated in IPM Club activities and some 400 (189 women) farmers participated in 16 short-duration pesticide risk reduction training activities. In Lao PDR, some 876 farmers participated in 28 short duration pesticide risk reduction farmer trainings and formulated community action plans for risk reduction scheduled for implementation in 13 districts in 7 Lao provinces. An additional 364 (including 159 women)farmers participated in seasonlong Save and Grow Sustainable Intensification of Rice Production Farmers Field Schools in 6 districts of 5 provinces. In Myanmar, with Thai government technical assistance, 50 (13 women) vegetable farmers in Southern Shan State participated in a biological control training, aimed at capacity building for reduction of pesticide use and adoption of eco-friendly alternative management options for pest managment. In Vietnam, apart from similar capacity building interventions on biological control, equally with Thai government technical assistance, work continued on developing more efficient, profitable and sustainable rice value chains as part of a public-private sector collaboration in 5 northern provinces. Some 643 (194 women) farmers participated in seasonlong FFS and associated field demonstration activities. For purpose of sharing and communicating programme results, national workshops were organized in various countries, including China. Case studies, posters and other communication products were developed, shared and made publicly available at national and regional workshops, including at the Final Regional Programme Forum in Bangkok in November 2018.

Longer-term impact assessment has shown impressive and lasting results. Confirmed by science-based longer-term impact studies, IPM adoption among FFS graduate farmers has led to a >50% reduction in total pesticide use; elimination of use of WHO Class I pesticides; reduced exposure due to less mixing of pesticides; improved disposal of pesticide containers; increased use of protective clothing. Regulatory control of pesticides was strengthened through capacity building interventions aimed at strengthening registration process, development of functional inspection and enforcement systems and updating laws and regulations pertaining to pesticide management in 4 Greater Mekong Subregion countries.

A follow up long-term study carried out for a PhD research[45] was completed in 2017 and documented significant differences in the reduction of pesticide use between IPM/PRR-trained, exposed and control farmers. The study showed that FFS-trained farmers sustained a reduced pesticide use at a level of approximately 35 % of original use (i.e. 65 % reduction of the dose per hectar). Exposed farmers (farmers that were not trained but working in villages with FFS trained farmers) reduced their use buy approximately 25 % and control farmers by approximately 15 %. These results are consistent with the findings of the FAO-published long-term impact assessment study of IPM/Pesticide Risk Reduction Training published in 2016. The reduction of pesticide risks in Cambodia was also positively influenced by government regulatory action, including the banning of WHO Class I pesticides, and greatly improved the occupational safety of farmers. This has resulted in fewer reported poisoning cases and richer and more functional and effective ecosystems and services. A case study on rice-farm ecology included in this PhD dissertation[46] also supports the findings of the long-term impact assessment published by FAO in 2016, reporting significantly reduced impact of pesticides on six indicator species. Higher natural enemy populations were observed in fields of IPM/PRR-trained farmers compared with non-trained farmers.

The programme continues to support the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention. The programme facilitated participation of relevant government staff in the latest 30th session of the Commission meeting, held in New Zealand in November 2017[47] and supported implementation of the Commission's workplans (2018-19). In particular, the programme also provided technical support and facilitated participation in regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides. This included support for a *Bactrocera* Fruit Fly Regional Workshop hosted by the Royal Government of Thailand in March 2018. This support is highly valued by the APPPC Secretariat and its 21 contracting governments and contributes substantially towards promotion of IPM and better management of pesticides. The secretariat is hosted and supported by the regional office of FAO in Bangkok securing a long term commitment for experience sharing and regional collaboration on matters pertaining to IPM and pesticide management.

In 2017-18, work on soil health with FAO's Regular and Trust Fund project support (including this programme) saw the preparation of a draft FAO position paper and a policy paper from the Philippines for submission to the ASEAN Working Group on Agriculture Training and Extension (AWGATE). The policy paper, presented at various international workshop and meeting events in 2018, endorses the development of a regional programme on soil health for funding support from the ASEAN + 3 partnership. Work in 2018 focused on development of a Farmers Field School Manual on Soil Health, to be finalized/published in early 2019.

FAO convened a Global Workshop on Impact Assessment and Monitoring and Evaluation of Farmer Field School programmes in Bangkok,Thailand during period 17-20 September 2018. The workshop, jointly organized by FAO AGP and Programme implementing partners, the Asia Regional IPM/Pesticide Risk Reduction Programme and Thai Education Foundation/TFA, brought together FFS practitioners from around the world to review and update the Impact Assessment framework and toolbox for FFS programmes. A total of thirty-three participants (9 women) attended the Global Workshop representing national governments, private sector, civil society organization (CSO) partners and FAO staff from 24 countries in Asia and the Pacific, Latin America, Near East and Africa.

[45] Ngin, C. (2017). *The Study on Sustainable Integrated Pest Management on Rice in Cambodia* (Doctoral dissertation).
[46] Ibid.
[47] http://www.apppc.org/content/30th-apppc-session-meeting-report

In most programme countries, government's increased attention and support to sustainable intensification of agriculture production has brought about policy changes translated into concrete financial support and mechanisms to upscale training on IPM and pesticide risk reduction. At field level, as FFS groups mature, they have moved from focusing on crop production and protection issues to becoming Clubs with revolving funds to continue to support the development of sustainable agriculture and marketing as well as other community concerns, such as health and sanitation. FFS alumni groups and IPM Clubs move on to become registered Cooperatives. In Vietnam, inter-groups, associations of commune-based groups of IPM alumni farmers, are formed to be able to systematically plan production and meet the quantity and quality of produce needed by buyers. Economic benefits from premiums obtained from better quality produce motivate FFS alumni farmer groups to continue applying sustainable production practices with reduced or no chemical use and enhancing benefits from ecosystem services. In Lao PDR, the programme supports a policy process at local and national level for generating political support for greater and sustained investments by government and resource partners in capacity building programmes for adoption of sustainable agriculture practices by smallholder farmers in rice-based landscapes. As part of and input to this process, innovative communication products are developed based on the successful Save and Grow Farmers Field School work implemented in 6 Lao provinces within context of FAO's Regional Rice Initiative[48] during the 2015-17 period. Aligned with the Lao Government's Green Growth Strategy, the Programme supported capacity building work done in Lao PDR was recognized during the 2018 World Food Day celebration held at FAO in Bangkok when one of the FFS Graduate farmers, Mrs. Phonexay from Phaxay, XiengKhouang, received a Model Farmer Award[49]. Documentation efforts at FAO-RAP continued into 2018/19 with the intention to report to Asia and Pacific member countries on RRI results achieved in all 3 countries (Indonesia, Lao PDR and Philippines) and to finalize communication products, including videos, posters, brochures and case studies, to be published in early 2019.

As part of working towards greater sustainability of Programme results beyond completion of the Programme, FAO staff identified and pursued strategic opportunities for take up and scale out of successful capacity building work pioneered with Programme support. FAO continued work with GMS member country government and other resource partners as to ensure sustained investements in IPM and Pesticide Risk Reduction farmer training. In Laos, IFAD and World Bank funding continued for the up-scaling of the pesticide risk reduction field training work in 6 Lao provinces with capacity building and technical support provided by the programme. Whereas FAO Regular Programme funding for the Regional Rice Initiative came to completion in 2017, some RP funds were set aside in FAO-RAP for RRI results analysis and communication of results in 2018. In both Laos and Vietnam, Save and Grow for Sustainable Intensification of Rice Production and Integrated Agro-Aquatic Biodiversity and Integrated Farming Systems development work continued in 2018. In Cambodia, the implementation of the IFAD-funded Project for Agriculture Development and Economic Empowerment to upscale IPM within integrated farm management and sustainable agricultural production continued. In Vietnam, the implementation of two World Bank projects with farmer education/FFS components continued during the reporting period: the Vietnam Agricultural Improvement Project - VIAIP (WB Project 7) and Mekong Delta Integrated Climate Resilience and Sustianable Livelihoods Project - MD-ICRSL (WB Project 9). The National IPM Programme provided technical support to both projects and in particular the component capacity building to improve productivity and quality of agriculture, increase farmers' incomes, and reduce vulnerability to adverse climatic events. In China –with Programme support-

[48] http://www.fao.org/asiapacific/perspectives/regional-rice/en/
[49] http://www.fao.org/asiapacific/events/award-citations-to-fao-asia-pacific-model-farmers/model-farmers2018/en/

successful project formulation discussions led to the approval of a Guangfa Securities project which intends to support interventions on Farmers Field Schools and use of novel ICTs for the benefit of smallholder farmers and connecting to the national and local government's priority Poverty Allevation targets and programmes. The project, with a geographic focus on Yunnan and Sichuan, aims to help government deliver on their national SDG action plans, most notably focused on achieving SDG-1 on poverty reduction. Efforts by FAO Programme staff continued into 2018 for the development of concept notes for several initiatives at global, regional and country levels proposed for Green Climate Fund and Global Environment Fund. The latter included technical assistance for development of the "Inclusive Rice Landscapes" and the HHP proposals, intended for GEF-7 funding cycle submissions in 2019.

Immediate objective 4: Strengthened regulatory framework for the control of pesticides in selected partner countries

Narrative report, FAO RAP and KemI

In 2018, all programme countries continued the development of legislation on pesticides and other chemicals and the programme supported this development by providing continuous advice on technical as well as legal issues. Several governments adopted new -and strengthened implementation and enforcement of -pesticide management decrees and regulations in 2018. In Myanmar, following promulgation of a new pesticide law in 2016, the programme supported capacity building for an improved pesticide registration process following the latest FAO guidance. The Plant Protection Department actively continued the development of a priority list of potential HHPs proposed for deregistration process. Technical assistance was also provided as input to a Parliamentary Inquiry on Agrochemical Residues, launched in late 2018.

In Lao PDR, following the 2017 promulgation of a Prime Minister Decree on Pesticide Management, work continued with the DOA Regulatory Division, in joint action with the World Bank, on development of a secondary legislation and development/finalization of inspection guidance materials and formulation of plans for inspection training.

The programme continued its support and development of the FAO Pesticide Registration Toolkit also in 2018. The toolkit is an on-line tool made available by FAO headquarter with various modules providing guidance on risk assessment, risk management etc. as well as spread sheets and templates to support evaluation of pesticides by national authorities. The toolkit also offers important guidance in support of countries' efforts to phase out Highly Hazardous Pesticides (HHP). In 2018, one regional Toolkit workshops[50] was organized in Thailand, hosted by the Department of Agriculture, with participation from relevant regulatory staff in Lao PDR (DOA) and Cambodia (DAL). The workshop contributed to strengthened capacity within national registrations authorities and provided opportunities and tools for increased regional cooperation. The workshop, which included a new learning module on HHPs, also generated suggestions on how to further develop the toolkit, making use of experiences from the region to improve the tool used globally.

[50] http://www.fao.org/pesticide-registration-toolkit/training/training-detail/en/c/1175311/

In Cambodia, the programme supported surveys of pesticide retail shops in 2 provinces bordering with Thailand and Vietnam with the purpose to assess availability of pesticides, including taking stock of inventories of banned and non-registered pesticides. Results of these surveys were published and used as input to updating pesticide inspection booklets and other guidance materials prior to planned continuation of inspections with programme support during 2nd half of 2018. Unfortunately, due to internal DAL issues, the inspection work did not materialize.

The collection of data from real life situations in the field also continued in 2018. This activity has always been an important part of the programme and has contributed with important information which is used for the development of national, regional as well as global policies and regulations on pesticides. For example, in Lao PDR, the programme supported the implementation of a survey aimed at making an inventory of pesticide use in melon production in central/southern provinces (Savannakhet/Khamouane) with a focus on Methomyl, a banned insecticide but reportedly still in use as confirmed by the study. The study was followed up by field studies aimed at working with melon farmers to identify effective alternatives to Methomyl use. Survey results were shared with the Rotterdam Convention for possibly incident reporting and/or follow up in-depth studies for same purpose. At the global level pesticides such as carbofuran and trichlorfon were listed under the Rotterdam Convention. The programme contributed to this development in various ways.

Governments' interest in sustainable intensification of agricultural production continues to increase in the region. In addition to China and Vietnam, the governments of Cambodia and Lao PDR now also invest in up-scaling of FAO-piloted Integrated Pest Management and Pesticide Risk Reduction training for farmers. In Myanmar, the government is keen to strengthen the pesticide registration process, aligned with best practice guidance provided in the FAO Pesticide Registration Toolkit. A recently initiated Parlimentary Inquiry in Agrochemical Residues will likely add stimulus for government to strengthen pesticide management efforts and promote Integrated Pest Management and Pesticide Risk Reduction among its many millions of smallholder farmers in the Asia Pacific region.

For the FAO and KEMI implemented Pesticide Management policy work, as in previous years, some delays of scheduled inspection and enforcement activities were experienced in 2018. Whereas in both Cambodia and Laos inspection and enforcement activities were scheduled to restart in 2018, internal government delays necessitated the Programme to halt implementation in Cambodia and delay the implementation of activities in Laos until such a time that is was no longer possible for the Programme to technically support and fund the planned work within still available timeframe of Programme implementation. Development and adoption of new national legislation naturally tends to follow a slow and somewhat opaque process with limited scope for outsider's influence, both in terms of content as well as timeframes. To adjust to this fact and other new situations and opportunities, the programme has worked with rolling work-plans that are updated on regular basis in dialogue with the countries. This allowed for adjustment of support from the programme to current situation and priorities.

During the entire calendar year of 2018 this Programme component supported the development of Status Reports on Pest and Pesticide Management for each of the GMS member countries. The reports are intended to facilitate design of follow up interventions to strengthen pest and pesticide management in each of the countries by governments, KemI, FAO and other resource development partners. The reports were shared with key government counterparts and other relevant partners/stakeholders. Key report findings and recommendations were shared/discussed at the Final Regional Forum in Bangkok in November 2018.

Immediate objective 5: Strengthened chemicals management capacity within authorities, industries and among relevant CSOs in the partner countries

Narrative report, KemI

In March 2018, KemI organized a regional 2-day workshop focusing on financing of chemicals control and discussions on priorities for future work related to chemicals management. 25 participants from the current member countries took part in the workshop. All countries in the regional are struggling with insufficient resources for governments' work on chemicals management and support on this issue was requested by the countries. During the workshop KemI introduced its new guidance on sustainable financing (developed within the framework of KemI's global programme on chemicals management) and the countries then presented and discussed their current financing systems and possible ways forward. With support from an external consultant, the participants were also introduced to the basic concepts of problem analysis, planning, monitoring and evaluation. In country groups, the participants discussed the problems connected to lack of proper control of chemicals and tried to identify the underlying reasons for the situation. Most countries came to the conclusion that the lack of political priority together with weak enforcement of existing legislation were the main reasons behind the current situation and many of the negative effects on human health and the environment that are being observed.

As a contribution to the member countries' work on implementation of the new Minamata convention on mercury, KemI supported a pilot project on phase out of mercury in the health care sector, implemented by Health Care Without Harm (HCWH) in Vietnam. With support from the project, two hospitals in the province of Hung Yen work on the phase-out of mercury containing devices with specific workplan and timeline. The Vietnam Health Environment Management Agency (VIHEMA) created information and education materials based on HCWH's materials that is open for download by all health care facilities in Vietnam. HCWH was able to coordinate with a local alternatives distributor for advancing their support in the phase-out process of the government. The results from the project was presented at the final regional forum. A detailed report summarizing the project is also available.

During 2018 and 2019, KemI continued the dialogue with the ASEAN secretariat and its Working Group on Chemicals and Waste (AWGCW). Representatives from the ASEAN secretariat were invited to the final Regional Forum but were, unfortunately, unable to attend. Kemi were, in its turn, invited to attend the open session of the 3rd annual meeting of the AWGCW. KemI presented ideas for possible future collaboration between KemI and ASEAN, which were positively received by the member states. KemI is now specified as one potential partner and stakeholder in the 2018 strategic plan of the AWGCW. To further strengthen the collaboration with the ASEAN secretariat and its member states, KemI, in dialogue with the ASEAN secretariat, initiated the development of a project proposal with focus on support for implementation of GHS in the ASEAN region. In March 2019, two representatives from KemI met three representatives from ASEC to continue the discussion on how future collaboration

could be arranged practically. The meeting resulted in better understanding of each organization's mandates and resources as well as available options for implementation of a collaboration project. In May 2019, KemI took part in the 4th annual meeting of the ASEAN Working Group on Chemicals and Waste. One representative from KemI took part in the open session of the meeting and presented plans for continued support on chemicals management to the regiona as well as the collaboration proposal focusing on support for implementation of GHS within ASEAN. The proposal was appreciated by the ASEAN member states and KemI was encouraged to submit the collaboration proposal for comments and formal endorsement. See excerpt from the minutes from the meeting below.

7.3.1 Project on Support for Implementation of GHS and Related Chemical Management Issues within ASEAN

46. The Meeting noted with appreciation the presentation by the Swedish Chemical Agency (KemI) on the Project on Support for Implementation of GHS and Related Chemical Management Issues within ASEAN, as in **ANNEX 20**.

47 The Meeting noted KemI's responsibilities, among others: (i) monitoring of import and production of the chemicals placed on the market; (ii) development of legislation, implementation and inspections; (iii) monitoring of pesticides, industrial and consumer chemicals; (iv) environment and health issues; (v) supporting the government negotiating on conventions, agreements, and development cooperation; and (vi) cooperation on global level (e.g. international training programme on chemicals management), regional level (Cambodia, Thailand, Viet Nam), and bilateral level.

48. The Meeting noted that the proposed project aims to improve the capacity of AMS to implement and enforce GHS and related chemical management issues in the ASEAN region. The Meeting noted that the activities under the proposed project include: (i) capacity building (trainings) of government staff on various aspects of GHS and other chemical management issues; (ii) support for development of legislation to implement GHS in national legislation; and (iii) training of inspectors on GHS and how to enforce it and pilot projects on GHS enforcement.

49 The Meeting endorsed in principle the proposed project and requested the KemI to submit the detailed proposal and budget plan to AWGCW through the ASEAN Secretariat for consideration and endorsement.

Action: Swedish Chemical Agency (KEMI)

Also the dialogue and collaboration with UN Environment Regional Office for Asia and the Pacific continued in 2018 and 2019. Representatives from UN Environment in Bangkok attended the workshop on future and financing as well as the final regional chemicals management Forum. At the final Forum, the Regional Director for UN Environment Regional Office for Asia and the Pacific presented the UN perspective on sound management of chemicals in Asia and took part in a panel discussion on the topic "how to move from awareness to action for a sound management of chemicals and achievement of the Sustainable Development Goals". A representative from UN environment also gave presentations on the recent report "Global Chemicals Outlook II" and Mintamata Initial Assessments that have been initiated in the region.

With support from the communication unit at KemI and Global Reporting, KemI produced a short film on the programme with interviews with various programme beneficiaries and examples of achievements. The film[51] was screened during the opening of final Regional Forum and is also available at the KemI website. In 2018 KemI also continued the discussions on how to make training material, guidance etc. available through additional channels.

November 27-29, KemI, in collaboration with its regional partners (FAO, TFA and PANAP) organized the 12th and final Regional Chemicals Management Forum within the current programme. A total of 129 participants (67 women) representating national governments, regional and national partners, civil society organizations (CSO), UN organizations, donors, the private sector etc. came together to summarize the accomplishments and lessons learned from more than 10 years collaboration, highlight remaining challenges for the region and discuss ideas, priorities and strategies for continued work to strengthen chemicals management and reduce health and environmental risks from pesticides, industrial and consumer chemicals. A detailed meeting report is available.

In 2018, KemI initiated the development of a new programme proposal for continued collaboration and support related to chemicals management to countries in South-East Asia in response to request from the current member countries. The development continued in 2019, in close dialogue with the ASEAN secretariat, UN Environment in Bangkok and Sida.

Evaluations

In 2019, two different evaluations of the programmes were performed.

One evaluation was made by FAO's Office of Evaluation and focused on FAO's part of the programme, i.e. the IPM component (objective 3: Strengthened capacity to innovate and scale up Integrated Pest Managament (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partners countries) and the esticide policy component (objective 4: Strengthed regulatory framework for the control of pesticides in selected partner countries). The evaluation also looked briefly at collaborative actions, complementarity and synergies between the implementing partners. Overall conclusion from the evaluation was positive and the evaluation team acknowledged that FAO's role and components were relevant for the needs in the region and that FAO had effectively implemented the planned activities. As a result, the programme was able to achieve better outputs and outcomes than was visualized through the results framework. It was observed that awareness about pesticide risks and mitigation methods has increased among a broad range of stakeholders, from farmers to consumers. In all of the programme countries, laws and regulations were upgraded during the programme period, including development of regulations banning hazardous pesticides.

[51] https://www.kemi.se/en/international-cooperation/global-regional-and-bilateral-cooperation/regional-and-bilateral-cooperation/regional-cooperation-in-south-east-asia

Most of the trained farmers use less hazardous pesticides and biological control methods. The economic situation of the farmers has improved. In the last phase, the Programme/FAO facilitated farmers' access to markets for the safer food produced by farmers following good agricultural practices (GAP). The participation of women, labourers, tribal and other marginalized sections of society has improved. Indeed, he Programme has advanced in addressing gender equality and a human rights-based approach in its Programme activities.

However, some issues are yet to be fully addressed, including: issues that were addressed during the programme but require longer-term assistance, such as strengthening capacity for registration of pesticides; new issues that were not prioritized in the programme, such as the implementation of the Globally Harmonized System (GHS), disposal of pesticide waste, control over illegal trade; and newer challenges due to climate change, increased demand for safer food and population growth, among others. The programme has generated adequate interest among the governments of the participating countries, which are demanding continued support. In all the programme countries, Myanmar, Cambodia, Lao PDR, Thailand, Viet Nam and China, there are demands and strategic opportunities, for the continuation of current interventions and support to new areas not addressed during the previous programme.

There is scope for further strengthening functional collaboration with a diversified set of stakeholders, particularly private sector and strategic collaboration with the Ministries of Public Health and Environment. FAO is well placed and competent to engage policymakers in preparing country-specific plans and to enhance regional collaboration in consultation and cooperation with a wide range of technical and resource organizations, in particular through the established and well-functioning regional bodies under the Asian-Pacific Plant Protection Commission (APPPC) and the Association of Southeast Asian Nations (ASEAN).

Hence, the evaluation recommends that FAO continue working on Integrated Pest Management (IPM) and Pesticide Risk Reduction (PRR) in South-East Asian (SEA) and that Sida support both regional and country-level work. It is not only important, but also critical to sustain and upscale capacity building of farmers on PRR for sustainable intensification of crop production within the context of globalization trends and of climate change. The momentum gained through the current programme for phasing out highly hazardous pesticides (HHPs) and adopting IPM needs to be maintained in order to achieve the larger goals of poverty alleviation, gender equality and environmentally sound production methods and to develop resilience for climate change adaptation.

Main conclusions from the evaluation team are summarized below:

- *FAO's components were extremely relevant to the programme objectives and complementary to the other implementing partners, the interventions were timely, needs oriented, important and effective.*
- *Pesticide governance with a focus on PRR is a national and regional priority now within Greater Mekong Sub-region countries, substantial work has been accomplished and is being sustained, in particular pesticide legislation and bans/restrictions on HHPs.*
- *Awareness, consciousness and knowledge on pesticides and related management issues have been widely broadened in all countries, in the region and internationally at different levels ranging from policy makers, high level governmental officials to technicians, to farmers, consumers and to many others. This development has been supported directly and indirectly through FAO and its partner organisations.*
- *The project had a human rights based, gender equality and poverty alleviation approach.*

- *FAO has been an enabler in the PRR sector by helping national governments comply with international standards/conventions. However, a number of challenges remain which should be addressed in the short-term.*
- *The South East Asia context in which the project is implemented, has several new opportunities and threats such as climate change, new pests, diseases, demand for more quantities of food from contract farming, continued production of cheap pesticides, inter-country competition for similar markets, possibility of falsified pesticides (such as hidden active ingredients (AIs)).*

Based on findings and observations the evaluation team recommends that FAO continues pesticide risk reduction work in SEA region, at all three levels with enhanced focus on:

- *At Field Level on IPM: developing models for alternative IPM-practices, and institutionalizing within communities, in cooperation with national research institutions, Plant Protection Centres, NGOs, farmers organisations, schools, local health and environmental authorities etc,*
- *At Country level policy and regulation: Capacity building for the sound management of pesticides with a life cycle approach, with special emphasis on PRR, HHPs; in cooperation with all concerned ministries, pesticide industries, farmer organizations, consumer organizations and CSOs to foster economic, human and social linkages among these countries,*
- *At Regional Level on knowledge management : Fostering regional collaboration through regular and continuous information exchange and joint action within established regional entities (APPPC and ASEAN), continued harmonization efforts e.g. on GAP , Maximum Residue Limit, border control, registration procedures on biological control agents, control of epidemic pests and diseases.*

Further, the evaluation team recommends that Sida/KemI continue to support multi.partner programmes in the region on pesticide risk reduction for sound chemicals management

- *to address common and upcoming issues which were highlighted during the current programme, e.g. on GHS, on disposal, storage and transport of dangerous goods, inter-ministerial collaboration*
- *by demanding involvement of the top level policy makers to ensure sustainability through institutionalization,*
- *through a project design with more collaborative approaches of programme partners in the areas of project activities*
- *may consider adding more countries in the region to widen, information exchange and expand the community of practice across all the ASEAN / APPPC member countries,*

All stakeholders are recommended to continue joint efforts by all the implementing partners together with respected government entities with enhanced design, resources and inclusivity of stakeholders.

- *At the grassroots level : strengthen bottom up planning, decentralized training, implementation of legal provisions,, improve monitoring and on the whole encourage sustainable intensification of crop production in the interest GAPs in the area of IPM / PRR. Consolidate and continue the gender sensitive approach by targeting more women groups.*
- *At Country level: deploy ministerial mechanisms for institutionalizing IPM / PRR work ; invest in and / or mobilize resources to compliment the programme funds by negotiating with international resource agencies*
- *At the regional level : actively contribute in the proceedings of the regional bodies APPPC and ASEAN support and follow up and implement their decisions.*

The second evaluation was commissioned by Sida and was contracted to NIRAS Indevelop. This evaluation focused mainly on KemI's performance as programme coordinator and expert agency. The evaluation also looked briefly at overall achievements of programme objectives. The evaluation concludes that the programme has contributed to sustainable results and KemI's expertise has been highly

appreciated. Limited coordination between the partners working on agriculture related issues lead to missed opportunities to develop a critical mass of local CSOs in pesticide management. The regional chemicals management forums organised by KemI were found useful and informative by the member countries but they did not contribute to a strengthened inter-minsterial coordination or a strong regional network. Below are some conclusion from the evalutation report:

- *Keml has been universally appreciated throughout the region as an organisation possessing unparalleled expertise; both as a repository of knowledge on chemicals management but also as a trainer and communicator of best practices on the top-ics. It is recognised as a government agency with a history of practical implementation. Its methodology of engagement and being responsive to the needs of individual countries are cited as excellent. It has built its trust amongst governments in the region and is classed as neutral, skilled, helpful and trustworthy.*
- *Six regional forums were held during 2013-2018 – one per year. These were venues for networking & experience sharing, orientation to the conventions, information on best practice and current issues. Largely targeted at government, they also included a smaller participation of CSOs and other stakeholders, and were found to be very useful and informative.*
- *There was very good results from the field activities of the three programme partners PAN-AP, TFA and FAO. They significantly exceeded their targets, even when the targets had been revised upwards. This work has catalysed additional funding from governments in Vietnam, Cambodia and Laos and donors to con-tinue to support farmers trainings, curriculum development (Thailand) and com-munity learning centres (Vietnam). Studies show reduced use of pesticides, improved health, more produce being sold and better incomes.*
- *In fact, ministry staff have appreciated the work of both TFA and PAN-AP; stat-ing they bring to their attention the realities of the work in the field and advocate in front of policy makers where government officials are unable to.*
- *The programme did also have its shortcomings. Over halfway through implementation, at the end of 2016, the KemI representative and overall programme coordinator, relocated to Stockholm as planned. This led to reduced networking and inability to at-tend regional meetings/workshops. As project coordinator, KemI had no coordination role to play in the first three components of the programme which related to community level pesticides awareness-raising and its reduced use. The programme was actually four projects under a funding facility: partners continued doing whatever their original organisational objectives were and expanded their activities to newer areas because of this Sida funding being available.*
- *There was little coordination between the four partners; it was the exception rather than the norm. FAO and KemI did cooperate on legal frameworks, trainings and other activities as they were envisaged to under component 4, but there was minor coordination of activities amongst the three partners undertaking field activities resulting in their local national partners not collaborating with one another. Opportunities for developing a critical mass of local CSOs in pesticides management were missed.*

The evaluation team's recommendations served as important input to the development of a new programme proposal for continued support to chemicals control in the region.

Highlighted regional activities

In March 2018, KemI organized a regional 2-day workshop focusing on financing of chemicals control and discussions on priorities for future work related to chemicals management. KemI introduced its new guidance on sustainable financing (developed within the framework of KemI's global programme on chemicals management) and the countries then presented and discussed their current financing systems and possible ways forward. With support from an external consultant, the participants were also

introduced to the basic concepts of problem analysis, planning, monitoring and evaluation. In country groups, the participants discussed the problems connected to lack of proper control of chemicals and tried to identify the underlying reasons for the situation.

In 2018, one regional Toolkit workshops[52] was organized in Thailand, hosted by the Department of Agriculture, with participation from relevant regulatory staff in Lao PDR (DOA) and Cambodia (DAL). The workshop contributed to strengthened capacity within national registrations authorities and provided opportunities and tools for increased regional cooperation. The workshop, which included a new learning module on HHPs, also generated suggestions on how to further develop the toolkit, making use of experiences from the region to improve the tool used globally.

In November 2018, KemI, together with FAO, PANAP and TFA, organized a final regional Forum to summarize the accomplishments and lessons learned from more than 10 years collaboration, highlight remaining challenges for the region and discuss ideas, priorities and strategies for continued work to strengthen chemicals management and reduce health and environmental risks from pesticides, industrial and consumer chemicals beyond the current phase of the regional programme. A total of 129 participants (67 women) attended the Forum. Participants comprised of representatives from national governments, civil society organization (CSO) partners and other stakeholders.

In 2018, FAO supported the developoment of draft curriculum and exercises for pilot activities on soil health to advocate for policy and development of a regional programme for funding support from the ASEAN + 3 partnership.

In 2018, TFA co-hosted the Mekong Extension and Learning Alliance (MELA) workshop with Department of Agricultural Extension in Thailand. MELA The MELA network includes policy makers, academia, civil society, private sector and farmers and its workshops provide opportunities to learn and share knowledge and experiences from the REAL program to a broader audience and learn about innovations and new development in rural advisory services to communities.

In July 2018, PANAP organized a Health Workers Consultation Workshop in Hanoi, Vietnam. The workshop was attended by 40 participants consisting of government representatives of Vietnam, health workers, and partners from civil society organisations (CSOs) in ten countries in Asia Pacific as well as by government representatives of Vietnam. The workshop examined the harmful impacts of HHPs on peoples' health and the environment. The workshop highlighted the need to improve the system of documentation at the grassroots level, in order to more effectively raise the level of engagement with the state and of corporate accountability. The workshop identified strategies including community organising as the backbone of grassroots documentation; capacity training on CPAM tools and methods; linking medical doctors to village farmers in the monitoring of pesticide poisoning and agroecology initiatives; and engaging governments through policy advocacy.

Collaboration with other projects and organisations

In 2018, the programme continues to support the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention. FAO facilitated participation of relevant government staff in the latest 30th session of the

[52] http://www.fao.org/pesticide-registration-toolkit/training/training-detail/en/c/1175311/

Commission meeting, held in New Zealand in November 2017[53] and supported implementation of the Commission's workplans (2018-19).

In 2017-18, work on soil health with FAO's Regular and Trust Fund project support (including this programme) saw the preparation of a draft FAO position paper and a policy paper from the Philippines for submission to the ASEAN Working Group on Agriculture Training and Extension (AWGATE). The policy paper, presented at various international workshop and meeting events in 2018, endorses the development of a regional programme on soil health for funding support from the ASEAN + 3 partnership. Work in 2018 focused on development of a Farmers Field School Manual on Soil Health, to be finalized/published in early 2019.

During 2018 and 2019, KemI continued the dialogue and collaboration with the ASEAN secretariat and its Working Group on Chemicals and Waste (AWGCW) as well as with UN Environment's Regional Office for Asia and the Pacific to support sound management of chemicals in South-East Asia.

Highlighted meetings

Results and experiences from the programme were highlighted and discussed during a Final Regional Programme Forum held in Bangkok, Thailand, November 27-29, 2018 (see film with results from the programme on KemI's website[54] and the FAO IPM website[55]).

In May 2018 and in May 2019, KemI attended the open session of the annual meeting of the ASEAN Working Group on Chemicals and Waste (AWGCW). At the first meeting, KemI presented initial ideas for collaboration between KemI and ASEAN and at the second meeting KemI presented more elaborated plans for continued support on chemicals management to the region and concrete collaboration proposal focusing on support for implementation of GHS within ASEAN. The suggestions were positively received by the ASEAN member states and KemI was encouraged to submit the collaboration proposal for comments and formal endorsement.

FAO convened a Global Workshop on Impact Assessment and Monitoring and Evaluation of Farmer Field School programmes in Bangkok, Thailand during period 17-20 September 2018. The workshop, jointly organized by FAO AGP and Programme implementing partners, the Asia Regional IPM/Pesticide Risk Reduction Programme and Thai Education Foundation/TFA, brought together FFS practitioners from around the world to review and update the Impact Assessment framework and toolbox for FFS programmes. A total of thirty-three participants (9 women) attended the Global Workshop representing national governments, private sector, civil society organization (CSO) partners and FAO staff from 24 countries in Asia and the Pacific, Latin America, Near East and Africa.

[53] http://www.apppc.org/content/30th-apppc-session-meeting-report
[54] https://www.kemi.se/en/international-cooperation/global-regional-and-bilateral-cooperation/regional-and-bilateral-cooperation/regional-cooperation-in-south-east-asia
[55] http://www.vegetableipmasia.org/news/view/148

Budget follow-up 2018

Divided by objective

Overall budget and follow-up year 2018			Remaining balance from 2017 (local currency)	Budget according to agreement (SEK)	Proposed budget for 2018 (SEK)	Transferred by KemI (SEK)	Received by partners (in local currency)	Exchange rate	Total budget, incl remaining balance from previos year (local currency)	Expenditure 2018 (local currency)	Expenditure 2018 (SEK)	Percentage of total expenditure	Difference between budget and expediture (SEK)	Balance (local currency)	Balace (SEK)	Comments
Objective		Organisation														
1	Increased awareness and enhanced capacity in farming communities, schools, institutions and among consumers within	PAN AP		2 012 500	1 900 712					783 236 MYR	1 726 140	66	174 572			1
		TFA		1 925 000	1 936 609					6 774 444 THB	1 868 812	73	67 797			
2	Enhanced international, national and local advocacy on sustainable pest management/agriculture	PAN AP		787 500	899 288					403 495 MYR	889 245	34	10 043			
		TFA		175 000	457 755					2 499 380 THB	689 484	27	-231 729			2
		Total PAN AP	**-84 469 MYR**	**2 800 000**	**2 800 000**	**2 800 000**	**1 270 500 MYR**	**2,204**	**1 186 031 MYR**	**1 186 731 MYR**	**2 615 385**		**184 615**	**-701 MYR**	**-1 545**	
Transfer by PAN AP to partner organisation		Work related to objective 1			503 300					136 037 MYR	299 806		203 494			3
		Work related to objective 2			224 700						0		224 700			4
		Total TFA	**1 818 187 THB**	**2 100 000**	**2 394 364**	**2 100 000**	**7 612 500 THB**	**0,276**	**9 430 687 THB**	**9 273 824 THB**	**2 558 296**		**-163 932**	**145 867 THB**	**45 867**	
Transfer by TFA to partner organisation		Work related to objective 1			1 197 147					3 721 090 THB	1 026 508		170 639			5
		Work related to objective 2			182 423					1 316 881 THB	363 278		-180 855			6
3	Strengthened capacity to innovate and scale up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.	FAO RAP		6 790 000	6 790 000					814 309 USD	6 898 443	66	-108 443			7
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.			1 750 000	1 750 000					414 605 USD	3 512 338	34	-1 762 338			8
		Total FAO	**444 215 USD**	**8 540 000**	**8 540 000**	**7 540 000**	**880 143 USD**	**8,567**	**1 324 358 USD**	**1 228 914 USD**	**10 410 781**		**-1 870 781**	**105 341 USD**	**902 434**	
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	KemI		700 000	330 000						320 536	9	9 464			
5	Strengthened capacity for chemicals management within authorities, industries and among relevant CSOs in the partner countries.			2 716 000	3 460 000						1 934 779	56	1 525 221			9
General technical support to the programme				840 000	0						0	0	0			
Overall programme coordination (including				840 000	1 550 000						1 218 936	35	331 064			10
		Total KemI		**5 096 000**	**5 340 000**				**5 340 000**		**3 474 251**		**1 865 749**			
		TOTAL		**18 536 000**	**19 074 364**	**12 440 000**			**17 281 076**		**19 058 713**				**946 756**	

Comments to the overall budget follow up:

1. Funds originally allocated to local partners were reallocated to campaigning and advocacy, including a workshop with health workers and production of two videos for campaigns.
2. Regional workshop and requests for in-country trainings on pesticides residues testing in vegetables and health were organized in addition to the approved workplan.

3. Funds transfer to partners were significantly reduced due to non-submission of audit reports by the partners.
4. This budget item should not have been included. The work under objective 2 is the work of PANAP in advocacy and campaigning.
5. Local contributions to support program activities increased, which resulted in reduced expenditures.
6. More emphasis were placed on the study on pesticides impacts to health and advocacy work which resulted in increased costs.
7. The IPM component of the project included final national workshops, final field trainings and project wrap up at field / farmer level. The final actual costs, the total exceeded the previous budget in order to ensure all activities with farmers and Service Providers (through LOAs) were adequately completed.
8. The Policy Component of the project included significant staff time to follow all regulatory control of pesticides capacity building interventions to strengthen registration process, including as per best practices advocated for in the FAO Pesticide Registration Toolkit. The project supported several regional Pesticide Registration Toolkit workshops and this support was greatly appreciated by member countries and helped strengthen registration process, including identification of Highly Hazardous Pesticides (HHPs).
9. The organisation of the Final Regional Forum was shared between programme partners which reduced KemI's costs. Other reasons for the underspending are that one regional workshop/training that was originally planned was not possible to organise due to other conflicting events and that the need for participation of additional KemI experts was smaller than expected.
10. The budget was expected to cover costs for the final evaluation. The evaluation mission was however delayed until 2019, which is why there are funds remaining.

Divided by cost kinds

Detailed budget and follow up year 2018 Organisation	Type of cost	Proposed budget for 2018 (SEK)	Percentage of total budget	Expenditure 2018 (local currecy)	Expenditure 2018 (SEK)	Percentage of total expenditure	Difference between budget and expediture (SEK)	Comments
Pesticide Action Network Asia Pacific (PAN	Salaries	588 000	28	269 700 MYR	594 380	23	-6 380	
	Travel expenses	672 000	32	205 597 MYR	453 106	17	218 894	1
	Other costs	812 000	39	575 397 MYR	1 268 093	48	-456 093	2
Subtotal, PAN AP		**2 072 000**		**1 050 694 MYR**	**2 315 579**		**-243 579**	
	Transfer to	728 000	35	136 037 MYR	299 806	11	428 194	3
Total PAN AP (incl. transfer to partners)		**2 800 000**		**1 186 731 MYR**	**2 615 385**		**184 615**	
The Field Alliance (TFA)	Salaries	737 225	31	2 859 769 THB	788 902	30	-51 677	
	Travel expenses	60 341	3	175 199 THB	48 331	2	12 010	
	Other costs	217 228	9	1 270 297 THB	350 427	13	-133 199	4
Subtotal TFA		**1 014 794**		**4 305 265 THB**	**1 187 659**		**-172 865**	
	Transfer to partners	1 379 570	58	5 124 922 THB	1 413 772	54	-34 202	
Total TFA (incl. transfer to partners)		**2 394 364**		**9 430 187 THB**	**2 601 431**		**-207 067**	
FAO Regional Office Asia Pacific (FAO RAP), IPM component	Salaries	1 150 000	16	101 258 USD	867 456	12	282 544	5
	Travel expenses	320 000	4	111 495 USD	955 154	14	-635 154	6
	Other costs	5 790 000	80	601 558 USD	5 153 421	74	636 579	7
Subtotal FAO (IPM)		**7 260 000**		**814 311 USD**	**6 976 031**		**283 969**	
FAO Regional Office Asia Pacific (FAO RAP), Policy component	Salaries	750 000	59	256 546 USD	2 197 776	62	-1 447 776	8
	Travel expenses	230 000	18	34 398 USD	294 680	8	-64 680	
	Other costs	300 000	23	123 661 USD	1 059 378	30	-759 378	9
Subtotal FAO (Policy)		**1 280 000**		**414 605 USD**	**3 551 834**		**-2 271 834**	
Total FAO		**8 540 000**		**1 228 916**	**10 527 865**		**-1 987 865**	
Swedish Chemicals Agency (KemI)	Salaries	2 930 000	55		2 228 364	64	701 636	10
	Travel expenses	400 000	7		294 610	8	105 390	11
	Other costs	2 010 000	38		951 278	27	1 058 722	
Total KemI		**5 340 000**			**3 474 252**		**1 865 748**	
Total	**Salaries:**	**6 155 225**	**32**		**6 676 878**	**35**	**-521 653**	
	Travel expenses:	**1 682 341**	**9**		**2 045 882**	**11**	**-363 541**	
	Other costs	**11 236 798**	**59**		**10 496 174**	**55**	**740 624**	**Including transfer to**
	Total:	**19 074 364**			**19 218 933**		**-144 569**	

Comments to the detailed budget follow up:

1. The travel expenses were less than budgeted as there were two back to back meetings that were used to have the Partners meetings including during the CPAM Health workshop in Hanoi as well as during the Regional Forum in Bangkok.
2. The additional costs was to undertake advocacy work in SAICM (including the meetings in Bankok for Asia Pacific and the intersessional meeting in Stockholm) as well as the CPAM Video and media campaign on Protecting our Children from Toxic Pesticides and corporate accountability campaigns.
3. Funds transfer to partners were significantly reduced due to non-submission of audit reports by the local partners.
4. Two major activities, the final regional forum (obj. 1) and the study of pesiticides impacts to children (obj. 2) resulted in increased cost and exceeded the budget allocation. Costs for final reporting was not anticipated in the workplan.
5. As the project was nearing final completion and budget constraints, staffing was reduced to minimum for final project reporting and evaluation mission. The evaluation mission duration was reduced to two weeks and in turn less number of consultancy days.
6. Two major events occurred that increased expenditures for travel – one was travel paid for participants to attend the Final Regional Workshop held in November 2018 and the other was the travel for participants to New Zealand to attend the "International workshop on conservation biological control".
7. In 2018, the policy component supported (co-financing with HQ) the staff costs of Ms Marjon Fredrix, who was the HQ Lead Technical Officer of the project and provided direct support (to both Policy and IPM) but was charged to the Policy Component of the project. During the final phase of the project, the Lead Technical Officer, Yongfan Piao, had an increased level of support for documentation review, technical involvement in final project activities and his claim for TSS in 2018 was higher.
8. Costs for the OED mission in November for conducting their first mission to Bangkok in November 2018, aligned with their participation in the Regional Forum, were not included in the 2018 forecast.
9. The need for involvement of additional KemI experts was smaller than expected.
10. Since one planned regional workshop did not take place expected costs for travels etc. was lower than expected.

Budget follow-up 2019 (FAO and KemI)

Budget and follow-up year 2019 Activity		Responsible	Remaining balance from 2018 (USD)	Estimated cost according to 2019 work plan (USD)	Estimated cost according to 2019 work plan (SEK*)	Expenditures 2019 (USD)	Expenditures 2019 (SEK)	Difference between estimated cost and expenditure (USD)	Difference between estimated cost and expenditure (SEK)	Remaining balace to be repaid to KemI (USD)	Remaining balace to be repaid to KemI (USD)
FAO											
1	Facilitation of field mission to be undertaken by OED Final Project Evaluation and preparation of Management Response on OED Final Project Evaluation	FAO country teams in Lao PDR, Vietnam and Myanmar		4 500	40 797	32 361 USD	288 887	-27 861 USD	-248 090		
		FAO RAP in Bangkok		12 000	108 792	24 209 USD	216 114	-12 209 USD	-107 322		
2	Preparation of FAO's contribution to the Programme's Annual Report 2018 and preparation of FAO Terminal Project Report	FAO country teams in Cambodia, Vietnam and China		4 500	40 797	18 630 USD	166 310	-14 130 USD	-125 513		
		FAO RAP in Bangkok		22 000	199 452	24 946 USD	222 693	-2 946 USD	-23 241		
	Total FAO		105 341	43 000	389 838	100 146 USD	894 003	-57 146 USD	-504 165	5 195	49 838
KemI											
1	Final evaluation and reporting of the programme. • Preparation of a consolidated final programme report based on inputs from all regional partners. • Preparation of final financial report and review of financial reports from partners • Development of targeted information materials based on achievements and lessons learned from the programme • Input to the final evaluation of the programme.	KemI			500 000		513 557		-13 557		
2	Meeting with the ASEAN secretariat to summarize and discuss lessons learned from the current collaboration and decide on ways forward. Participation in the 4th annual meeting of the AWGCW.	KemI			150 000		167 101		-17 101		
	Total KemI				650 000		680 658		-30 658		
	TOTAL				**1 039 838**		**1 574 661**		**-534 823**	**5 195**	**49 838**

FAO's costs for closing the programme were larger than expected at the development of the 2019 work plan. The FAO OED evaluation mission was the main reason behind the increased costs. FAO's total costs were, however, covered by available funds even though the final disbursement to FAO was reduced by 1 million SEK. Remaining funds have been repaid to KemI and will eventually be transferred to Sida.

Annex 3: Results matrices with data from 2013 to 2018

Programme Objective: Strengthened capacity and regional collaboration for efficient pesticide risk reduction and chemicals management within and among partner countries

☺= According to plan, 😐 = Small deviations compared to plan, ☹= Not according to plan

Since some of the target values, set at the launch of the second phase of the programme, have already been surpassed partners have set new targets for 2018. These new target values are included in the below tables and the old target values have been left as a reference.

Programme objective (med-term objective)					
Strengthened capacity and regional collaboration for efficient pesticide risk reduction and chemicals management within and among partner countries					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assess-ment of status**	**Comments**
1. Number of cases where field data from programme areas have been fed into national and international processes related to chemicals management.	2 cases	Approximately 22 more cases (Old target value: 3 additional cases)	Total: 33 additional cases (150 % of new target value). Result from 2018 (8 additional cases): • 1 case in Laos (PANAP) • 2 cases from Vietnam (PANAP) • 1 regional report (PANAP) • 1 case in Central/Southern Laos (FAO) • 2 cases in Thailand (TFA) • 1 case in Vietnam (TFA)	☺	One regional report launched, entitled "Of Rights and Poisons: Accountability of the Agrochemical Industry" revealed that HHPs remain widely used in the countries surveyed, which include Bangladesh, India, Indonesia, Malaysia, Pakistan, the Philippines, and Vietnam with a total of 2,025 respondents involved. Link: http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf

Programme objective (med-term objective)					
Strengthened capacity and regional collaboration for efficient pesticide risk reduction and chemicals management within and among partner countries					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assess-ment of status**	**Comments**
2. Number of farmers in the region implementing pesticide management according to IPM.	Approximately 44 000 farmers	Approximately 100 % increase	Total: A cumulative total of 84,131 IPM farmers (91 % increase) have reduced pesticide use and associated risk and made increased use of biological control and other agroecology-based pest management practices. Many more farmers adopted similar good practices resulting from capacity building interventions supported with financial resources made available by Programme government and resource partners (e.g. World Bank, IFAD, bilateral donors) during the life time of this Programme. Result from 2018: Another 4,199 farmers have reduced pesticide use and made increased use of biological control.	☺	GMS governments at national and local levels continue to provide good facilitation and buy-in support for up scaling of farmer training programmes on IPM and pesticide risk reduction. Multiple resource partners support scaling out of the Programme pioneered capacity building interventions, allowing many more farmers to adopt IPM and good pesticide risk reduction practices.
3. Examples of chemicals management measures taken in partner countries	No available baseline	Approximately 20 examples of chemicals management measures	20 examples in total (100 % of target value) Results from 2018 (2 examples): • Restrictions and banning of pesticides in all GMS countries (Paraquat in China, Laos and Vietnam, restrictions Paraquat, Chorpyrifos in Thailand, bans and restrictions of 19 HHPs in Myanmar) • Various secondary legislative action taken in follow up to adoption of pesticide laws (several Prakas in Cambodia, regulations and instructions in Lao PDR, MARD/PPD circular on pesticide container disposal in Vietnam).	☺	
4. Level of regional cooperation on	No available baseline	Approximately 10 examples of regional	9 examples in total (90 % of target value).	☺	

Programme objective (med-term objective)					
Strengthened capacity and regional collaboration for efficient pesticide risk reduction and chemicals management within and among partner countries					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assess-ment of status**	**Comments**
pesticide risk reduction and chemicals management		cooperation on pesticide risk reduction and chemicals management	Results from 2018 (2 examples): • During the final regional Forum, several member countries expressed a wish to strenhthen regional collaboration and work towards increased harmonization of legislation on chemicals within the ASEAN region • One regional exchange on pesticides waste management laws and implementation		

Immediate objective 1: Reduced risks associated with pesticide use and enhanced use of alternatives through increased awareness and enhanced capacity in farming communities, schools and institutions and among consumers in partner counties.

Immediate objective 1 (short-term outcome)					
Reduced risks associated with pesticide use and enhanced use of alternatives through increased awareness and enhanced capacity in farming communities, schools, institutions and among consumers in partner counties.					
Indicators:	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
1.1. Various measures taken by target communities and partner organizations to create awareness and reduce pesticide use	Approximately 8,000 persons in target communities and partner organizations	New target value: Approximately another 80,000 persons (Previous target value: Approximately another 65,000 persons)	Total: Approximately another 170 842 persons (213 % of new target value) Result from 2018: • Outreach to another 44,544 persons (PANAP) • 108 Communities with 18,948 persons (8,990 females) (TFA)	☺	
1.2. The number of farmers, women, youth and other sectors participating in schemes to apply alternative and ecological practices	Approximately 4,000 persons	New target value: Approximately another 50,000 persons (Previous target value: Approximately another 35,000 persons)	Total: Approximately another 76,307 persons (152 % of new target value) Results from 2018: • 345 farmers, women, youth and other sectors participating in schemes to apply alternative and ecological practices (PANAP) • 16,462 persons (8,478 females) (TFA)	☺	
1.3. Media and internet coverage on pesticide issues	PAN AP website generated 10,953,956 hits	Approximately another 10 000 000 hits	Total (2013-2016): 12,533,826 (125 % of target value) Results from 2018: 687,306 webhits	☺	Due to changes to website host (www.panap.net) and design in 2017, the web hits and number of publication had to be recalculated.
	431 Likes on Facebook (PANAP)	New target value: Approximately another 2,100 likes on Facebook	Total: Another 2,978 likes (141 % of new target value) on Facebook	☺	

Immediate objective 1 (short-term outcome)					
Reduced risks associated with pesticide use and enhanced use of alternatives through increased awareness and enhanced capacity in farming communities, schools, institutions and among consumers in partner counties.					
Indicators:	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
		(Previous target value: Approximately another 1,000 likes on Facebook)	Results from 2018: • 484 new likes on Facebook • 93 new likes on Twitter, (1,174 Likes in Total)		
	REAL project televised 3 times	At least 4 REAL project televised	Total: 8 REAL projects televised (200 % of target value). Results from 2018: • School lunch policy televised 2 times, Thailand, 2018 • Pesticides residue testing televised 1 time	☺	
	Approximately 600 viewers on school projects at YouTube	At least 4 articles/papers published At least 4000 hits on website and Facebook	Total: 7 articles/papers published (175 % of target value) Results from 2018: • 2 Newspaper articles • 1 study briefing note.	☺	
1.4 The quality of training programs.	No baseline available.	Refined curriculum utilized in target schools, adult/farmer education programme and college.	Total: Curricula refined in 5 countries with the focus on gender and poverty issues. Results from 2018: • One new handbook on CPAM monitoring was updated to include CPAM mobile application (PANAP) • 23 curriculum workshops/ trainings (TFA)	☺	
	No baseline available	At least 25 in-countries meetings/trainings and 4	Total: 139 in-countries meetings/trainings (556 % of target value) and 4 regional	☺	

Immediate objective 1 (short-term outcome)					
Reduced risks associated with pesticide use and enhanced use of alternatives through increased awareness and enhanced capacity in farming communities, schools, institutions and among consumers in partner counties.					
Indicators:	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
		regional meetings/ training/exchange workshops	collaboration workshops (100 % of target value). Results from 2018: • 45 in-countries meetings/ trainings		

Immediate objective 2: Enhanced international, national, and local advocacy on sustainable pest management/agriculture

Immediate objective 2 (short-term outcome)					
Enhanced international, national, and local advocacy on sustainable pest management/agriculture					
Indicators:	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
2.1 Examples of advocacy measures taken by partner organisations in the region.	15 workshops /national seminars and national campaigns on highly hazardous pesticides initiated	New target values: Approximately 20 additional workshops/national seminars 7 regional exchanges 15 national campaigns on HHPs (Previous target value: Approximately 5 additional workshops /national seminars 2 regional exchanges 5 national campaigns on highly hazardous pesticides)	Total: 13 additional workshops /national seminars (65 % of target value) 8 regional exchanges (114 % of target value) 41 national campaigns on highly hazardous pesticides (273 % of target value) Results from 2018: • 1 regional workshop for health workers and government officals held in Vietnam (PANAP) • 19 national campaigns on for No Pesticide Use Week, Protect Our Children and World Environment Day Campaign (PANAP) • 3 regional campaigns (PANAP)	☺	
	2 Provincial and 1 National forum held in the region	Approximately 5 additional national forum/campaigns held in the region	Total: 38 additional national forum/campaigns held in the region (760 % of target value) Results from 2018: • 6 no pesticide campaigns • 4 field days • 4 provincial forums • 1 national policy meeting	☺	
2.2 Examples of cases when documentation of pesticide poisonings and other incidents have been	4 communes with about 30 communities participated and 1000 copies of Asian	Report adherence of the on the FAO Code of Conduct completed and published and 2000	Total: Documentation of pesticide problems in 47 communities (118 % of target value).	☺	

Immediate objective 2 (short-term outcome)					
Enhanced international, national, and local advocacy on sustainable pest management/agriculture					
Indicators:	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
utilized for advocacy at all levels.	Regional report on documentation of pesticide problems distributed	copies distributed and downloaded and documentation of pesticide problems in 40 communities available	Around 3,100 copies of Report adherence of the on the FAO Code of Conduct downloaded/distributed (155 % of target value). Results from 2018: • Schools from four communues were surveyed in North Vietnam (PANAP) • 10 farmers and 19 shop oweners were interviewed in two communes in Laos (PANAP). • One regional report launched, entitled "Of Rights and Poisons: Accountability of the Agrochemical Industry" revealed that HHPs remain widely used in the countries surveyed, which include Bangladesh, India, Indonesia, Malaysia, Pakistan, the Philippines, and Vietnam with a total of 2,025 respondents involved. Link: http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf		
	Community pesticides impacts assessment data used in 20 communities	Community pesticides impacts assessment data utilized in approximately 50 additional communities and at least 5 times at the national level	Total: Pesticide impact assessment data used in 244 additional communities (488 % of target value) and 8 times (160 % of target value) at national level Results from 2018: • PIA data were used 108 communities for planning, 4 provincial forums for policy reccomendations and 1 national policy formulation forum.	☺	

Immediate objective 2 (short-term outcome)					
Enhanced international, national, and local advocacy on sustainable pest management/agriculture					
Indicators:	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
2.3 The degree of participation of CSOs in formulating policy making and legislative measures at all levels	No baseline available	Participation in meetings of Stockholm, Rotterdam Conventions, SAICM, FAO, etc. New target value: approximately 35 interventions on pesticide issues (Previous target value: including 2 interventions on pesticide issues).	Total: Participation in all relevant meetings connected to the Stockholm and Rotterdam conventions, SAICM and FAO JMPM. Around 65 interventions on pesticide issues (186 % of target value). Results from 2018: • 20 interventions were made in the regional and international meetings relevant to the Stockholm and Rotterdam conventions, SAICM, UNEA, and FAO JMPM (PANAP)	☺	

Immediate objective 3: Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.

Immediate objective 3 (short-term outcome)					
Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
3.1 IPM/Pesticide risk reduction training materials of international standards adapted to local needs produced	Quality training materials developed in 4 and national FFS standards in 2 partner countries	Quality training materials and national FFS standards developed in 6 partner countries	Total: 6 countries (100 % of target value) Results from 2018: Curriculum development and design of structured learning exercises for IPM in new crops and for new invasive pest species continued in all four countries - Cambodia, China PR, Laos and Vietnam. In Lao PDR, the pesticide risk reduction training manual and farmers workbook was revised in 2017 and further pilot tested in farmer training on pesticide risk reduction in central/southern Lao provinces in 2018. In Myanmar, new curricula for field training on IPM and classical biological control were developed and pilot tested within context of a Training of Trainers for Brassica IPM Farmers held in 2018. In Vietnam, leaflets and posters were printed and distributed to disseminate information on pesticide risks and guidelines for mass production and application of the biological control agent *Metarhizium anisopliae* and practices under the System of Rice Intensification that promotes sustainable intensification of rice production. The ecological guide and field exercises for rat management were	☺	Given the relatively late participation of Myanmar in the IPM field component work on FFS curriculum development and standard settting more such work is needed in Myanmar, in case the country commits to scaling out IPM-FFS work in future. The ongoing Parliamentary Inquiry on Agrochemical Residues could potentially provide impetus to follow up on that still much needed farmer capacity building and training standard setting work in Myanmar.

Immediate objective 3 (short-term outcome)					
Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
			updated. A curriculum for integrated agro-aquatic biodiversity was designed with a strong focus on pesticide risk reduction to make fish/shrimp rearing possible. FFS to test the curriculum materials were implemented in the Mekong Delta during 2018. Participatory monitoring and evaluation system for IPM FFS programme, with a focus on monitoring implementation of pesticide risk reduction learning activities, have been set up in all four GMS countries. Efforts to strengthen these systems continued in 2018. FAO convened a Global Workshop on Impact Assessment and Monitoring and Evaluation for FFS in Bangkok during August 2018. Participants from all 6 GMS countries participated in this workshop and pledged to utilize workshop results as input to curriculum development and FFS standard setting exercises at national level.		
3.2 Number of (and gender-disaggregated data) IPM trained extension workers and farmers in partner countries	Approximately 300 government extension workers and farmer trainers and 44 000 farmers	New target value: Approximately 540 % increase of the number of trained IPM extension workers and farmer trainers and approximately 100 % increase of trained farmers Previous target value: Approximately 100 % increase of the number of trained IPM extension workers,	Total cumulative total and % increase: Trainers: 2,099 (700 % increase over baseline) Farmers: 84,131 (91 % increase over baseline) Results from 2018: • Capacity to conduct IPM and PRR farmer training through organization of Training of Trainers and Refresher TOT courses expanded in all 5 GMS countries. An additional 364 (41% female) IPM Trainers from Government and Farmer Trainers are actively involved in the conduct of IPM-PRR farmer training. • Some 4,199 (46 % female) additional farmers in the Mekong region, participated in 'fortified' Farmers Field Schools or focused 3-day		

Immediate objective 3 (short-term outcome)					
Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
		farmer trainers and farmers	Pesticide Risk Reduction trainings with direct support from the Programme.		
3.3 Level of institutional knowledge on IPM. The quality of cooperation and sharing of experiences in the regional networks of programme partners established on national and regional level as to ensure implementation of more relevant, innovative and effective training programmes with a focus on pesticide risk reduction	Annual Regional Meeting held for Programme Evaluation and Planning	5 Annual Regional Meetings held for Programme Evaluation and Planning & IPM technical subject matters	Total: 10 regional meetings (200 % of target value) Results from 2018 (3 additional regional events): • The FAO-IPM component worked with the Asia and Pacific Plant Protection Commission and the Government of Thailand to organize/provide technical support to a Regional *Bactrocera* Fruit Fly IPM Workshop, held in Bangkok in March 2018. • FAO convened a Global Workshop on Impact Assessment and M&E of FFS Programme in Bangkok in September 2018. • FAO helped convene a Final Regional Forum in Bangkok in November 2018. This Forum included technical sessions on agroecology, biodiversity, Pest and Pesticide Management etc.	☺	
	Number of website hits: 71 782 hits to date on FAO Asia IPM website: www.vegetableipmasia.org	Approximately 150 000 hits on FAO Asia IPM website: www.vegetableipmasia.org	Total: > 124,000 hits (83 % of target value) as of December 2018.	☺	The regional IPM programme website is regularly updated and used widely and frequently. Discussion ongoing at FAO on how best to make website resources available beyond Programme completion.

Immediate objective 3 (short-term outcome)					
Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
					The website teller has at times not been functioning well, failing to record hits/reverting to zero at various points in time during the life time of the Phase II Programme. The total tally therefore is a conservative estimate.
3.4 The degree of institutionalization of IPM in the partner countries	Preliminary state of institutionalization of IPM and local buy-in in 2 partner countries	Advanced state of institutionalization and buy-in in at least 2 partner countries and preliminary stage of institutionalization in 2 additional partner countries	Total: Advanced state of institutionalization and buy-in in 2 partner countries. Both China and Vietnam have institutionalized IPM policies and capacity building programmes, financed by national and local governments. Preliminary stage of institutionalization in 2 countries. In both Cambodia and Lao PDR, the government provides an annual allocation for operations of the National IPM Programmes. In both countries, resource partners, like IFAD and World Bank as well as several bilateral donors, provide additional support for scaling out of the National IPM Programme work.		Given the relatively late participation of Myanmar in the IPM field component of ths Programme more work to facilitate an IPM institutionalization process is needed in Myanmar. Basic policy support of IPM is engrained in national policies and government institutions like PPD. The ongoing Parliamentary Inquiry on Agrochemical Residues could potentially provide impetus to follow up on that still much needed institutionalization process in Myanmar.

Immediate objective 3 (short-term outcome)					
Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
	Government investments in IPM-FFS programme 15 Million US$ on annual basis	Approximately 100 % increase of government annual investments in IPM-FFS	Most notably the governments of Vietnam and China continue to make considerable investment of own budgets into support for IPM-FFS and Pesticide Risk Reduction training. In Vietnam, the government has invested US$ 595,000,000 for projects with IPM/FFS and farmer education components through World Bank loans (MD-ICRSL - WB 9 from 2015-2020 at US$ 385 million and VIAIP - WB7 from 2014-2020 at US$ 210 million). The Laos Government has invested approximately 1 Million US$ in IFAD grant. The Government of Cambodia will invest about US$ 2,333,600 in the IFAD-funded "*Agricultural Services Programme for Innovations, Resilience and Extension*" (ASPIRE) project (2018-2021) as a follow up to an ongoing IFAD-funded "*Project for Agriculture Development and Economic Empowerment*" (PADEE) of US$14,000,000 for capacity building, mainly farmer training in Farmer Field Schools for the period 2013-2017.		
3.5 The level of use of IPM and biological control options by farming communities	Approximately 44 000 IPM farmers trained to date have reduced pesticide use (50 %) and 90 % of trained farmers have made increased use of biological control	Approximately 90 000 IPM farmers trained to date have reduced pesticide use (50 %) and 90 % of trained farmers have made increased use of biological control	Total: 84,131 farmers (91 % of target value). Thousands of additional farmers benefited from participation in local government and/or other donor funded FFS programmes that were implemented with FAO technical and coordination support provided under the project. Results from 2018:		

Immediate objective 3 (short-term outcome)					
Strengthened capacity to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
			Some 4,199 (64 % female) additional farmers participated in 'fortified' Farmers Field Schools or focused 3-day Pesticide Risk Reduction trainings. Lasting Impact: Confirmed by science-based longer-term impact studies, IPM adoption among FFS graduate farmers has led to a >50% reduction in total pesticide use; elimination of use of WHO Class I pesticides; reduced exposure due to less mixing of pesticides; improved disposal of pesticide containers; increased use of protective clothing.		
	40 % of trained farmers have stopped use of WHO Class I pesticides	Approximately 90 % of trained farmers have stopped use of WHO Class I pesticides. Revised target value in 2015; previously 70 %.	100 % of trained farmers have stopped the use of WHO Class I pesticides.	☺	

Immediate objective 4: Strengthened regulatory framework for the control of pesticides in selected partner countries

Immediate objective 4 (short-term outcome)					
Strengthened regulatory framework for the control of pesticides in selected partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	
4.1 The number of legislative instruments that have been updated or newly introduced.	2 countries adopted new primary instruments	4 countries have new primary instruments	Total: 4 countries (Cambodia, Lao PDR, Myanmar and Vietnam) have a new primary legal instruments (100 % of target value). Results from 2018: New secondary legislation drafted and ready for adoption in both Cambodia and Lao PDR	☺	
4.2 The number of inspectors trained and the number of inspections conducted with formulated recommendations (made public/presented to decision makers).	Pilot completed and initial scaling up in Lao PDR	Inspection schemes established and scaled up in 3 countries	Total: Inspection schemes established and scaled up in 1 country, Lao PDR and piloted in two Provinces in Cambodia. Initial discussion with Myanmar on how to strengthen inspection capacity. Results from 2018: Despite of workplans developed, inspections remained on hold in Cambodia due to delays in DAL government clearances for planned inspection work to go ahead. In Lao PDR good progress made on clarification of legal basis for enforcement and necessary updates processed in inspection guidance materials. Due to government delays in approval for implementation of inspections, Programme support could no longer be utilized to support inspection work scheduled for late December 2018. The government will now attempt to seek resources elsewhere to continue the inspection and associated capacity building/training material pilot testing work.	😐	In Lao PDR, the launch of the newly developed inspection manuals was delayed due to the work connected to development of the pesticide decree. Finalization of the manuals and training of inspectors was accomplished in 2018.
4.3 Percentage of pesticide labels in local language	No baseline available	Main distributors in two countries have labels in	Total: Substantial increase in % of local language labels in 2 countries; no exact data on % available as time of report writing.	☺	See above.

Immediate objective 4 (short-term outcome)					
Strengthened regulatory framework for the control of pesticides in selected partner countries.					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	
		local language on their products	Cambodia reported that based on baselines set during Phase I and follow up issue of relevant Prakas, the percentage of pesticides with Khmer labels has increased steadily as per latest survey findings in 2017-18. In Lao PDR, some pesticides now carry labels in local Lao language in line with the 2017 promulgated PM Decree on Pesticide Management. Results from 2018: Above Cambodia results confirmed in pesticide retail shops surveys, fielded during 4th quarter of 2017. In Lao PDR, the new PM Decree on Pesticide Management now provides the legal basis for mandatory improvements in labelling, with some results to show as per latest DOA/PPC surveys.		

Immediate objective 5: Strengthened chemicals management capacity within authorities, industries and among relevant CSOs in the partner countries

Programme objective 5 (mid-term objective)					
Strengthened chemicals management capacity within authorities, industries and among relevant CSOs in the partner countries					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
5.1 Number of staff participating in programme activities on chemicals management	Approximately 165 persons	Approximately 80 % increase in the number of participants	Total increase in the number of participants: 133 % (219 new participants, 56 % women) at Forum meetings 7-12. Result from 2018: 27 new participants (63 % women) took part in the final regional Forum (no. 12) in Bangkok, Thailand.	☺	
5.2 Share of participants (men/women) who states that the activities have been useful or very useful to their work.	No baseline available	A majority of the participants consider the programme activities to be very useful in their work on chemicals management.	Total: Evaluations of Forum 7 to 11 show that, on average, around 85 % of the participants find the topics relevant or highly relevant for their work (60 to 97 %). An average of around 80 % find the knowledge and network useful or very useful (64 to 100 % of men and 61 to 97 % of women, respectively) Result from 2017: No written evaluation of the final Forum was made.	☺	
5.3 Number of chemicals management measures (highlighting measures for protection of vulnerable groups) taken at different institutions in partner countries.	No baseline available	Approximately 50 examples of chemicals management measures taken at different institutions in partner countries	Total number of examples: 47 (94 % of target value) Results from 2018 (5 examples): • Ministry of Industry and Trade in Vietnam continued the development of the first National Chemical Inventory and Database, which was is expected to be launched in 2019. • Mynmar developed a Master Plan for Hazardous Waste Management • Vietnam strengthened its inspection and post-inspection activities, management of chemicals is	☺	

Programme objective 5 (mid-term objective)					
Strengthened chemicals management capacity within authorities, industries and among relevant CSOs in the partner countries					
Indicators	**Baseline**	**Target (2018)**	**Results 2013-2018**	**Assessment of status**	**Comments**
			transferred from pre-inspection (licensing) to post-inspection (inspection). • Vietnam revised its chemicals law to make it more efficient and remove resource intensive administrative procedures. • Thailand continued the work towards establishment of a chemicals agency		