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



Progress report 2017

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Annex 1: Risk matrix 2017

Annex 2: Detailed narrative reports with results from 2017

Annex 3: Results matrices with data from 2017

1 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 Management
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

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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

2 Executive summary

The second phase of the programme “Towards a non-toxic South-East Asia” has now been implemented during 4.5 years. All partners continue to work towards reduced risk from chemicals to human health and the environment and sustainable agricultural methods, supporting the member countries to achieve the sustainable development goals. The programme is also supporting regional collaboration on management of pesticides, industrial and consumer chemicals 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.

In 2017, an additional 2,900 farmers (64 % female) switched to more sustainable agricultural practices, adopting IPM with reduced or no use of chemical pesticides with support from the programme. A follow up long-term study carried out for a PhD research¹ 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 hectare). Exposed farmers (farmers that were not trained but working in villages with FFS trained farmers) reduced their use by 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 dissertation² 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.

In 2017, 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. 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. In Lao PDR, a Prime Minister Decree on Pesticide Management was developed and promoted with programme support³. 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.

The programme has continued its support and development of the FAO Pesticide Registration Toolkit, 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. In 2017, two regional Toolkit workshops were organized with participation from China, Vietnam, Thailand, Lao PDR and Cambodia. The workshops contributed to strengthened capacity within national registrations authorities and provided opportunities and tools for

¹ Ngin, C. (2017). *The Study on Sustainable Integrated Pest Management on Rice in Cambodia* (Doctoral dissertation).

² Ibid.

³<http://www.vegetableipmasia.org/news/view/136>

increased regional cooperation. The workshop also generated suggestions on how to further develop the toolkit, making use of experiences from the region to improve a tool used globally.

The collection of data from real life situations in the field also continued in 2017. 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. 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.

To support the process of implementing the Minamata convention in the region, KemI supported two different pilot projects in this area. One project on mercury in artisanal small scale gold mining (ASGM) was finalized in 2017 and one project on phase out of mercury in the health care sector was launched.

Add more examples?? Please add if you have suggestions.

3 Background

3.1 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. As a response to this, the programme “Towards a Non-Toxic Environment in South-East Asia” was initiated in January 2007. A second phase of the programme was approved by Sida in 2013. The programme builds on a strong partnership with well-established organisations that together have many years of experience on dealing with chemicals management issues in the region. Implementing partners are the Swedish Chemicals Agency, the Food and Agriculture Organization of the United Nations (FAO), Pesticide Action Network Asia and the Pacific (PAN-AP) and the Field Alliance (IFA). The geographical scope of the Programme is South-East Asia and has a primary focus on the Mekong region countries. Partner countries are Cambodia, China, Lao PDR, Myanmar, Thailand and Vietnam. Regional activities under this programme sometimes involve other countries from the region, like Bhutan, Indonesia and the Philippines.

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.

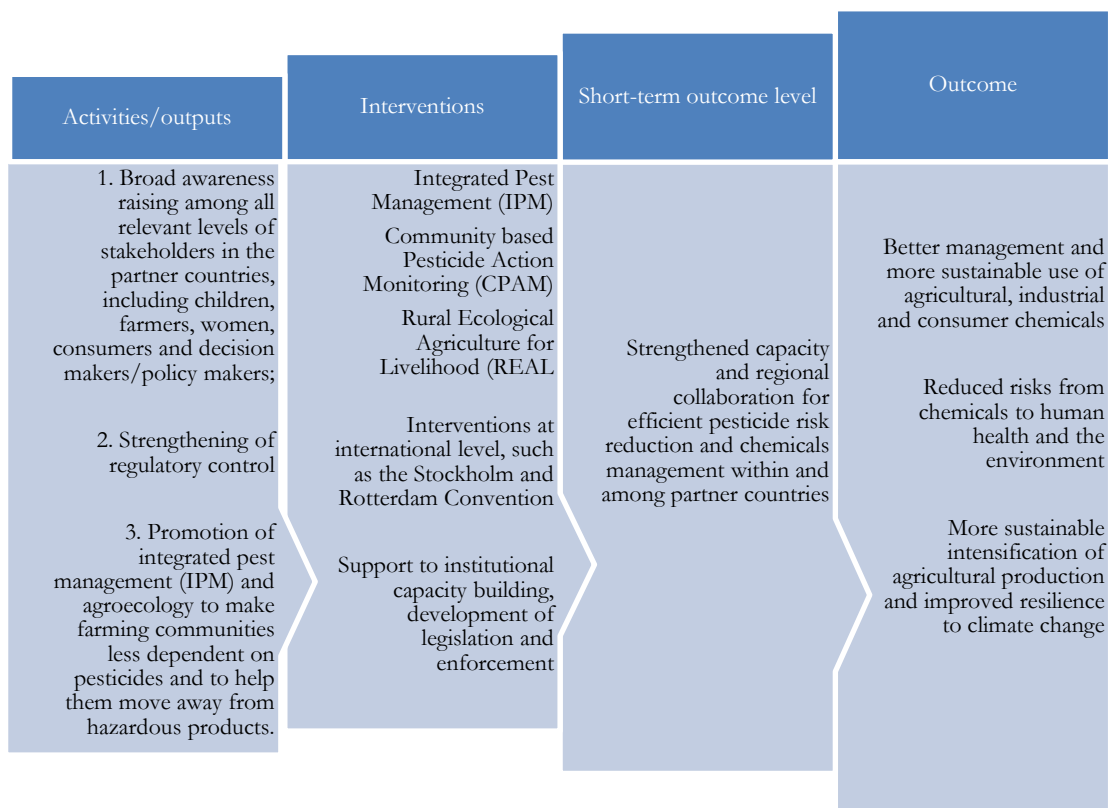
The programme considers safe food a “right” of all and not a privilege of a few. Farmers, their families and their communities have a right to live and work in a non-toxic environment and consumers have a right to eat food that is healthy and free from pesticide residues. To protect themselves, everybody has a right to know about health and environmental risks from chemicals.

3.2 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.




3.3 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.

4 Context analysis

The trade and production of hazardous pesticides has gradually shifted from Europe to Asia. China has become the world’s largest producer and consumer of pesticides. Products include hazardous substances like chlorpyrifos and paraquat. 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.

Not only pesticide production and trade but also general chemicals production, use and disposal continue to increase worldwide. Assessments and forecasts predict that global chemical sales will grow by about 3 % per year until 2050, and the major part of that increase will take place in Asia⁴. Chemical manufacturing and processing activities are steadily expanding into developing countries and countries with economies in transition. A recently published report by the European Chemical Industry Council

⁴ http://www.keepeek.com/Digital-Asset-Management/oecd/environment/oecd-environmental-outlook-to-2050_9789264122246-en#.WNjNBdKKCUk#page1

(Cefic) reveals that China together with the rest of Asia (excluding India, South-Korea and Japan) have almost tripled their part of world chemicals sales from 2005 to 2015 and now account for 51.8 %.

Chemicals related matters continue to gain attention and priority in the 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 further strengthen regional coordination and cooperation in addressing chemicals-related issues under relevant multilateral environmental agreements such as Basel Convention, Rotterdam Convention, Stockholm Convention, and Minamata Convention, as well as internationally agreed-upon systems such as the Globally Harmonized System for Classification and Labelling of Chemicals (GHS). The working group has now developed a work-plan for the coming years and more concrete actions and activities can be expected in the near future. Since ASEAN is an important regional actor in the area of chemicals, KemI has been in continuous contact with the working group since its creation and a good working relationship has now been established. In 2016, KemI was invited to take part in the 2nd annual meeting of the AWGCW. At the 3rd annual meeting of the working group (May 2018), a representative from KemI will present ideas for future collaboration between ASEAN and KemI to the member states, which will hopefully result in concrete activities to support sound management of chemicals in the region.

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 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 2017⁵. 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 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 in the Asia Pacific region.

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. Preliminary results from this study have already caused participants to reconsider their chemical exposure and request additional education regarding prevention and health impacts of pesticides. Partners also provide farmers with knowledge and access to sustainable farming techniques, i.e. making it possible for farmers to produce the requested products.

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 creating awareness and demand at consumer level as well as by providing farmers with knowledge and access to sustainable farming techniques, i.e. making it

⁵ <http://www.apppc.org/content/30th-apppc-session-meeting-report>

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 continued strengthened implementation and enforcement of pesticide management decrees and regulations in 2017. In Lao PDR, the Prime Minister promulgated a Decree on Pesticides, developed with programme support. In addition to China and Vietnam, the governments of Cambodia and Lao PDR now also invest in up-scaling of FAO-piloted IPM and PRR training for farmers. In Myanmar, the government is keen to strengthen ongoing farmer training programmes on IPM and pesticide risk reduction in response to increasing concerns about pesticide risks to health and the environment.

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 solution 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 has also effected partners' outreach in Cambodia. Martial Law in Mindanao, Philippines, has threatened the lives of activist and farmer leaders. The focus on 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.

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.

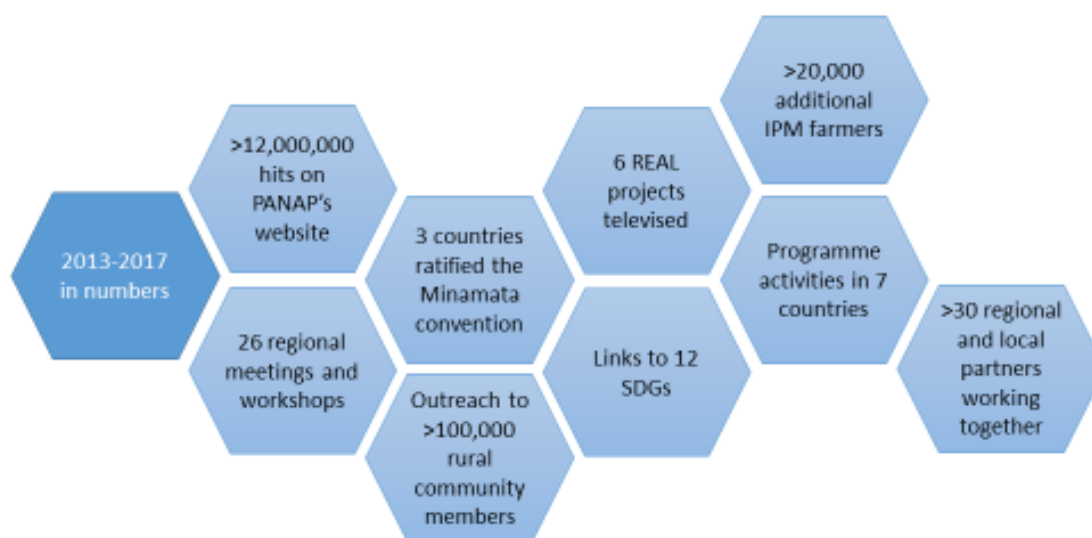
In Cambodia the development of an environmental code, including a specific chapter on chemicals, continued in 2017. The programme has offered its support to the process but has, so far, not been invited to take part in the drafting of the legislation. The code is expected to be finalized in 2018. Significant work to develop secondary legislation is expected in order to make the code functional and contribute to the achievement of sound chemicals management.

In Myanmar, the government recognizes the need to strengthen farmer education on IPM and pesticide risk reduction as more and more agrochemical companies pick up operations in the country and farmers become more exposed to pressure from the industry. The quality of ongoing Farmer Field School programmes implemented by both governmental and non-governmental agencies stand to benefit from association with and technical support by this programme. Partners are interested and there is much scope for collaborative work between governmental and non-governmental agencies to strengthen work on training and policy on IPM and pesticide risk reduction. This was confirmed during a national workshop

held in Yangon in June 2017 organized within the context of this programme. There has been on-going training conducted by the government for pesticides applicators which helped to decrease the misuse and/or overuse of pesticides. There is, however, still inadequate attention and support for the development of biological control as alternatives to chemical pesticides. There is a need to help government to build capacity and make available the bio-control products in the market to support the organic production.

5 Progress report with results from 2013 to 2017

The second phase of the programme “Towards a non-toxic South-East Asia” has now been implemented during 4.5 years. All partners continue to work towards reduced risk from chemicals to human health and the environment and sustainable agricultural methods, supporting the member countries to achieve the sustainable development goals. The programme is also supporting regional collaboration on management of pesticides, industrial and consumer chemicals 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.



5.1 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 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.

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 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 agriculture⁶.

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".

For the past 7 years, PANAP's local partner in northern Vietnam, 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.

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.

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>



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 for her efforts in championing women's issues in various campaigns against toxic pesticides over 25 years.

TFA has integrated gender roles into all the trainings conducted for both schools children and farmers for the past years. The assessment of gender roles in agriculture and particularly for making decision and involvement in handling pesticides allowed communities and partners to design specific interventions to minimize the risks of exposure to pesticides. 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 saving groups (89 % women) 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 understandings 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 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 the results, 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-mat and compost to reduce chemical inputs and gain more incomes.



On International Women's Day, March 8, 2017, the booklet "Stories from the Field: Women Working Towards a Non-Toxic Environment" was officially launched (link to press release:

<http://panap.net/2017/03/inspiring-stories-of-women-vs-pesticides/>). The publication was also highlighted through articles on Sida's⁷ and Kemi's⁸ websites. The publication was developed jointly by

⁷ <http://www.sida.se/Svenska/Har-arbetar-vi/Asien/Regionalt-samarbete-Asien/resultatexempel/utbildning-ska-minska-giftbesprutningen-och-oka-skorden/>

⁸ https://www.kemi.se/nyheter-fran-kemikalieinspektionen/2017/svenskt-stod-till-kvinnors-arbete-for-giftfritt-jordbruk-i-sydostasien/?_t_id=1B2M2Y8AsgTpgAmY7PhCf%3d%3d&_t_q=sydostasien&_t_tags=language%3asv%2csiteid%3a007c9c4c-b88f-48f7-bbdc-

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 format⁹. The booklet has been distributed to various national, regional and global meetings related to chemicals and the environment.

Poverty and human rights perspective

The poverty perspective has always been an integral part of the planning and prioritization of various programme interventions.

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 activities after training in initial FFS designed based on needs identified include Farmer Clubs moving into marketing, value chains and formalized cooperatives as well as Self-help Groups covering aspects of savings and loan services¹⁰.

TFA continues to select rural target sites for the REAL program to increase income for poor families and reduced the input costs in farming and increased income through ecological agriculture practices, conservation of aquatic species in the rice field and indigenous vegetables garden. In addition, TFA and partners have been collecting and used field data to advocate for children's rights for safe foods and environment through the development of community plans and measures to reduce pesticides exposure to school children and community. The data on testing pesticides residues in vegetables and fruits used for school lunch and testing of residues in blood provided evidence for awareness raising to communities, concerned government agencies and local authorities. As a result, Thai Education Foundation, presented the results at the National Chemical Management Forum and received overwhelming responses from the audience advocated for improving the situations. The programs were integrated into the draft National

[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](http://www.sida.se/globalassets/sida/sve/har-arbetar-vi/stories-from-the-field-2016.pdf)

⁹ <http://www.sida.se/globalassets/sida/sve/har-arbetar-vi/stories-from-the-field-2016.pdf>

¹⁰ For some relevant FAO case studies published in 2017: Farmers' Journey from FFS to a Cooperative:

[http://www.vegetableipmasia.org/uploads/files/document/farmer_field_schools/Farmers%20Journey%20from%20FFS%20to%20a%20Cooperative%20\(2\).pdf](http://www.vegetableipmasia.org/uploads/files/document/farmer_field_schools/Farmers%20Journey%20from%20FFS%20to%20a%20Cooperative%20(2).pdf) and Beyond Farmer Field Schools:

http://www.vegetableipmasia.org/uploads/files/document/farmer_field_schools/Beyond%20Farmer%20Field%20Schools.pdf

Strategic Chemical Management Plan (2017 – 2023) and received additional support from the government to further extend and expand the program in 2018.

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 used field data to advocate for children rights for safe food and environment through the development of community plans and measures to reduce pesticides exposure to children and communities. The data on testing pesticides residues in vegetables and fruits used for school lunch and testing of residues in blood provided evidence for awareness raising to communities, concerned government agencies and local authorities. As a result, Thai Education Foundation was invited to present the results at the first National Conference on Chemical Management in Thailand and received overwhelming responses from the audience who advocated for improvements of the situations. Subsequently, the program was integrated into the draft National Strategic Chemical Management Plan (2018 – 2028) and received additional support from the Thai government to further extend and expand the program in 2018.

Programme 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.

PANAP have worked actively to raise their level of knowledge on this issue and a training of trainers was conducted in August 2015, using the human rights framework as an analysis in the context of CPAM and for campaigning using the CPAM results. As an outcome, PANAP has been improving their human rights perspective and has sent a submission to the committee responsible for the implementation of the UN Convention on the Rights of the Child. Submission was also made to the UN Special Rapporteur (UNSR) on the Right to Food who was focusing her report on pesticides. In this report, which was launched on 7th March, 2017, the UNSR stated that the international community must work on a comprehensive, binding treaty to regulate hazardous pesticides throughout their life cycle, taking into account the human rights principles. Acting on the recommendations, PANAP drafted a proposal on a global legally binding treaty on pesticides. The proposal was distributed in Regional SAICM meetings.

PANAP continues to use the Human Rights framework in the documentation of impact of pesticides on people and the environment particularly looking at the marketing of pesticides by industry. A regional report on CPAM with a human rights analysis will be launched in April 2018.

KemI has continued the 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 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. In order to increase knowledge on this issue within the international unit, 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 unit will take part in a one-day training on human rights in order to further

increase their knowledge in this field. KemI will continue to seek possibilities to support the work of the special rapporteur by exchanging information and, when appropriate, take part in relevant activities.

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 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 Initiative¹¹ during the 2015-17 period.

The REAL program continues to attract policy support and funds, which contributing to possibilities to expand the program. In Laos, TFA's local partners received almost 1,400,000 THB to support blood testing of communities in selected target sites as well as for pesticides reduction interventions. The Non Formal Education (NFE) under the Ministry of Education also expressed an interest for pilot learning activities and materials to create awareness on the impacts of pesticides to health, environment and agrobiodiversity. The training was piloted in 5 districts of Xieng Khuang province on Chemicals impact assessment which included pesticides, chemicals used to treat food products and chemical in home. In Thailand, the government has been supporting capacity building of governmental agencies, such as education, health, and natural resources and environment for integration of REAL activities. TEF has been requested to provide technical support to develop plans and capacity building of governmental agencies at the local and national levels on several occasions. Nearly one million THB was allocated to support capacity building of NFE staff on Agroecology in 2 provinces and local support for FFS implementation in 2017. In Vietnam, the Department of Continuing Education, had also expressed interests to expand the works on pesticides impacts awareness raising and Agobiodiversity for green agriculture and requested ICRERD technical assistance in developing proposal and plan for expansion nationwide in 2018 and onward.

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 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

¹¹ <http://www.fao.org/asiapacific/perspectives/regional-rice/en/>

farmers on marketing of their products. As of 2017, SEADA has facilitated three markets with the financial support from the district and provincial governments in northern Laos.

At regional level 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. The programme facilitated participation of relevant government staff in the latest Commission meeting, held in New Zealand in November 2017. 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. 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. In 2017, 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 aims to endorse the development of a regional programme on soil health for funding support from the ASEAN + 3 partnership.

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 working group on Chemicals and Waste 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. In 2017, KemI was invited to attend the open sessions of the second meeting of ASEAN Working Group on Chemicals and Waste (AWGCW). Due to other conflicting activities, KemI was not able to attend the meeting. The invitation was, however, seen as an important step towards closer collaboration between AWGCW and KemI. In December, KemI and a representative from the ASEAN secretariat met for a follow-up meeting and discussed possibilities and ways for future collaboration in more detail. At the 3rd annual meeting of the working group (May 2018), a representative from KemI will present ideas for future collaboration between ASEAN and KemI to the member states, which will hopefully result in concrete activities to support sound management of chemicals in the region.

The KemI-supported regional collaboration on chemicals management is still considered 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 manangement 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 work 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 2017¹². 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.

Communication/information

The FAO Asia Regional IPM/Pesticide Risk Reduction Programme continues to share information through the programme's existing website (<http://www.vegetableipmasia.org>). During 2017, some nine news releases were published on a variety of different activities supported by the Swedish funded project. The regional IPM programme website is regularly updated and used widely and frequently, with some 119,270 hits as of December 2017. The e-list serve is constantly updated and new participants added, with relevant news articles shared at an almost daily basis. During the reporting period, two chapters outlining

¹² <http://www.fao.org/aud/43301-0e63753e918fd9395cfa276ffbd275f03.pdf>

results of capacity building interventions for agroecology, integrated farming systems and sustainable intensification of crop production were prepared by FAO staff for a major book publication entitled “*Agricultural Development and Sustainable Intensification: Technology and Policy Challenges in the Face of Climate Change*” and targeted for public release in the 1st quarter of 2018. Additionally, in 2017, a peer-reviewed article was published in *Mysore J. Agric. Sci.*, 51(A) on the *Review and Status of FAO-assisted DBM Biological Control Programs in the Asia Region*. Programme staff were engaged in the development of innovative communication products for the purpose of communicating programme results. The programme also continued to communicate with a broader audience using Facebook and Twitter.

All participants that have participated in 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.

TFA continues to share and disseminate program information in various national and regional meetings and workshops. The TFA website 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.

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>). Work to improve the overall structure of KemI's pages with information on the international work, guidance documents developed by KemI etc. has been initiated and is expected to be finalized in early 2018. This will further facilitate access to useful information and guidance.

Results and risk management

The aggressive marketing strategies of pesticide companies continue. 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.

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.

FAO continues stressing the importance of IPM and Pesticide Risk Reduction farmer training and financial investments for scaling out this training during policy dialogues with senior government officials and various resource partners at national and international levels. 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. Funding continued from FAO regular programmes for sustainable agriculture promotion and capacity building, e.g. Save and Grow for Sustainable Intensification of Rice Production in Laos and Integrated Agro-Aquatic Biodiversity and Integrated Farming Systems development in Vietnam. 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 Sustainable 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- project formulation discussions were held with relevant public and private sector stakeholders for the development of innovative capacity building initiatives making use of Farmers Field Schools and ICTs and connecting to the national and local government's priority Poverty Alleviation targets and programmes, intended to help government deliver on their national SDG action plans.

TFA continues to monitor changes of key government counterpart personnel in order to ensure effective communication and related to policy supports etc.

The fact that development and adoption of new legislation is a slow process has resulted in delay of some activities connected to enforcement. 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 allows adjustment of support from the programme to current situation and priorities.

Recruitment of external consultants has supported implementation of activities connected to the policy work on pesticides. New FAO procedures for hiring international consultants have affected the feasibility and speed of such recruitments, something that hampered the implementation of pesticide policy related work during the 2nd half of 2017 to some extent.

For more details on risk levels and implemented risk mitigation measures during 2017, see risk matrix in Annex 1.

Private sector collaboration

FAO have 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 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.

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. Subsequently (in early 2018), a project concept note was developed and funding approval from Guangfa Securities is awaited.

TFA and partners also continue to seek collaboration with the private and public sectors. Linking farmers to markets and foods companies was initiated in Vietnam in 2014 and was further increased in 2017. TFA and partners have been able to link restaurants, markets, supermarkets, schools, hospitals and food companies to farmers in the program, which has resulted in increased income for the farmers.

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. In 2017, around 1,400 new farmers in Laos are awaiting PGS certification. 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.

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.

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.

5.2 Regional collaboration

The FAO-IPM component has continued to provide programme development support for curriculum design, development of training exercises, capacity building and technical assistance for delivery of FAO's Regional Rice Initiative (RRI) in three pilot countries (Indonesia, Lao PDR and Philippines). More specifically, technical backstopping has been provided in the area of innovative integrated and diversified agriculture as to address challenges to sustainable production such as intensive use of agrochemicals and

its impact on ecosystem goods and services and landscapes. Innovative practices have demonstrated that farmers can grow more with less inputs and negative impacts on human health and the environment. Lessons learned –shared through innovative and smartly-designed communication products- are fed into government policy processes for development of clean and green agriculture. Governments of participating countries have now started to invest public funding to scale up the adaptation of the concept and approaches initiated by RRI (see section on Results and Risk Management). In 2017, the programme supported the preparation 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.

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, a workshop on Empowering Farmers through FFS-IPM Training in Support of Sustainable Intensification of Crop Production was conducted in Kathmandu, Nepal in 2017 – with seed funding from APPPC and with programme technical assistance. 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. The Progress Report of the Standing Committee on IPM highlighted efforts that have strengthened regional and in-country information sharing and capacity building during the 2016-17 biennium on regional initiatives on spread prevention and management of invasive agricultural crop pest and diseases, promotion of IPM and reduction in risks related to distribution and use of pesticides in agriculture.

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 has also organized study visits for policy makers from Laos and Vietnam, selected teachers and farmers from Cambodia to be exposed to innovations over the years. TFA and partners has 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 1017. 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. TFA will co-host the 2018 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. TFA partners and officials from public health services have conducted surveys with approximately 3,800 students, farmers and consumers in Laos, the Philippines, Thailand and Vietnam. The preliminary results show that students and farmers in the high risks areas in all countries have higher residue of organophosphides and carbamates in their blood compared with the control/consumer group who do not live in the high risk area. While the preliminary results were disseminated at national and regional workshops, the studies were extended to 2018 to further investigate the residues by doing more laboratory analyses with contributions from the Thai national health promotion fund and Greenpeace Thailand.

PANAP and partners continue the regional campaign “Protect Our Children from Toxic Pesticides”. Since the beginning of pase 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 joint studies on CPAM.

Since 2009, KemI in collaboration with the member countries, have organized regional chemicals management Forums and specialized workshops focusing on specific topics related 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 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 continuous and in 2017 KemI was invited to take part in the open sessions of the second meeting of ASEAN Working Group on Chemicals and Waste (AWGCW). Due to other conflicting activities, KemI was not able to attend the meeting. The invitation was, however, seen as an important step towards closer collaboration between AWGCW and KemI. In December KemI and a representative from the ASEAN secretariat met for a follow-up meeting and discussed possibilities and ways for future collaboration in more detail. At the 3rd annual meeting of the working group (May 2018), a representative from KemI will present ideas for future collaboration between ASEAN and KemI to the member states, which will hopefully result in concrete activities to support sound management of chemicals in the region.

Since the beginning of phase 2, KemI has also been having continuous dialogue and collaboration 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.

5.3 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 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.

The number of farmers in the region that are implementing better pesticide management continue to grow due to efforts by FAO, PANAP, TFA and their partners. By 2013 (end of Phase 1), an additional 58,716 farmers had adopted better risk reduction practices and by end of 2017 some 21,200 additional farmers - directly reached by the programme - have adopted IPM after having participated in 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 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 are 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 learning centers for 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.

Community-based Pesticide Action Monitoring, CPAM, is a process of participatory action research developed by PANAP and its partners that helps communities to document the adverse impacts of pesticide use, to raise awareness and to motivate them to adopt ecologically sound and sustainable agricultural practices. CPAM have played a strategic role in influencing global action, through better pesticide regulations and government implementation of international conventions on pesticides. CPAM has significantly become a fertile ground for the development and emergence of rural women leaders and farmers. To make the process easier and accessible to more communities, PANAP has developed a CPAM mobile application to monitor the impacts of pesticides in the region. Through the mobile application, monitoring results are available in real time, translated in local languages and are easily verifiable. The application covers a variety of survey tools including a list of pesticides and how they are being used; health impact assessments; and how pesticides are being sold and advertised. The CPAM results from these surveys have been compiled and discussed at national and international meetings, amplifying the need for urgent action. CPAM results also supported the ban of certain highly hazardous pesticides and various campaigns to protect women and children. From 2016- 2017, partners have used the CPAM app to document pesticides impacts **and** a report will be published in April 2018.

The regional chemicals management Forum, supported by KemI, provides 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 2017, 5 regional forums have been organized with a total number of about 310 participants (44 % women) from the member countries and other invited country delegations (excluding lecturers and other experts). The accumulated number of new participants at these 5 forums is 192 persons (55 % women).

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, a workshop on Empowering Farmers through FFS-IPM Training in Support of Sustainable Intensification of Crop Production was conducted in Kathmandu, Nepal on 27 February to 2 March 2017 – with seed funding from APPPC and with programme technical assistance. 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 2013-2017, 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 farmares’ livelihood has also been promoted. The process has been embedded in the REAL program since the beginning of the program until present.

Phase I: 2007 – 2012	Phase II: 2013 – 2017	Outcomes
<ul style="list-style-type: none"> • The PIA and ABD curriculum were translated in 4 languages and implemented in REAL schools and community education program. • Over 2,500 students, teachers and farmers were trained. • Awareness raised on pesticides impacts to health and environment 	<ul style="list-style-type: none"> • Ecological agricultural practices and study of pesticides residues in children and school lunch added to the curriculum • Added Thailand and Myanmar • 20,000 students, teachers and farmers trained under REAL program 	<ul style="list-style-type: none"> • Reduction of pesticides uses and proper handling of pesticides and waste • Increased income, foods nutrition and yields • Increased biodiversity and sustainable utilization for community livelihood • Measures, policies and plans supporting awareness raising, reduction of pesticides uses, exposure and waste management implemented.

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

REAL Data 2012 -2016	2013	2104	2015	2016	2017
No. of Schools	33	60	29	94	105
No. of Students & Teachers	1935	5598	6250	9885	8708
No. of Farmers	2812	4038	3300	3137	1801
Total	4747	9636	9550	13022	10509
% females		53%	58%	53%	50%

The

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 are being integrated into the training curriculum for the Community Learning Centers under the the Non-Formal Education department in Laos, Thailand and Vietnam.

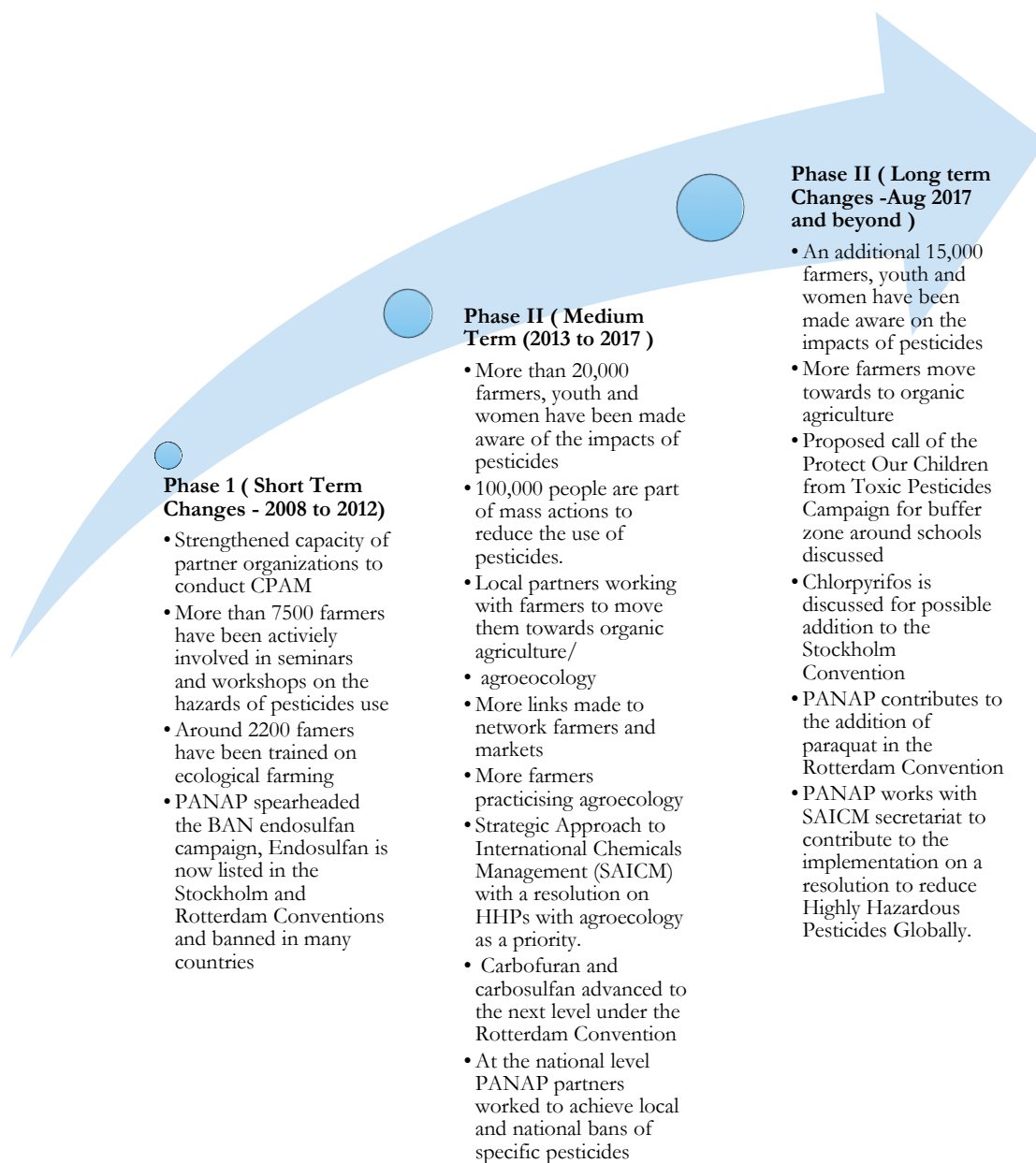
Pesticides impact assessment surveys have continued to be conducted by schools and communities to assess and track the status of pesticides impacts to health and the environment. The data has been used to create awareness and has helped communities to plan and adopt ecological agriculture practices to 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 groups 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 TILT), 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

Institutionalization at the local and national levels in 2017. TFA staff has periodically provided technical supports for capacity building for FAO related programs.

Summary of results 2013-2017, PANAP and partners





PANAP and partners continued to strengthen the capacity of local farmers and rural communities by working together to strengthen agroecology as a movement. With ongoing trainings, more 55,000 farmers, youth and rural women have been using agroecological practices in Vietnam, Cambodia, China, Laos, India and the Philippines over the past 5 years.



PANAP kick started the Protect Our Children Toxic Pesticides (POC) campaign in 2014. The aim of the campaign was to create awareness on the impacts pesticides on children’s health and the environment.

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. In Laos, there is an increased use of pesticides in Mandarin, 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.

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 55,000 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.

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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 aluminium phosphide should be removed by 2020 according the South China Morning Post. Chloropicrin, carbofuran and methomyl will be phased out by 2022. Announcement Link >> <http://www.scmp.com/news/china/policies-politics/article/2122904/china-phase-out-more-pesticides-improve-food-safety>.

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. 5000 new farmers have been trained in various methods such as system of rice farming, vermi composting, bio-pesticides, marketing skills and product branding.

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 7 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 bufferzone around schools and safer environment for children. PANAP and partners have mobilized more than 118,000 persons have been made aware and are part of mass actions to reduce the use of pesticides. The original baseline of Phase 1 was 7,500 persons.

In Cambodia, Po Ampil school was featured in the Social Breaking News- SBN <https://www.youtube.com/watch?v=hKz2EtMdgbQ>. Po Ampil School and local authorities took the lead by asking surrounding farmers not to spray pesticides during school hours. Some outcomes of the campaign include greater awareness of pesticides impacts on children and the creation of a pesticide free bufferzone around schools in Vietnam and Cambodia. PANAP's pesticide free bufferzone campaign has garnered 700 signatures (online and hard-copies).

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.

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 2013-2017, 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. The

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 2013-2017, PANAP and partners

Ongoing campaigns and advocacy work have advanced the progressive ban of HHPs, promoted safer alternatives, including agrobiodiversity based ecological agriculture. 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, on behalf of PAN Int, 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, 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.

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. Link >> <http://files.panap.net/resources/Global-Governance-of-Highly-Hazardous-Pesticides-PAN.pdf>. PANAP’s recommendation was featured in UNEP Asia Pacific YouTube Chanel >> https://www.youtube.com/watch?v=sf_D8IHzeaQ.

Over 530 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 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, on behalf of PAN Int, 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.

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 21,200 farmers had participated in IPM/pesticide risk reduction education/training programmes by the end of 2017 (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).¹³

¹³ For details on these contributions, see relevant table in MTR-2016 final report.

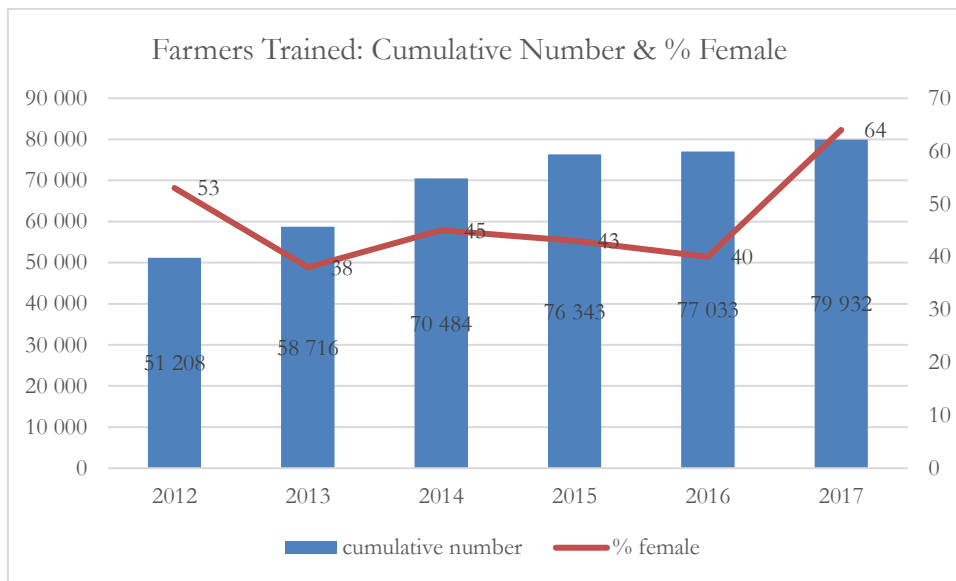


Chart 1: Farmers Trained – Cumulative Number and % Female, 2012-2017

All member countries have continued to strengthen and innovate their national IPM/pesticide risk reduction programmes supported by policy declarations. A good example is Vietnam’s 2015 Directive 2027/QĐ-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. 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 Phúc and Deputy Prime Minister Vu Duc Dam visit IPM-FFS alumni farmers’ fields, Hanoi, September 2016

In Cambodia, farmers continue to invest their own money through savings in IPM Farmers’ Clubs to continue group learning activities and support sustainable production (See Chart 2).

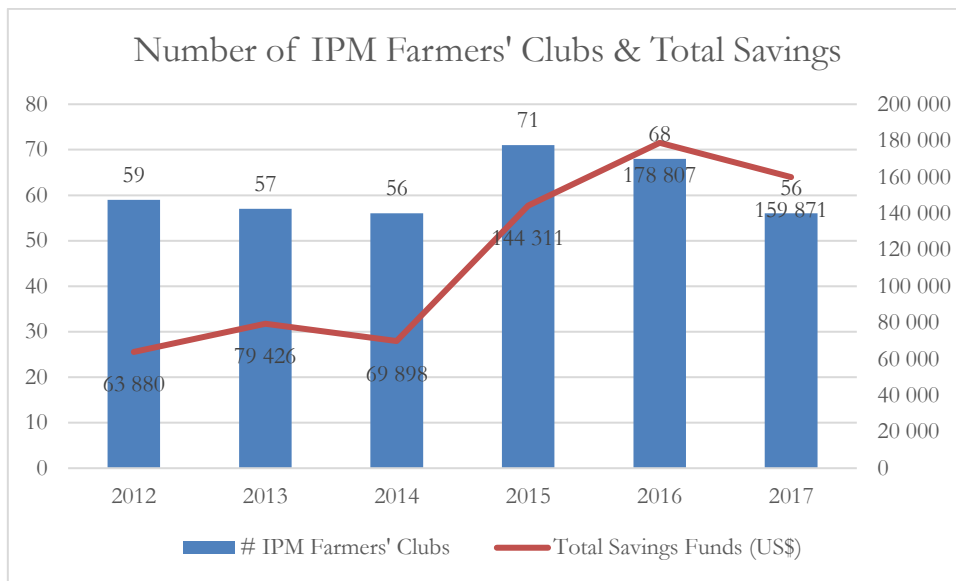


Chart 2: Number of IPM Farmers’ Clubs and Total Savings, Cambodia, 2017

In Lao PDR, the government at national level is keen to develop an umbrella policy for clean and green agriculture development and recently requested FAO to work with government to develop such a national strategy. 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 agriculture¹⁴.

The 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 Workplan (2016-17), including technical assistance for regional workshops, participant travel and information exchange. The FAO component also supported implementation of the FAO component (GCP/RAS/288/AIT) of the EU-funded and AIT managed Regional Project on System of Rice Intensification in the Lower Mekong River Basin countries, with farmer participatory action research (FPAR) in rain-fed rice production in 3 project countries (Cambodia, Lao PDR and Vietnam) during 2013-2018¹⁵. During the reporting period, additional support was provided for women (FPAR) groups and landless laborers to pilot various income generating activities related to SRI, e.g., mushroom production using rice straw, aimed at raising rural incomes for poverty alleviation.

Finally, the IPM component has also helped develop, provide technical support to and deliver FAO’s flagship Regional Rice Initiative in three pilot countries (Indonesia, Lao PDR and Philippines). This initiative, operational since 2013, is 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 2017, aside from strengthening the work on aquatic biodiversity/rice-fish, attention was given to the importance of soil health in farming systems and the development of an FAO position paper and a policy paper for submission to the ASEAN AWGATE.

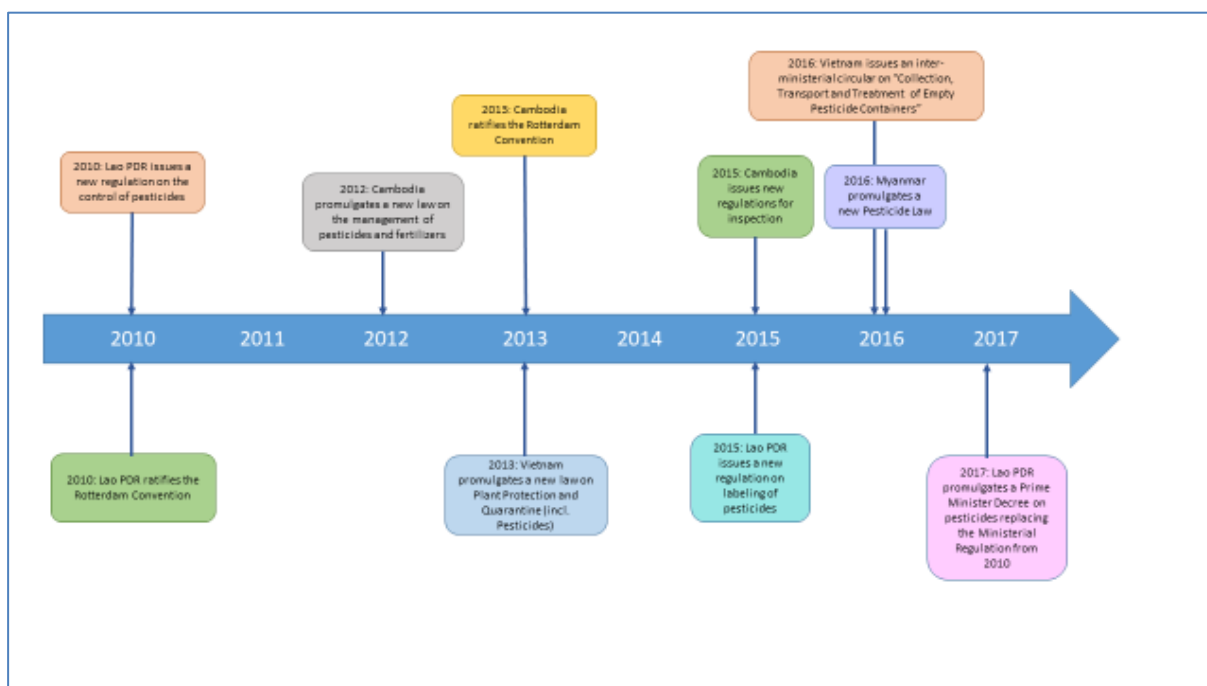
¹⁴ <http://www.fao.org/farmer-field-schools/news-and-events/detail-events/it/c/900282/>

¹⁵ For a video link on this SRI project and its work in Lao PDR: <https://www.youtube.com/watch?v=k8VzdM46fMY>

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.

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 supported capacity building for improved pesticide registration process following the latest FAO guidance¹⁶.

In Lao PDR, a Prime Minister Decree on Pesticide Management was developed and promoted with programme support¹⁷. 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 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 are intended as input to updating pesticide inspection booklets and other guidance materials prior to inspections scheduled to resume with programme support in 2018.

¹⁶ <http://www.fao.org/pesticide-registration-toolkit/en/>

¹⁷ <http://www.vegetableipmasia.org/news/view/136>

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 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 or severely restricted in other countries.

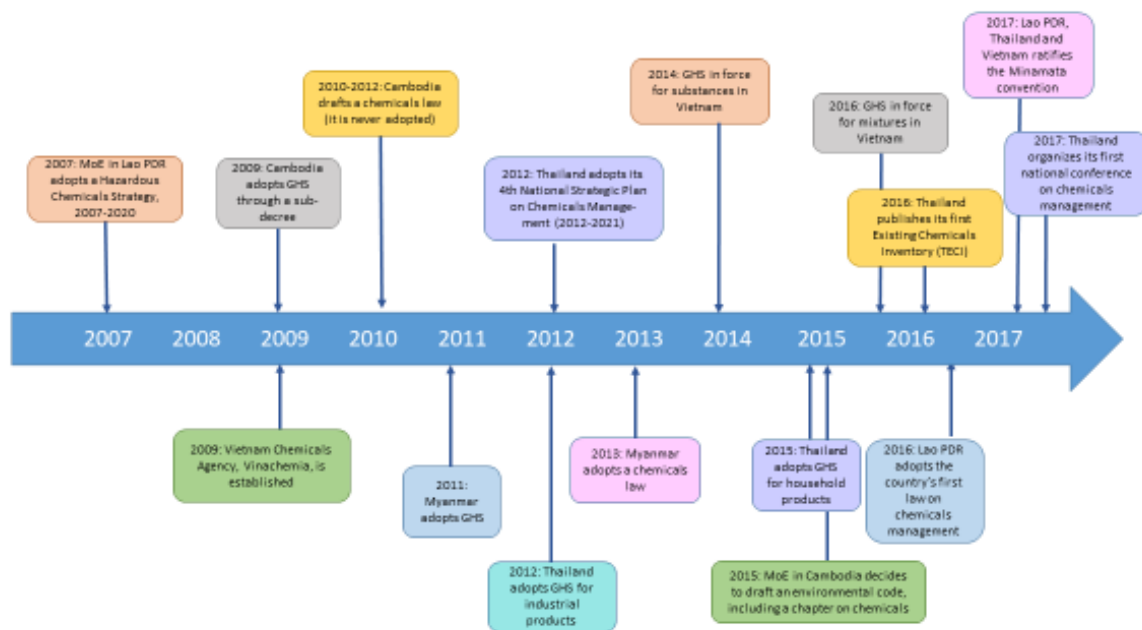
The programme has also contributed with important input and advice in the development of FAO's Pesticide Registration Toolkit. The toolkit is an on-line decision support system for pesticide registrars in countries around the world, especially developing countries with limited resources. It assists registrars 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 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 workshops were organized in Beijing in June and in Hanoi in October 2017. 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 adaptation 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 and subsequent training of inspectors and pilot inspection can re-commence, scheduled for 2nd quarter of 2018.

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

All member countries have made steady progress towards sound management of chemicals. At the beginning of the programme, only Thailand had some degree of organized 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 (see timeline below). Regional collaboration and information exchange, supported by the programme, has been crucial in some of the later developments of legislation etc.



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 etc. Almost 280 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 regional chemicals management Forum, supported by KemI and organized in collaboration with the member countries, provides 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 2017, 5 regional forums have been organized with a total number of about 310

participants (44 % women) from the member countries and other invited country delegations (excluding lecturers and other experts). The accumulated number of new participants at these 5 forums is 192 persons (55 % 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) and on two occasions participants from Bhutan have taken part in Forum meetings. Participants have been introduced to a number of different topics on 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 11.

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
	<ul style="list-style-type: none"> • Food and Agriculture Organisation of the United Nations (FAO), Integrated Pest Management and development of legal framework on pesticides • 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)
10 (2016)	Introduction to Chemicals in Products – Challenges and approaches
	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
	EU legislation on chemicals in products
	SAICM Chemicals in Products Programme, CiP
	Enforcement of legislation on chemicals in products
	Chemicals management at H&M
	Chemicals management at Beiersdorf
	Carbon Roadmap Project at Tesco Lotus
	GEF project on chemicals in textiles
	A planned project on chemicals in toys

Forum	Topic
	Swedish examples of collaboration with industry
11 (2017)	Update on the Minamata convention and support from UNEP connected to implementation of the convention
	Results from a pilot project on mercury in ASGM
	Presentation of KRICT-ASEAN Chemical Cooperation Center
	Asia-Pacific Forum on Health and Environment - An introduction
	Asia-Pacific Forum on Health and Environment - Thematic working group on toxic chemicals
	Introduction to human rights and environment
	Chemicals and human rights
	Chemicals management and the sustainable development goals (SDGs)
	Strategy for Sweden's regional development cooperation in Asia and the Pacific region
	Introduction to ASEAN Working Group on Chemicals and Waste (AWGCW)
	Gender equality and chemicals

6 Organisation and coordination

6.1 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 80 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 SRP¹⁸, FAO provides technical assistance and participates in collaborative activities, including revision of the SRP standards as well as participation in SRP workshop and conference events.

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

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. In 2017, a workshop on Empowering Farmers through FFS-IPM Training in Support of Sustainable Intensification of Crop Production was conducted in Kathmandu, Nepal on 27 February to 2 March 2017 – with seed funding from APPPC. 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.

Since the creation of the ASEAN working group on chemicals and waste 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 two years, invitations to take part in major regional meeting have been extended to respective organization and at the next annual meeting of the working group (May 2018), a representative from KemI will present ideas for future collaboration

¹⁸ 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.

between ASEAN and KemI to the member states. This will hopefully result in concrete activities to support sound management of chemicals in the region.

Since the beginning of phase 2, KemI has also been having continuous dialogue and collaboration 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.

6.2 Internal collaboration/coordination

The return of KemI's programme coordinator to Sweden has affected the possibility to take part in some activities and meetings in the region. The close collaboration between KemI and partners that developed during the presence of KemI in the region has, however, continued and contributes to an efficient implementation 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 will be taken into account when designing a new project proposal.

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

6.3 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.

7 Budget follow-up

The budget follow up has been based on KemI's official financial follow up and final financial reports from partners (FAO RAP, TFA and PANAP). KemI's official financial follow up can be found in a separate report dated XX, 2018 (Finansiell redovisning 2017 avseende regional samarbete i Sydostasien. The below tables reflects figures in this report.

7.1 Budget follow up 2013-2017

Budget follow up 2013-2017		Year 2013*	Year 2014	Year 2015	Year 2016	Year 2017**	Total
Organisation		(SEK)	(SEK)	(SEK)	(SEK)	(SEK)	(SEK)
Pesticide Action Network Asia Pacific (PAN AP)	Grant from Sida	1 400 000	2 800 000	2 800 000	2 500 000	3 100 000	12 600 000
	Expenses	1 059 902	3 071 334	2 888 006	3 366 542	2 467 820	12 853 604
	Balance	340 098	-271 334	-88 006	-866 542	632 180	-253 604
The Field Alliance (TFA)	Grant from Sida	1 050 000	2 090 000	2 090 000	1 553 460	2 626 540	9 410 000
	Expenses	413 512	1 674 316	2 897 039	2 098 344	2 169 874	9 253 085
	Balance	636 488	415 684	-807 039	-544 884	456 666	156 915
FAO Regional Office Asia Pacific (FAO RAP)	Grant from Sida	4 235 000	9 134 000	9 135 000	7 690 000	9 390 000	39 584 000
	Expenses	1 721 394	9 527 022	8 053 898	8 001 795	9 152 419	36 456 528
	Balance	2 513 606	-393 022	1 081 102	-311 795	384 951	3 274 842
Swedish Chemicals Agency (KemI)	Grant from Sida	1 780 005	4 532 789	3 388 850	4 560 118	4 058 814	18 320 576
	Expenses	1 780 005	4 532 789	3 388 850	4 560 118	4 058 814	18 320 576
	Balance	0	0	0	0	0	0
Total	Grant from Sida	8 465 005	18 556 789	17 413 850	16 303 578	19 175 354	79 914 576
	Expenses	4 974 813	18 805 461	17 227 793	18 026 799	17 848 926	76 883 792
	Balance	3 490 192	-248 672	186 057	-1 723 221	1 473 797	3 178 153

7.2 Budget follow up 2017

The budget follow up is based on the official financial statement from FAO, audited financial reports from PANAP and TFA and KemI's official financial follow up (separate report dated 24 April, 2018, Finansiell redovisning avseende regional samarbete i Sydostasien).

7.2.1 Divided by objective

Overall budget and follow-up year 2017		Remaining balance from 2016 (local currency)	Budget according to agreement (SEK)	Proposed budget for 2017 (SEK)	Transferred by KemI (SEK)	Received by partners (in local currency)	Exchange rate	Total budget, incl remaining balance from previous year (local currency)	Expenditure 2017 (local currency)	Expenditure 2017 (SEK)	Percentage of total expenditure	Difference between budget and expenditure (SEK)	Balance (local currency)	Balance (SEK)	Comments
Objective	Organisation														
1	Increased awareness and enhanced capacity in farming communities, schools, institutions and among consumers within partner countries to reduce the risk		2 012 500	2 012 500					780 116 MYR	1 575 007	64	437 493			1
	TFA		1 925 000	2 141 626					5 926 057 THB	1 498 331	68	643 295			2
2	Enhanced international, national and local advocacy on sustainable pest management/agriculture		787 500	787 500					442 221 MYR	892 817	36	-105 317			3
	TFA		175 000	472 056					2 794 195 THB	706 478	32	-234 422			4
Total PAN AP		-397 593 MYR	2 800 000	2 800 000	3 100 000	1 535 460 MYR	2,019	1 137 867 MYR	1 222 337 MYR	2 467 824			-84 470 MYR	-170 540	5
Transfer by PAN AP to partner organisation		Work related to objective 1		732 900					327 148 MYR	660 492		72 408			
		Work related to objective 2		224 700						0		224 700			6
		Total TFA	3 085 THB	2 100 000	2 613 682	2 626 540	10 388 244 THB	0,253	10 391 329 THB	8 720 252 THB	2 204 809		1 671 077 THB	422 511	7
Transfer by TFA to partner organisation		Work related to objective 1		1 316 394					4 201 929 THB	1 062 406		253 988			8
		Work related to objective 2		217 701					930 809 THB	235 344		-17 643			
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					851 241 USD	7 233 413	79	-443 413			9
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	FAO HQ	1 750 000	1 750 000					225 832 USD	1 919 005	21	-169 005			
		Total FAO	172 073 USD	8 540 000	8 540 000	9 390 000	1 105 032 USD	8,497	1 277 105 USD	1 077 073 USD	9 152 419		200 032 USD	1 699 770	See above
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	KemI	700 000	645 000						350 758	9	294 242			10
5	Strengthened capacity for chemicals management within authorities, industries and among relevant CSOs in the partner countries.		2 716 000	3 270 000						2 585 822	64	684 178			11
General technical support to the programme			1 085 000	1 225 000						0	0	1 225 000			12
Overall programme coordination (including			1 260 000	1 260 000						1 122 234	28	137 766			13
		Total KemI	5 761 000	6 400 000				6 400 000	4 058 814				2 341 186		14
TOTAL			19 201 000	20 353 682	15 116 540			19 206 301	17 883 865			2 469 817	1 951 742		14

Comments to the overall budget follow up:

1. The decrease in the expenditure was due to transfer of funds to PEAC already in 2016.
2. The underspending is due to a postponed workshop and delays experienced during previous years of the programme
3. Increased expenditures due to a larger number of meetings in 2017 than expected. In addition, PANAP staff also attended a number of national meetings.
4. The request for engagement of TFA and their local partners in policy related work was greater than predicted at the planning stage.
5. See above explanation, 3.
6. The allocation was taken from the budget of Objective 1. The partners have used part of these allocation towards work on policy advocacy
7. Remaining funds originate from previous delays of programme activities and .
8. Part of the payment will be made in January 2018.
9. Whereas expenditure in 2017 for both FAO implemented components was close to forecasted annual budget needs, remaining balance related to underspending in previous years (mainly delays in promulgation of new legislation and subsequent activities related to enforcement).
10. The underspending is due to delayed work connected to enforcement activities in Lao PDR and lack of request for support to development of legislation (provided by the WB instead)
11. The reduced expenditure is partly explained by a delayed invoice from SEI for the chemicals survey. Additional factors influencing the expenditures were reduced cost for organizing the training in Myanmar and lack of pilot project proposals from the member countries
12. Planned expenditures have instead been reported under objective 4 and 5, respectively.
13. Underspending due to a postponed workshop with expected costs for consultancy support.
14. Only remaining funds from TFA, PANAP and FAO are included in the overall balance. Since KemI invoices Sida for actual costs, the remaining balance is not available to the programme unless a specific request to use the funds is sent to Sida.

7.2.2 Divided by costs kinds

Detailed budget and follow up year 2017	Type of cost	Proposed budget for 2017 (SEK)	Percentage of total budget	Expenditure 2017 (local currency)	Expenditure 2017 (SEK)	Percentage of total expenditure	Difference between budget and expenditure (SEK)	Comments
Organisation								
Pesticide Action Network Asia Pacific (PAN)	Salaries	392 000	21	280 591 MYR	566 496	31	-174 496	1
	Travel expenses	364 000	20	266 513 MYR	538 073	30	-174 073	2
	Other costs	1 086 400	59	348 084 MYR	702 760	39	383 640	3
Subtotal, PAN AP		1 842 400		895 188 MYR	1 807 330		35 070	
	Transfer to partners	957 600	52	327 148 MYR	660 492	37	297 108	4
Total PAN AP (incl. transfer to partners)		2 800 000		1 222 336 MYR	2 467 822		332 178	
The Field Alliance (TFA)	Salaries	785 732	30	2 818 857 THB	712 713	32	73 019	
	Travel expenses	64 829	2	237 190 THB	59 971	3	4 858	
	Other costs	229 026	9	531 467 THB	134 375	6	94 651	
Subtotal TFA		1 079 587		3 587 514 THB	907 059		172 528	
	Transfer to partners	1 534 095	59	5 132 738 THB	1 297 750	59	236 345	
Total TFA (incl. transfer to partners)		2 613 682		8 720 252 THB	2 204 809		408 873	
FAO Regional Office Asia Pacific (FAO RAP), IPM component	Salaries	2 172 800	32	315 507 USD	2 681 018	37	-508 218	5
	Travel expenses	300 000	4	63 508 USD	539 659	7	-239 659	
	Other costs	4 317 200	64	472 226 USD	4 012 736	55	304 464	
Subtotal FAO (IPM)		6 790 000		851 241 USD	7 233 413		-443 413	
FAO Regional Office Asia Pacific (FAO RAP), Policy component	Salaries	500 000	29	84 029 USD	714 036	37	-214 036	6
	Travel expenses	400 000	23	54 663 USD	464 498	24	-64 498	
	Other costs	850 000	49	87 140 USD	740 471	39	109 529	
Subtotal FAO (Policy)		1 750 000		225 832 USD	1 919 005		-169 005	
Total FAO		8 540 000		1 077 073 USD	9 152 419		-612 419	
Swedish Chemicals Agency (KemI)	Salaries	2 470 000	48		2 605 780	62	-135 780	7
	Travel expenses	260 000	5		241 918	6	18 082	
	Other costs	2 366 000	46		1 346 386	32	1 019 614	8
Total KemI		5 096 000			4 194 084		901 916	
Total	Salaries:	6 320 532	33		7 280 043	40	-959 511	
	Travel expenses:	1 388 829	7		1 844 119	10	-455 290	
	Other costs	11 340 321	60		8 894 971	49	2 445 350	Including transfer to partners
	Total:	19 049 682			18 019 133		1 030 549	

Comments to the detailed budget follow up:

1. Increase in expenditure were due to salary increments for staff and hiring of additional staff for information and communication
2. Travel expenses includes all travel costs for partners when attending workshops organised by PANAP. It also includes travel for policy advocacy purposes. In 2017, all partners were involved in advocacy work and travels by PANAP staff and consultants was therefore larger than expected.
3. Funds budgeted for this was reallocated to salaries and travel expenses.
4. The decrease in the expenditure was due to transfer of funds to PEAC already in 2016.
5. Due to challenges in recruitment of international consultants during 2nd half of 2017, required FAO Professional Staff inputs (and associated travel costs) were higher than anticipated
6. Due to challenges in recruitment of international consultants during 2nd half of 2017, required FAO Professional Staff inputs (and associated travel costs) were higher than anticipated
7. The cost for salaries was slightly higher than anticipated due to involvement of a new expert at the international unit in one of the regional workshops
8. The reduced expenditure is partly explained by a delayed invoice from SEI for the chemicals survey. Additional factors influencing the expenditures were reduced cost for organizing the training i Myanmar, lack of pilot project proposals from the member countries and a postponed workshop with expected costs for consultancy support

7.2.3 Details on transfer of funds to local partners

PANAP

Country	Organisation	Transfer in 2017 (MYR)	Transfer in 2017 (estimated amount in SEK)
Cambodia	CEDAC	73 623	148 640
China	PEAC	0	0
Lao PDR	SAEDA	50 726	102 413
Myanmar	Metta	0	0
Philippines	PAN Philippines	67 232	135 737
Vietnam	CGFED	45 197	91 250
	RCRD	45 210	91 276
	SRD	45 160	91 175
TOTAL		327 148	660 492

*Due to new NGO laws in China, funds for 2016, 2017 and 2018 were transferred in 2016.

** CPAM work in Myanmar was delayed and the transfer of funds to Metta was postponed to 2018.

TFA

Country	Organisation	Transfer in 2017 (THB)	Transfer in 2017 (estimated amount in SEK)
Cambodia	ATSA	1 109 710	280 577
Lao PDR	Rural Development Sole Co. Ltd.	1 168 801	295 517
Myanmar	MIID	347 000	87 735
Thailand	TEF	1 249 783	315 992
Vietnam	ICERD	1 257 444	317 929
TOTAL		5 132 738	1 297 750

FAO RAP

FAO Country Office	Transfer in 2017 (USD)	Transfer in 2017 (estimated amount in SEK)
Cambodia	162 069	1 377 180
China	2 918	24 796
Lao PDR	97 300	826 806
Myanmar	7 048	59 890
Thailand	0	0
Vietnam	77 500	658 556
TOTAL	346 835	2 947 227

All partners

Country	Total transfer in 2017 (estimated amount in SEK)
Cambodia	1 806 397
China	24 796
Lao PDR	1 224 736
Myanmar	147 625
Philippines	135 737
Thailand	315 992
Vietnam	1 250 186
TOTAL	4 905 469

8 Follow up of audit issues (2017)

Based on issues raised by KemI's external auditor, KPMG, KemI's economy unit will make the following improvements:

- A first step of improvement has been made to allow production of financial reports from the economy system (Agresso) that are in line with the cost kinds defined by Sida. KemI will explore the possibilities to create a compiled report from Agresso, showing the overall follow-up of a project/programme. At present, the economy system doesn't allow follow up of staff cost (fees) but only the number of work hours. Since the fees are regulated by KemI's framework agreement with Sida and are not identical to KemI's regular fees they need to be calculated separately. KemI will investigate if it is feasible and cost efficient to include the correct fees in Agresso.

9 Proposals for future work

9.1 General

During the last year of implementation all partners will focus on making sure that all programme objectives are reached and that activities in order to reach an increasing number of beneficiaries.

PANAP and partners will continue to create awareness on the impacts of pesticides on human health. Mobile applications for community based pesticides action monitoring (CPAM) continue to be implemented next year (2018). A regional report on pesticide use and human rights will be launched. PANAP is also planning for a regional consultation workshop for health workers in July 2018 in Hanoi, Vietnam to include and engage more health workers, doctors and medical officers.

The FAO programme components will continue to provide programme development support and technical assistance for strengthening policy advice and pesticide management at national and regional level. The FAO-IPM component will support implementation of community education and farmer training programmes on IPM/pesticide risk reduction in the programme countries – especially those with government investments and/or funded by other donors scaling-up the pilot activities supported by the Swedish-supported IPM/PRR programme. Likewise, FAO staff involved in this programme will continue

provide programme development support and technical assistance to FAO's Regular Programme funded Regional Rice Initiative in three pilot countries (Indonesia, Lao PDR and Philippines) with a focus on documentation of results for generating policy support for scaling out this successful capacity building work involving farmers for sustainable rice production and management/restoration of rice-based landscapes. Support will be provided to the planned regional programme on soil health when funding from the ASEAN AWGATE becomes available. The component will also continue to support the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention and in particular, the APPPC Standing Committees on IPM and Pesticides.

KemI will continue to support capacity building of governments in all member countries. Since financial support for sound chemicals management is an issue that is raised by many countries at various meetings (e.g. within SAICM), KemI will arrange a specific workshop focusing on sustainable financing of chemicals management. In order to capture the countries' current priorities and needs in relation to sound management of chemicals, KemI will engage an RBM consultant to facilitate discussions on problem analyses and objectives for the coming 5 years at a workshop in 2018.

After finalization of the two pilots on mercury, the results will be analyzed and shared with concerned stakeholder. A regional workshop will be organized to discuss the results from the projects and how to continue mercury phase out in the region

9.2 Gender issues

The programme will continue its efforts to promote gender equality in all parts of the work and continue to highlight examples and stories from the book "Stories from the Field" in various platforms, forums and campaigns.

PANAP and partners have on-going training and capacity building with a focus on women's participation in various platforms for research, policy advocacy and leadership. The issue of gender is also strengthened by aiming for a 30-50 % engagement of female participants and beneficiaries from this project.

The Field Alliance and partners will continue to increase women's and girls' participation in the program. In Cambodia, the program will continue to support women saving groups and in Vietnam supporting women groups for producing nutritional indigenous vegetables to supply pre-schools. In Thailand, the community based safe school lunch is being piloted to formulate policies for safe school lunch and minimize pesticides exposure to schools. Capacity building will emphasize safe and nutritious food as well as reduced use of food additives and preservatives in cooking. Analysis of gender roles in pesticides handling will continue to be used for program planning and training. The efforts are being integrated into curriculum and programs for schools and communities under the ministries of education and other donors' program.

Gender equity will continue to be at the core of the design of FAO's community education programmes on IPM/pesticide risk reduction and National IPM Programmes. Recognizing the important contribution of rural women to food security and nutrition at household and community levels, women will be at the center of any action to promote sustainable agriculture and eradicate food insecurity as well as poverty. FAO through the 2030 Agenda envisages a future where achieving gender equality and empowering women is key and the precondition to breaking the cycle of poverty and hunger and achieving the Sustainable Development Goals (SDGs). FAO-HQ recently launched a Global Farmers Field School

Platform and a website, with a section on social inclusion and gender to be added in 2018. The FAO Regional Office for Asia and Pacific Region prioritizes gender action. FAO's development of male and female Farmer Trainers will continue as to be able to reach more farmers through farmer training in season-long FFS or short, focused training on pesticide risk reduction. Systematic efforts will be pursued towards improved gender-disaggregated programme data collection and reporting and the importance of the information for designing more gender-sensitive programmes.

In order to further strengthen KemI's internal capacity to integrate gender aspects, KemI will continue to take part in trainings and workshops on gender issues that are organized by Sida and the national network of government agencies active in development cooperation (N4L).

9.3 Poverty and human rights perspective

FAO, within the context of its IPM and pesticide risk reduction training interventions, will continue to address poverty alleviation by means of increasing incomes of the rural communities in selected areas in member countries. This can be achieved by obtaining high and stable crop yields and improved net returns obtained from reduction of on-farm use of pesticides and more efficient production activities and diversification thereof while reducing costs of unproductive inputs. This work will support poverty alleviation initiatives and be implemented in several member countries. This work will also support sustainable intensification of crop production as promoted by FAO under the banner of "Save and Grow" and connect functionally -and provide substantial support- to implementation of several FAO Regional Initiatives, such as RRI, Zero Hunger, One Health and Blue Growth. Case studies outlining the project impact on poverty alleviation in various member countries will be documented and communicated in order to assure widespread knowledge of these results.

PANAP will continue exploring monitoring tools (mobile application) and campaigns on the impacts of pesticides on children and farmers using the Child Rights Framework, the Right to Food Framework and the Business and Human rights Framework. PANAP will also launch a campaign on corporate accountability with a human rights perspective to further emphasize the link between pesticides and human rights violations. PANAP will link with groups to build solidarity and campaigning as well as other groups such as ECCHR (European Center for Constitutional and Human Rights) and Pubic Eye to strengthen campaigns on agrochemical corporations and their violations on human rights.

TFA will continue to expand programs in the poor and high-risk pesticide exposure areas. Agroecology training for farmers and schools will be expanded to ensure food security, safe and nutritious foods, income generation and climate change resilience strategies. Increased supplies of safe vegetables and materials for school feeding/lunch programs will also be supported.

In order to increase knowledge on this issue within the international unit, KemI will continue to take 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 unit will take part in a one-day training on human rights in order to further increase their knowledge in this field. KemI will continue the dialogue and collaboration with the Raoul Wallenberg Institute (RWI) and explore further interactions between chemicals and human rights. Continued contact and interaction with the UN Special rapporteur on human rights and toxic chemicals is also foreseen. To highlight the links between sound chemicals management and protection of human rights the Final Regional Forum will possibly have a

specific session devoted to this issue with planned participation from RWI, the UN Special Rapporteur and other relevant organisations.

9.4 Sustainability

All partners will increase their efforts to transfer knowledge and responsibilities to institutions that can continue the work on permanent bases after the end of the programme.

FAO will continue to advocate for increased government budget allocations in support of farmers training on IPM and Pesticide Risk Reduction through Farmers Field School-based educational approaches.

TFA will collaborate and support the development and networking of young farmers to fill the increasing gap of aging farming populations in the region.

PANAP will further explore online portals and e-databases so that information, publications, reports and documentation could be stored on online, accessible to more people.

KemI will continue the collaboration and dialogue with UN Environment Regional office in Bangkok and the ASEAN Working Group on Chemicals and Waste (AWGCW) in order to assure that activities are coordinated and complement each other. KemI will take part in the 3rd meeting of AWGCW and present the current regional collaboration and ideas for the future.

9.5 Anti-corruption

Partners will continue their efforts to deal with corruption by paying attention to this issue in all parts of the work. The improved routines for the auditing process will continue to be implemented as well as the use of an increased level of detail in the financial reporting from all partners.

PANAP, TFA and FAO will continue to create awareness of internal and external audits and ensure that all staff and partners are aware of anti-fraud control policies and mechanisms. At community and local levels, FFS alumni will be enjoined to continue to be guardians of their environment, putting pressure on private sector to be more responsible (i.e., especially in pesticide trade) and demand quality service - such as farmer training - from the public sector.

9.6 Communication

At the last regional forum within the current programme, partners will consolidate and share information about the results from the programme. The focus will be to transfer as much as possible of the results, methods and contacts to all the stakeholders that will remain and work in the region as well as to inform about possible future initiatives and support from the Swedish Chemicals Agency and other concerned organisations. Various communication materials will be developed to support this work.

The FAO Asia Regional IPM/Pesticide Risk Reduction Programme will continue to share information through the programme's existing website (<http://www.vegetableipmasia.org>) and its Facebook and Twitter page. New releases on a variety of different activities as well as case studies on success stories based on work supported by the Swedish funded project will be published. The FAO Asia Regional

IPM/Pesticide Risk Reduction Programme website is now linked to the Global FFS Platform and it is envisioned that the users of the website will increase as it become more accessible to more users.

PANAP will continue to improve the website www.panap.net. The site was created to enhance social engagement, sharing interaction, which can lead to increased online advocacy. This will also assist PANAP in its outreach to a youth and more diverse audience. More human stories and poisoning cases will be collected to be featured through various media sources. Focus in 2018 will be geared towards the impacts of pesticides on human rights violations to broaden the outreach among various group working on similar issues. PANAP plans to engage with more doctors, health workers and other groups related to public health to further advance the issue of pesticides and its impacts on human health.

TFA will promote the use of residues testing on vegetables and meat products to increase awareness for safe foods production among government staff, private sector, local government, schools and communities. Workshops to disseminate studies of pesticides impacts to children and communities and introduction to various test kits are planned for Myanmar and Vietnam. Digital materials will be developed to create awareness on pesticides impacts to health and environment for schools and communities and to encourage policy and programs towards safer food production and promotion of Safe School Lunch. A video production of REAL program in each country will be developed for dissemination at all levels and in digital form.

In 2018, KemI will restructure the web pages with information related to international work to make it easier for the target audience, government agencies working on issues related to chemicals control, to find relevant information and guidance.

9.7 Results and risk management

All partners will continue to monitor the surrounding world to be prepared for changing circumstances and political priorities and be able to adapt and adjust planned activities. 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. Activities that involve the least amount of risk and human rights violations for partners in countries in these countries are being planned.

Partners will continue to analyze and document the results of the programme interventions and make documentation available to implementing partners and stakeholders for purposes of learning and adjustments in work plans, if need be. Risk levels are continuously monitored and mitigation measures implemented and adapted to current circumstances and needs.

9.8 Private sector collaboration

PANAP and partners will continue to facilitate exchange visits and collaboration between companies, markets and farmers while supporting and promoting companies that invest in organic products and vegetables.

TFA will continue to solicit partnership with foods producers, safe food markets, schools and hospitals to link with farmers' training programs. Marketing topic has been added to the training curriculum and will continue to be implemented in the local and national programs in order to assure sustainable continuation.

To support actions by communities to reduce risks from pesticides, the FAO project interventions in 2018 will continue to assist IPM-farmer networks gain access to private sector provided good quality seeds and biological control products. A more systematic approach will be taken to address market-related issues in the training curricula and engaging private sector partners who observe responsible and fair trade practices and sustainable value chains. FAO will continue to engage with relevant public and private sector partnerships/platforms, including the Sustainable Rice Platform (SRP). And where possible and as relevant to mandates of government agencies – facilitate organization of FFS groups into Cooperatives and linkage to markets. For example, in Cambodia the Provincial Department of Agriculture is mandated by law to register farmers' groups as Cooperatives and provide training for these groups. In Vietnam, the project will continue supporting provincial Plant Production and Plant Protection Sub-Departments implementing pilot activities linking IPM farmer groups with sustainable rice value chains.

FAO will continue to explore partnerships and facilitate linkages of farmer groups with private sector ranging from sources of good seeds to alternatives to pesticides and better market access. Technical advice will continue to the UNEP/IRRI led Sustainable Rice Platform as to ensure that standards for sustainable production do not favor the vested interest of industries but prioritizes farmers' and community health and safety, profits and are environmentally sound.

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Annex 1: Risk matrix 2017

Risks	Initial Estimated Risk Value*	Risk during year 2017	Risk mitigation measures taken during 2017	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 cannot be organised
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 further regulated in China, Cambodia and the Philippines.
4	Funding uncertainties	Medium-High	Stable	TFA and PANAP: Continuous fundraising activities to avoid lack of funds.	TFA: Increased 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 safety labels and information or might be even illegal/not registered.
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 chemicals such as biological control.	

Risks	Initial Estimated Risk Value*	Risk during year 2017	Risk mitigation measures taken during 2017	Comments	
3	Limited access to additional donor resources to ensure maximization of implementation capacities	Low	Stable	<p>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.</p> <p>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.</p>	
4	Low interest from Ministry of Agriculture in project participation (Myanmar)	Medium	Lower	In May/June 2017, a national meeting was held with government and CSO partners for strategic planning for project implementation. Follow up discussions have since then been held and the government is keen to work with FAO to implement the project.	
5	Low potential for programme stakeholder collaboration (China)	Low	Stable	Continue to engage civil society organizations in dialogue with governments.	
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 2017. FAO and KemI have arranged meetings with new staff in order to introduce them to the project and the support that can be provided. Collaboration with counterparts in both countries as well as in Myanmar (PPD) has seen continued improvements in 2017.	The programme has reestablished contact with key persons at central level in all countries and there is basis for continued collaboration and support. This bodes well for smooth implementation of programme activities during the final Phase II year (2018).
2	Countries do not ask FAO	Low	Stable	The programme have continued to offer legal	A new request from PPD in Yangon is awaited for

Risks	Initial Estimated Risk Value*	Risk during year 2017	Risk mitigation measures taken during 2017	Comments
assistance for formulation of regulations			support to all countries and have made experts available, also on short notice, in order to respond to requests from the countries.	assistance in legal development. FAO depends on often slow but necessary national policy and regulatory processes to run their course for its technical assistance to be demand-driven and effective. This process necessarily is government-owned and cannot be accelerated with outside assistance/pressure.
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 in both Laos and Cambodia for strengthening capacity for implementation of inspections, with inspection activities scheduled to resume in 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. In 2017, third person was introduced to the programme in order to secure continuous	
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.	
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	

Risks	Initial Estimated Risk Value*	Risk during year 2017	Risk mitigation measures taken during 2017	Comments
			specific measures have been taken during 2017.	
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 2017.	
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 2017.	

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

Annex 2: Detailed narrative reports with results from 2017

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

To continue strengthening national capacity for sound chemicals management in the region, KemI organized a 3-day training on principles and key elements of sound chemicals management for a broad range of government officials and other concerned stakeholders in Myanmar (81 persons in total). Similar trainings were organized in Cambodia and Lao PDR in 2016. The host ministry (Ministry of Industry) presented the latest development in chemicals management in the country and participants were then introduced to a number of topics, such as background to the need for chemicals control, international work, hazard assessment and communication (the Globally Harmonized System for Classification and Labeling, GHS), exposure and risk assessment, risk management, occurrence and use (inventories and registries) and enforcement. Presentations from KemI experts were mixed with group discussions and presentations in plenary. Participants came from a broad range of ministries/agencies and other concerned actors. Evaluation from the training showed that the participants were highly satisfied with the content of the training and the blend of presentations and discussions.

Organisation of two 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. Altogether, around 60 registration officers attended the workshops and got in-depth knowledge on the content and structure of the toolkit and how it can be used to support pesticide registration in the day to day work.

The Field Alliance and partners have been promoting REAL activities on Agrobiodiversity and Pesticides Impact Assessments through schools and community learning centers in Cambodia, Laos, Myanmar, Thailand and Vietnam. TFA and partners also works with relevant governmental agencies such as the ministry of health on the impacts of pesticides to health and chemical management plan and policies. TFA also supported regional exchange of key ministerial personnel to be exposed to innovations and efforts as well as provided technical support for capacity building of all concerned agencies to reduce the use and negative impacts from agro-chemicals and waste to health and the environment and implement ecological agricultural practices as alternatives for pesticides uses. Up to now, approximately 8,400 students and 300 teachers from 105 schools and 1,800 farmers from 48 communities and community learning centers (CLC) have participated in the REAL program.

REAL Data 2017											
Country	School	Communities	CLC	Students	Female	Teachers	Female	Farmers	Female	Total	Females
Cambodia	18	11		1732	930	32	9	264	156	2,028	1,095
Laos	28	32	5	2063	962	111	61	594	229	2,768	1,252
Myanmar	2	5				2	1	91	32	93	33
Thailand	57		29	4629	2167	139	87	852	616	5,620	2,870
Vietnam	22	22	3	1287	734			935	575	2,222	1,309
Total	105	48	34	8424	4059	284	158	1801	1033	10,509	5,250

In 2017, FAO with programme support facilitated the preparation of a policy paper and a draft curriculum and exercises for pilot activities on soil health. The policy paper is intended to advocate for soil health policy and development of a regional programme for funding support from the ASEAN + 3 partnership.

Under the APPPC plans for the 2016-17 bi-ennium, a workshop on Empowering Farmers through FFS-IPM Training in Support of Sustainable Intensification of Crop Production was conducted in Kathmandu, Nepal in 2017 – with seed funding from APPPC and with programme technical assistance. This support is highly valued 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.

FAO in collaboration with regional and local partners organized field visits and a national meeting in Myanmar during the period 1-2 June 2017. The field visit and consultations with field implementers solicited ideas to design collaborative government-CSO-private sector work on IPM/pesticide risk reduction in Southern Shan State under the Sida-supported programme. The national meeting was aimed to inform a larger audience about the regional programme, its goals, activities and results to date, with a focus on ongoing/planned and collaborative work in Myanmar for reducing risks from pesticide and other hazardous chemicals.

In 2017, Lao PDR finalized, promulgated and promoted a new Prime Minister Decree on Pesticide Management with programme support¹⁹. The decree aims to better protect the environment and human health and calls for inter-ministerial collaboration to strengthen pesticide management.

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, PAN AP and partners

PANAP and partners continued to strengthen the capacity of local farmers and rural communities by working together to strengthen agroecology as a movement. With ongoing trainings, around 5,000 farmers, youth and rural women have been using agroecological practices in Vietnam, Cambodia, China, Laos, India and the Philippines in 2017.

In 2017, more than 18,000 farmers, youth and women have been made aware on the impacts of pesticides through various campaigns, workshops and seminars.

General summary of campaigns

PANAP kick started the Protect Our Children Toxic Pesticides (POC) campaign in 2014. The aim of the campaign was to create awareness on the impacts pesticides on children's health and the environment. Since, there are no systematic data collected on poisoning of children and pesticides, PANAP released an infographic on cases of pesticide poisoning globally in 2017. Data on pesticide poisoning on children was

¹⁹<http://www.vegetableipmasia.org/news/view/136>

collected from various sources, mainly from the news. Children continue to be poisoned by the food they eat and drink and also the air that they breathe in. The infographic aimed to create more awareness among governments and the public on the impacts of pesticides.

At the local level, partners have contributed to the Protect Our Children campaign by training young children, students and farmers on organic agriculture, compost making and hazardous use of pesticides. The campaign was celebrated on two days including the International World Environment Day, International Children's Day (Nov 20th) and the No Pesticide Use Week (Dec 3 to Dec 10) in seven countries in Asia Pacific.



In Vietnam, partner SRD along with school children along with farmers grew banana trees around the school area to act as a buffer-zone. As CGFED in Vietnam organized a contest and invited 300 children to participate in the event. In China, PEAC organized several activities for 1157 concerned parents, teachers and students in four primary schools which resulted in no pesticide use in and around schools. In Cambodia, Po Ampil school was featured in the Social Breaking News- SBN <https://www.youtube.com/watch?v=hKz2EtMdgBQ>. Po Ampil School and local authorities took the lead by asking surrounding farmers not to spray during school hours.

Some notable highlights in 2017 include a paper entitled Understanding the Impacts of Pesticides on Children by UNICEF condenses the 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. Link to paper >> https://www.unicef.org/csr/files/Understanding_the_impact_of_pesticides_on_children_-_Jan_2018.pdf

In 2017, PANAP and partners 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 short surveys on pesticide use. In Laos, there is an increased use of pesticides in Mandarin, most likely originating 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.

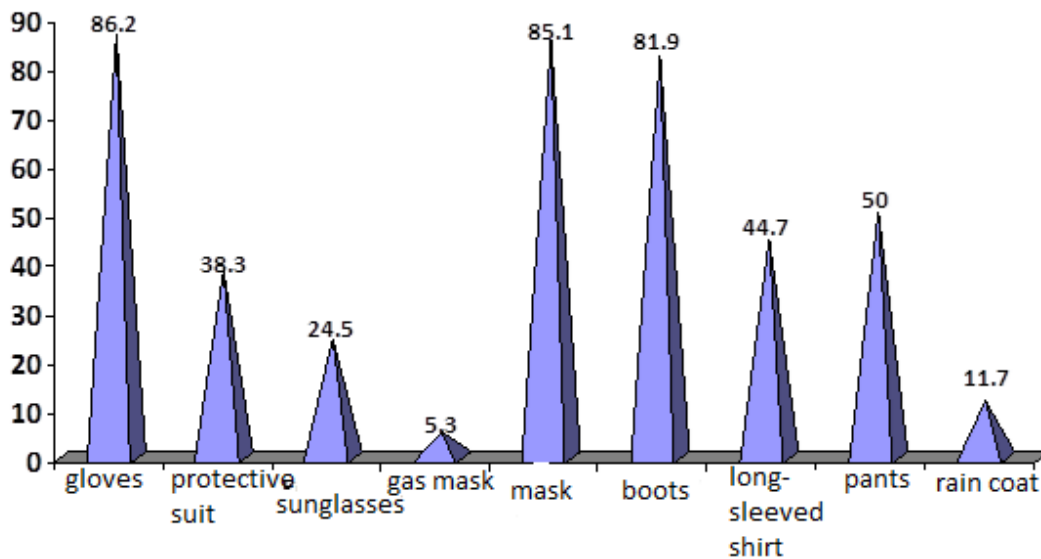
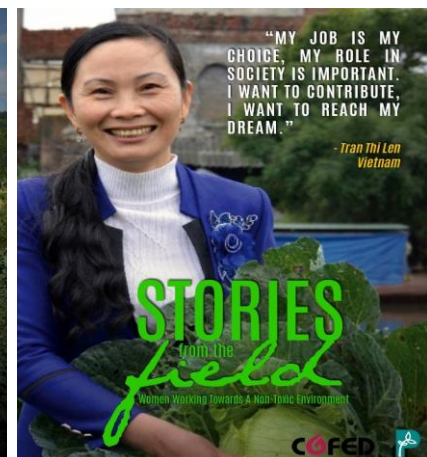
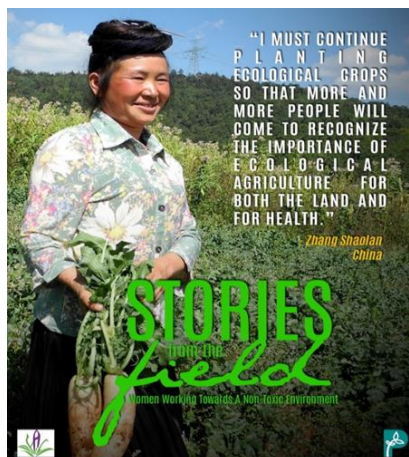


Figure: Percentage of Personal Protective Equipments(PPE) Used by Farmers in North Vietnam.

Social Media Outreach

The POC social media contents garnered a total of 2,769 Facebook reach and 156 Facebook engagement. Consequently, the hashtag reached a total of 94,464 accounts with 127, 903 impressions, 3,781 reaches and 63 engagements in twitter. On the other hand, the NPUW social media contents garnered a total of 1,542 Facebook reach and 66 Facebook engagement while twitter reach is pegged at 3,207 and engagement is pegged at 31. These information and social materials were also shared in PANAP website and list serves.

In 2017, PANAP distributed almost 650 copies of the book “Stories from the Field”. Books were distributed to various national and government agencies, Intergovernmental bodies such UNEP and UN staff, consumers and NGOs at various events, meeting and workshops. Memes (short e-posts) from the book were created and shared on Facebook and Twitter. The mems received a total 51,704 impression on social media.



The mems received a total 51,704 impression on social media. In the villages of Samrong Tong, district of Kampong Speu province in Cambodia, women vegetable farmers are at the forefront of promoting agroecology. A short documentary²⁰, featuring these women and their involvement in the Women Organic Vegetable Producer Group and how they are able

²⁰ Video Link : <https://www.youtube.com/watch?v=C6eQtd3ve10&t=203s>

to improve their health and livelihood through sustainable organic farming was developed with the support of the Cambodian Center for Study and Development in Agriculture (CEDAC).

PANAP updated its website (www.panap.net) in 2016 and unfortunately could not retrieve web hits and number of publications. Actions are currently being taken to calculate web hits on the new website.

Some notable media outreach includes the feature story of PAN Asia Pacific's Executive Director Sarojeni Regam for winning the Gender and Chemicals Award²¹.

Outreach of CPAM reports

In 2017, PANAP's and partners' surveys on pesticide use were published in various newspapers and reports.

- One news article on the situation of banana plantations in the Philippines was featured in *Bullet and Banana's*, which led to more groups taking notice of the pesticides in bananas and human rights violations in these plantations²².
- PANAP's study on workers exposure to pesticides in oil palm plantations was featured in the *Jakarta Post*²³.
- PANAP's partner PAN India published a report on pesticides use in Yavatmal, India and the death of several farmers was featured in *GM watch*²⁴.
- PANAP's and partners from Vietnam's joint press release on the ban of paraquat and 2-4-d was featured in the *Sustainable Pulse*²⁵.
- PANAP's materials and fact sheets was cited in scientific and research journals including *Glyphosate and Paraquat in Maternal and Fetal Serums in Thai Women* by Kongtip et al. (2017, *Journal of Agromedicine*), *Evaluate the decision of as low as reasonably practicable (ALARP) solutions for the safe use of pesticide among the pesticide handlers, paddy farm, Tanjung Karang, Selangor* by How et al. (2017, *Journal of Tropical Medicine and Public Health* and three other journals).

PANAP's partner CEDAC, Cambodia

Public awareness

As part of its public awareness initiatives, CEDAC along with their partners organized a series of workshops, village trainings and engaged with different media organizations to increase their outreach and raise public awareness on the impact of pesticides etc. The commune workshops took place in Takeo, Kampong Speu and Prey Veng provinces where a total of 1,188 farmer were involved. Farmers were

²¹ <https://www.star2.com/living/2017/09/26/sarojeni-rengam-pesticide-action-network-toxic-free/andhttp://english.astroawani.com/malaysia-news/malaysian-activist-sarojeni-rengam-fore-136659>.

²² <http://english.astroawani.com/world-news/bullets-and-bananas-price-farmers-pay-your-cavendish-bananas-143532>.

²³ <http://www.thejakartapost.com/news/2017/12/19/pesticide-use-threatens-health-plantation-workers.html>

²⁴ <http://www.gmwatch.org/en/main-menu/news/latest-news/17977-india-gm-bt-cotton-falls-victim-to-pest-it-s-supposed-to-resist>

²⁵ <https://sustainablepulse.com/2017/02/27/vietnam-bans-paraquat-and-2-4-d-pesticides-over-human-and-environmental-damage/>

trained on a variety of topics including techniques on organic farming, pesticide alternatives, marketing skills and participatory guarantee systems.

In collaboration with the Ministry of Environment and Forestry Administration, CEDAC was appointed as a resource person, to train 2,405 farmers (832 women) on the impacts of pesticides and the environment. CEDAC's trainings has resulted in more farmers practicing ecologically based farming. As of 2017, approximately 3000 new farmers are now producing organic rice and 600 farmers are producing organic vegetables. Around 1,714 organic rice farmers and 144 organic farmers (mostly growing vegetables) are linking their products to market.



Photo: Farmer Training and Rice Mill in Cambodia

CEDAC's community Organic Rice Mill is expected to be completed in March of 2018 in spite of many challenges. The rice mill would be the first rice mill to produce organic rice at a large scale for the export of rice from various farming communities. The rice mill is gaining more attention and support both nationally and internationally.

Due to political changes in Cambodia, online media are getting more popular. CEDAC utilized social media sites like Facebook to increase outreach, as well as made appearances on mainstream news to address the use of pesticides and provide alternatives to sustainable farming. CEDAC's Facebook Pesticide and Cambodia and Cedac Natural Agri-Products page garnered almost 50,000 likes (an increase of 39,311 likes). CEDAC was also interviewed by the Internal French Radio for a commentary of the Prime Minister's call to ban contaminated fruits and vegetables²⁶.

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

During 2017, PEAC continued to raise farmers' awareness on risks of pesticide use in villages and advocated for eco-farming practices for pesticide use reduction. PEAC also provided technical support for partners while implementing eco-farming and expanded working groups to NGOs, government sectors, educational sectors and communities.

In addition, PEAC also shared findings based on community surveys with officials, calling for better risk management arising from pesticide use. A comprehensive report on the exposure of the "terrible twenty-one pesticides" that are particularly toxic to children have been compiled and will serve as a baseline for the future interventions. The survey also found that 61 % of farmers were using glyphosate.

²⁶ <http://km.rfi.fr/cambodia-Assets-Tourism-24-12-2017>

1,261 (465 women) participants including farmers, children and teachers were trained on ecological farming and the impacts of pesticides. Participants were from nine different villages in the Yunnan province. Trainings also saw the involvement of five NGOs, two schools, two universities, one local hospital and five local government sectors.

Around 4,400 people were made aware of the impacts of pesticides through various publicity materials. Articles on pesticides use was downloaded more than 4,200 times.

PANAP's partner Sustainable Agriculture and Environment Association (SAEDA) from Laos

On World Environment Day, together with National University of Laos (NUoL), Faculty of Environment Sciences (FES) and GRET (a French NGO), SAEDA organized a seminar for 300 students from different faculties of NUoL. This seminar covered a variety of topics with a focus on organic farming and the impacts of pesticides on human health.

In northern Laos, massive banana plantations are opened up by Chinese contractors. The hazards of the products used in these plantations remain widely unknown by the local farmers who often work in these plantations. To gain more understanding of pesticide use in northern Laos, in 2017, SAEDA organized three CPAM trainings. The trainings were held in Mai District, Samphan District and Nhot Ou District for 40 participants (13 females) including farmers and government officials (28 officers). During the trainings, 142 farmers were interviewed about their use of pesticides. Highly Hazardous pesticides that are particularly toxic to children were found (including paraquat and glyphosate) and unidentified labels in Mandarin were found. A compiled report will be prepared at the end of March, 2018. In order to continue to monitor the impacts of pesticides on the ground, SAEDA facilitated the formation of 5 new village committees to monitor the use of pesticides at the village level and to create awareness among the villagers in Nhot Ou districts and Phongsaly province.

To encourage more farmers to grow organic food, SAEDA has continuously trained farmers and government officers on organic farming methods and marketing. As of 2017, 1414 farmers whom have been trained previously in organic farming methods and are currently awaiting certification in participatory guarantee systems (PGS) by the central government by mid-2018.

In 2017, 198 new farmers were trained on organic farming and marketing methods. As result of ongoing trainings, SAEDA has reported that 87 farmers of PEAK district have increased their income and 70 new households have received organic standard certification. New organic markets have been established in 3 districts of Xiengkhouang province and one district in Luang Namtha province with the support of local governments.

PANAP's partner PAN Philippines

PAN Philippines has continued to lobby, advocate and carry out public awareness activities on highly hazardous pesticides (HHPs), especially their impacts on children. These are performed through different community organising activities and meetings, mass actions and regular social media postings by PAN Philippines together with its local partners.

One training workshop on building capacity, one fact-finding mission on paraquat use in oil palm plantations in Mindanao and one public seminar on health and environmental effects of pesticides were conducted during the first half of 2017. Additional CPAM and household survey in South Cotabato were also undertaken by local partner organizations and the results are in the process of collation and analysis.

A collaborative research is also under discussion with other organizations on the use of drift-catcher equipment developed by PAN North America for the purpose of monitoring pesticide drifts from aerial spraying in the Mindanao plantations.

PAN Philippines, together with its local partner organizations at the local and national level, have successfully conducted trainings, seminars, community meetings and other activities on issues pertaining to pesticides, community pesticide action monitoring, health and environment, biodiversity-based ecological agriculture and other related issues during the project period of 2017. During this period, special attention was given to activities related to biodiversity-based agroecological agriculture. Training/workshops and field trips were conducted in the provinces of Bukidnon, Surigao del Sur and in Davao del Sur on sustainable agriculture/organic farming with indigenous people and other groups, with particular emphasis on organic vegetable farming and organic medicinal plant production and processing.

At the same time, public awareness activities including seminars and campaigns pertaining to health and environmental hazards of pesticides, especially aerial spraying and highly hazardous pesticides were continued. Likewise, community pesticide action monitoring (CPAM) activities were also continued, including community survey of pesticides use and effects.

In 2017, information, education and communication materials such as comic books, flyers, posters and other printed materials were distributed to participants and to the general public during the public awareness activities. The PAN Phils website was revitalized and various forms of social media articles were disseminated. A short video production on pesticides health effects was produced and disseminated in the social media in collaboration with Altermidya (local alternative media group) and MASIPAG (Farmers-Scientists Partnership for Agricultural Development).

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

SRD in Vietnam has continued their outreach to communities and government officials and created awareness on sustainable rice production, safe honey production, ecological pesticides and compost making.

In the 2017 spring season, two System of Rice Intensification (SRI) Farmer Field Schools were conducted for 50 farmers in two communes, Dong Dat and On Luong. Each FFS was conducted on demonstration fields under the technical guidance of 2 trainers from Thai Nguyen Plant Protection Sub Department and Phu Luong Plant Protection Station. SRI is an agroecological approach that aims to grow rice sustainably while reducing pesticides and chemical inputs. After the training, the extension officers in 2 communes also have supported other farmers to scale up this activity. As a result, 55 households in two communes have registered to apply SRI in their fields in 2017 and committed to not to use herbicides on a 7.2 ha rice field. Farmers have also reduced agricultural inputs like seeds and have an increased their income by an average 300 % and yields. These households will continue to be monitored by Thai Nguyen PPSD and SRD staffs to achieve better results.

SRD was invited by extension officers of Dong Dat, Ou luong and Yen La Communes to train 50 farmers on organic compost making. Farmers used a combination of animal waste, soil and worms to make compost instead of using nitrogen-based fertilizers. Honey bees are vital to ecosystem and pollination. In various parts of Europe, documentations have revealed that pesticides are linked to honey bee deaths. In order to create more awareness on the issue, SRD organized a seminar for 100 participants from various government agencies, members of the Thai Ngyuen Gardening Association, and bee keepers from Phu Luong district and Dong Dat commune and media agencies. This seminar, featured stories of successful organic honey production and create more awareness on the need to reduce pesticides.

After ongoing seminars and the 'Protect Our Children' campaigns, in April of 2017 banana trees were used as a buffer to protect students from pesticides in Dong Dat secondary school. Neighboring farmers were concerned about the impact of pesticides and supported the school in growing banana trees to protect the children. In addition, two workshops were organized and attended by 112 farmers, government officers, teachers and students on composting and bio pesticide production. The children were excited about the event and helped their teachers make organic pesticides using various plants such as chili, garlic, betel leaves, meliaceae leaves and various ingredients. The children and teachers later expressed their concern about the pesticides they were being exposed to and committed to take future action.

In December 2017, SRD organized a CPAM training for 21 participants (13 women) including farmers, extension officers and members of the People's Committee. After the training, key farmers along with extension officers and members of the People's Committee conducted a survey on 100 famers. The CPAM process made them more aware of the impacts of pesticides on human health. Results of the CPAM study will be translated to English and published on April 2018.

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

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, possibly due to lack of labor in the fields as compared to the survey done in 2016. The final report will be published at the end of April, 2018.

In 2017, CGFED also organized a training on raising environmental awareness and using animal and poultry manure as feed for earthworms, developing the eco-agricultural model for 50 farmers in Hai Hau district. After the training, participants made a commitment to reduce chemical fertilizers and to make compost from pig and chicken dung instead.

During the No Pesticide Use week, CGFED organized a seminar on the impacts of pesticides on children for 350 students from Hai Long Secondary School. After the seminar, the students had a strong message for their community "Say No to Pesticides: In order to build a Sustainable Agriculture for Health of the People and the Community". Thirty school students were also interviewed on the impacts of pesticides and pesticide exposure.

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 neighboring 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 who 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. These women farmers signed up for being key trainers and speakers in locally organized workshops etc.

CGFED continued to gather information on pesticide poisoning cases, government documents regarding the licensing of pesticide residues, focusing on HHPs such as chlorpyrifos, glyphosate, etc.

Communication materials on paraquat, chlorpyrifos and effects of insecticides on breast and kidney cancer were distributed to government leaders and farmers. An analysis and policy recommendations on pesticide regulations and its impacts on children in Vietnam will be produced in 2018. The policy paper will include CPAM survey on farmers and children and an analysis of gaps in current regulations.



Photo: Farmer market and training in North Vietnam

PANAP's partners RCRD from South Vietnam

A CPAM study was conducted on 104 farmers rice farmers an Vinh Trach Commune. The farmers were surveyed on pesticides used and health impacts. Another 10 farmers were interviewed for poisoning incidents. Around 30 farmers were made aware of the impacts of pesticides and floating rice models. As of 2017, around 100 farmers have been practicing this technique.

RCRD has promoted the floating rice model to over 100 farmers of the past few years. RCRD also promoted the floating rice model during the No Pesticide Use Week.

Floating rice is a species of rice that is climate resistant, and a native variety of South Vietnam. This species requires very little external inputs such as pesticides and fertilizers. RCRD has also conducted research on various varieties of rice floating species. As a result, the success of the model has been shared with 30 farmers and other organization from Vietnam, Cambodia, Myanmar and Australia in various events that promoted agritourism and organic farming.

In 2017, RCRD also organized a workshop for 60 students on the impacts of pesticides on their health during No Pesticide Use Week. School children were also made aware of a the dangers of pesticides and the need to have a pesticide free bufferzone around their schools.



Children from Vinh Trach high school, Thoai Son district

A case of pesticide poisoning:

Mr. Pham Tung Em is a farmer located the Dinh Thanh commune of Thoai Son district of An Giang province. Mr. Em is a 40-year old man who manages a family of six. He has been spraying pesticides for 30 years. He is employed as a pesticide sprayer during the period of rice cultivation. One day in 1997, the equipment that he used was faulty. He opened it and pesticide splashed into his left eye. While he sought treatment for his eyes at the the local hospital he gradually lost sight on his left eye. To earn income for the family, he now continues to work as a pesticide sprayer.

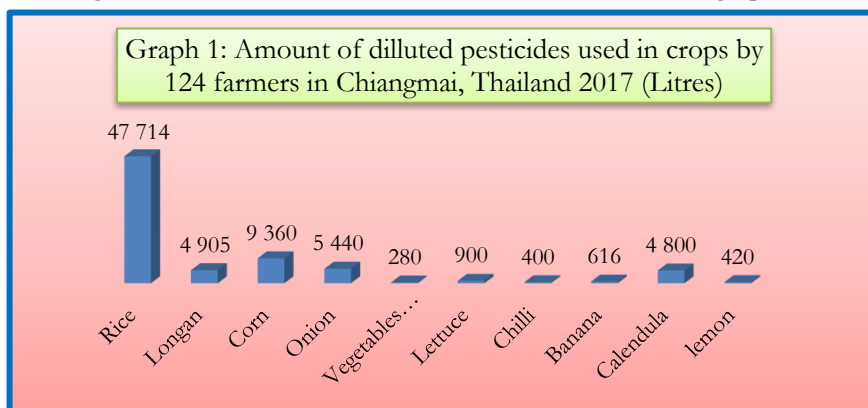


Narrative report, TFA and partners

During 2017, The REAL program continued to put emphasis on education and building capacity of communities, schools and agencies on the awareness of the impacts of pesticides to health and environment, the importance of the agrobiodiversity and the reduction of pesticides uses and risks through ecological agricultural practices.

Status of Pesticides Impacts to Health and Environment were used for planning and dissemination at community, provincial and national level. According to the data collected by communities in the program, there is increased used of herbicides, over 50% of agrochemical in all countries and up to 90% in rubber plantation throughout Thailand. In Chiangmai, farmers sprayed approximately 47,700 litres of diluted pesticides in rice, 4,900 litres on longan, 9,360 litres on corn and 5,440 litres on onion (see graph 1 for details).

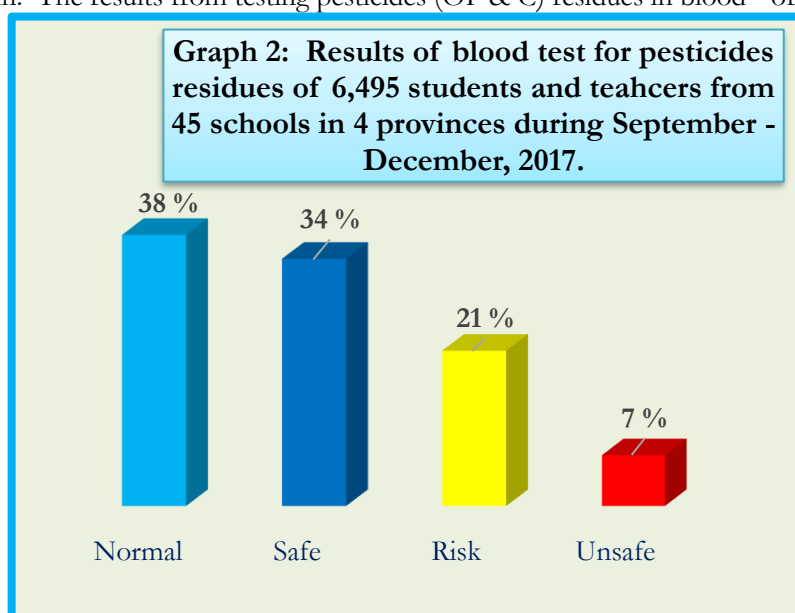
A majority of the pesticides used are WHO class II and IV while 1% is still of the most acutely toxic, class Ia. Recent data from Prathumtani province also show that a total of 17,520 litres of pesticides were sprayed surrounding a school at a



frequency of 134 times per year. The pesticides spray dripped directly onto children, school grounds, buildings, classrooms and the pond inside the school. These are new sites in 2017 and data was presented to school/communities meeting for developing measures to minimize the impacts. Unfortunately, there is not enough government training to help farmers reduce the use of pesticides.

Status of pesticides used surrounding a school, Prathumtani Province, Thailand 2017					
No.	Crops	Area (hectare)	Total Amount Used (liter)	Average amount per hectare (liter/hectare)	Sprayed Frequency (Times/years)
1	Rice (Dry season)	2.88	7,500	2,604	15
2	Rice (Wet season)	2.88	5,000	1,736	12
3	Mandarin orange	0.32	420	1,312	7
4	Long bean	0.16	2,400	15,000	60
5	Eggplant	0.16	1,800	11,250	30
6	Okra	0.16	400	2,500	10
Total		6.56	17,520		134

Tests showed that approximately 63% of the vegetables and fruits used for lunch in 34 schools in 4 provinces of Thailand, were contaminated with organophosphates and carbamate²⁷ in 2017. Long bean, coriander, garlic, tomato, Chinese cabbage, onion, cucumber and morning glory were among the top items contaminated. The program also tested residues of sodium hydrosulfite (used for making bean sprout and bamboo shoot look white), sodium borate and formalin. Unsafe levels were found in fresh squid, bamboo shoot, dilled fruits, bean sprouts, noodles, ground pork, meat balls, sausage, fried potato/banana/onion/raisin. The results from testing pesticides (OP & C) residues in blood²⁸ of 6,495 students and teachers showed only 38% normal levels, while 34% were safe (acceptable level of residues), 21% were at risk (over acceptable level) and 7% were unsafe (high level of residues). Although, the results of pesticides residues and in vegetables, fruits and blood using test kits may not be 100% accurate, the data indicates problems of residues in foods and human. Further investigation of pesticides



²⁷ Test kits were used to test pesticides residue in vegetables and fruits.

²⁸ Residues testing in blood conducted by local public health hospital using reactive paper to test cholinesterase activities in blood.

residues in vegetables and fruits and urine are being conducted by Thai Education Foundation and Chiangmai University with contribution support from the Thai National Health Promotion Funds and Greenpeace Thailand in 2018. The results will be used to formulate recommendations for national policies relating to school lunches and protection of children from pesticides exposure.

The Field Alliance postponed the regional workshop on the studies of pesticides impacts to children in the high risk areas during 2017, due to the lack of laboratory analysis of the actual levels of pesticides residues. The workshop is planned to be held in 2018 when laboratory results are completed. However, TFA organized a national workshop on Pesticides Residues Testing and test kits for food safety with partner (ATSA) in Cambodia on December 17, 2017 with 32 participants from civil society, international organizations, relevant government agencies, teachers, farmers and the private sector. The objectives of the workshop were to share the knowledge and efforts carried out in Thailand and build capacity of interested agencies in the use of test kits to detect pesticides residues in vegetables and fruits and other toxic chemicals used to treat products. Participants expressed great interests and requested more in-country training, particularly for civil society and international organizations including WHO. Similar workshops are being planned for Laos, Myanmar and Vietnam in 2018.

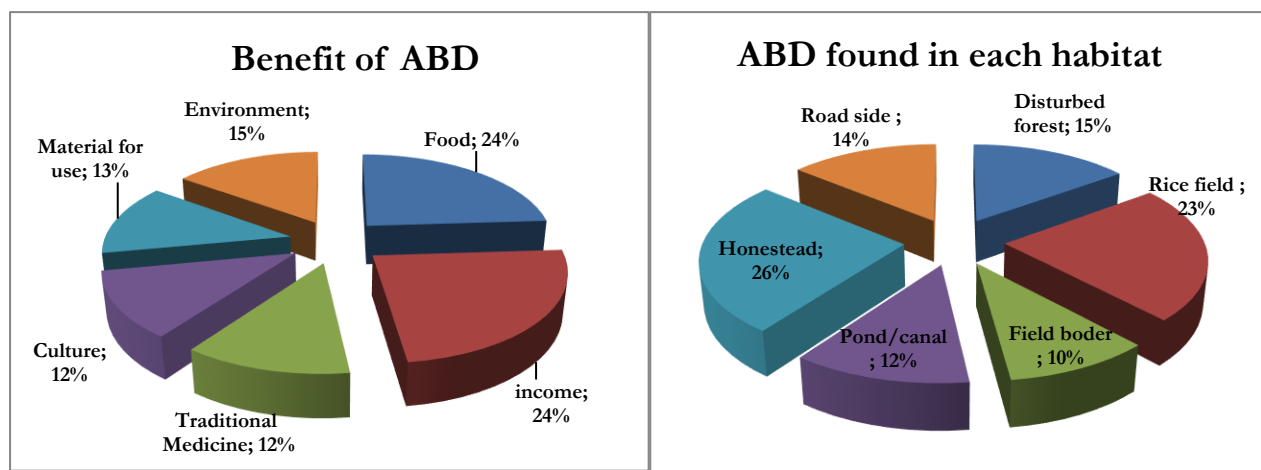
In Cambodia, 1,685 students (54% female) of grade 7 and 8 from 18 schools conducted surveys on the status of pesticides impacts to health and the environment. The survey showed that a total of 25 kinds of pesticides were used by their parents, mostly Class II and III pesticides with 53% herbicides, 41% insecticides and 6% were fungicides. In 2017, two more pesticide disposal tanks were built in 2 villages, which added to the total of 38 tanks in 16 villages. A survey conducted by teachers found that 2,316 empty pesticides containers (113 glass containers and 2,203 plastic containers) were disposed in the tank in 2017. The efforts helped reduce the impacts from waste containers to the environment, children, animals and water sources.

In Laos, the RDS organized a 4 days awareness raising workshop for 25 Non-Formal Education Teachers (16 females) from 5 districts on pesticide impacts. During the training, teachers surveyed 6 farmers nearby the Community Learning Center (CLC) in Paek district of Xiengkhuang and found that farmers used mostly class II and IV pesticides with an average of 10,940 litres/ year of dilute pesticides on vegetables and an average of 56 spray days per year. Over 50 % of the farmers wore proper protective clothes like boots, hats and gloves. However, the storage and disposal of pesticides were found to be unsafe to children, foods, water sources and animals. Through the support from another project, Luras, (Lao Upland Rural Advisory Service) implemented by Helvetas the RDS and the ministry of health conducted blood tests, using reactive paper, to check residues of 999 students, teachers, farmers and consumers in Kham district of Xieng Khuang. The results showed that only 3 % of students had normal levels, while 64 % had safe levels, 27% were at risk and 6% had unsafe levels. Only 28 % of farmers were at risk compare to 38 % of consumers, 39 % of teachers and 27% of students and only 6 % of farmers had unsafe levels compared to 9 % of consumers, 5 % of teachers and 6 % of students. The overall data showed that consumers and teachers had higher residues than students and farmers which may be due to ingestion of contaminated vegetables and fruits from local markets while farmers mostly grow and eat their own vegetables. The Luras project collected and sent more samples for laboratory analysis and results should be published in 2018.

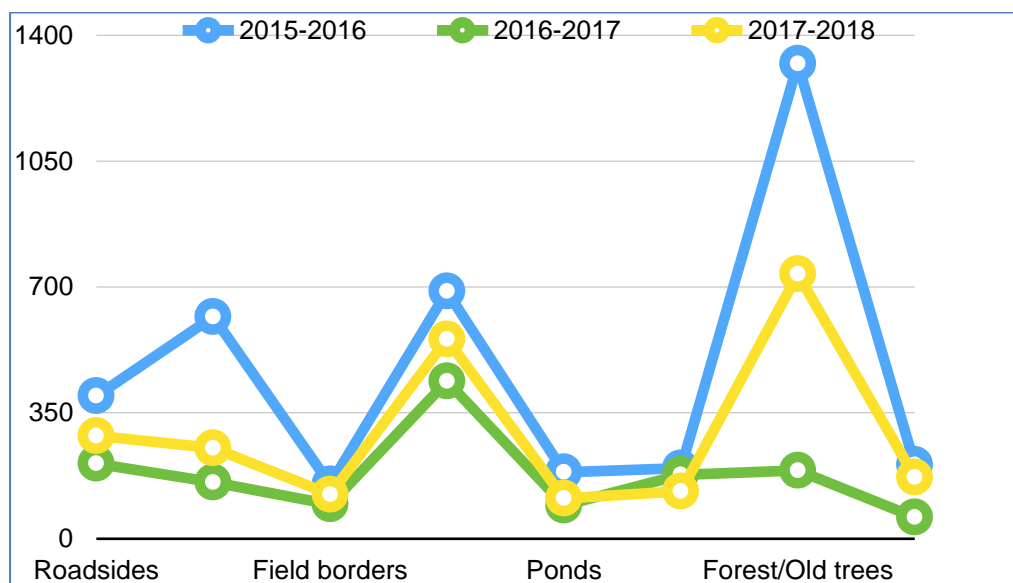
Blood Test Results of Pesticide Residues in 999 Samples in Kham District, Xieng Khuang, 2017															
	Normal (No residue)			Safe (Acceptable level)			Risk (Higher than acceptable level)			Unsafe (High residues level)			Total		Total
	M	F	%	M	F	%	M	F	%	M	F	%	M	F	
Students	3	9	3	131	138	64	56	58	27	15	12	6	205	217	422
Teachers	0	0	0	9	12	55	5	10	39	1	1	5	15	23	38
Consumers	2	2	9	7	13	44	9	8	38	2	2	9	20	25	45
Farmers	12	16	6	136	162	60	69	67	28	17	15	6	234	260	494
	17	27	4	283	325	61	139	143	28	35	30	7	474	525	999

In Vietnam, a pesticides status surveys was conducted with 229 farmers (125 women) in 6 communes from 3 provinces (Bac Giang, Lao Cai and Yen Bai). The results were similar to other countries. Farmers used mainly class II, III and IV pesticides. While 70 – 90% of farmers wore protective clothes, boots, gloves and observed wind directions while spraying, 90% also cleaned their tanks and equipment near water sources. Up to now, 293 pesticides concrete disposal tanks have been built in the area.

In Cambodia, ATSA conducted the Agrobiodiversity training for 1,649 students (863 females) and IPM training for 1,732 students (930 females) from 36 schools. Data collected during the training showed that homestead and rice field contained more species than other habitats and a majority of the species were used for foods (24%) and income (24%). The rest were used for traditional medicine, materials, culture and improvement of environment. In 2017, 49 concrete fish habitats were installed in rice fields of 49 families in 2 villages, which brought to the total of 108 fish habitats for 108 families. In total, 1,772 Kg. of 19 aquatic species were collected from these habitats.



Students and teachers actively participated in growing their own vegetables such as morning glory, cucumber, long bean, bitter melon, lettuce, tomato, cabbage, cauliflower, egg plants, water melon and lemon grass with an average of 150 Kg harvested and given to students to take home. Teachers and students also made their own botanical pesticides, compost, and liquid organic fertilizer made from pineapple for use in the school garden and also to bring home to their parents. Schools also grew 238 trees of rare species for conservation in their schools. In March 2017, ATSA collaborated with the national?? FAO IPM program and organized training on PRR for groups of farmers in 2 targeted villages with 50 farmers (58% women). ATSA and teachers also organized training on production of botanical pesticides and liquid compost for 264 farmers (59% women) from 11 villages to be used on their own vegetables plots. In October, 2017, ATSA and TEF organized a study visit for 10 teachers and farmer leaders to learn innovations with Young Smart Farmers, red claw shrimp raising, mushroom cultivation, vegetables production and food processing in Sakeo Province, border of Thailand. In Laos, RDS continued to support 27 schools to monitor the status of Agrobiodiversity and review community conservation plans in 25 communities in 3 districts of Vientiane, Khammoune and Xieng Khuang provinces. In 2016, TFA and partners used Excel program to document the status of the biodiversity to minimize the error in counting species which helped schools and partners to calculate and present the status as shown the graph below. Approximately, 2,100 students (992 females) participated in growing vegetables, banana, sugarcane, sweet potato, galling, ginger, eggplant, chilli, lemongrass and plants used for traditional medicine. Approximately 600 farmers (229 women) participated in community planning and production of bio pesticides and compost for their own vegetables plots.



In Myanmar, TFA provided technical support for Myanmar Institute for Integrated Development (MIID) to organize a season long Training of trainers for 30 participants (9 women) who were mostly farmers, teachers, extension officers, and representatives from civil society from 6 remote villages near Heho town. The curriculum emphasize agroecology practices on vegetables through FFS and training was divided into 4 sessions of 5 days held once a month from January to April, 2017. Three concurrent FFSs and 1 school/ ffs were organized during the TOT with 61 farmers (22 females) and 20 students (11 females) participating in the season long training. The TOT encountered many challenges due to the drought from December to May. Various experiments were set up to maximize the use of the scarce water reserves in the village. Nearly one-third of the participants (farmers) were not literate and trainers

depended on translators for communication, thus the process took much longer time than planned. In addition, participants were not allowed to stay overnight in the village where the TOT was organized, so nearly half of participants had to commute daily to the training. Experimental plots were sometimes left unattended when the TOT was not organized, thus a majority of the crops did not get water and died near the end of the TOT. TFA conducted a monitoring visit with MIID staff to the FFS after the TOT. Some participants were able to use the knowledge and skills they acquired in their FFS. Due to the lack of resources, governmental extension participants were unable to organized additional FFS after the TOT. A majority of the farmers who attended the TOT and FFS in the remote village were able to use what they learned to improve their production and gain better yield and most of them did not use pesticides. As a result, the private food export company bought all their ginger products. However, due to the lack of resources, governmental extension participants were unable to organize additional FFS after the TOT. MIID is planning to innitiate similar project in the Pa-O self administration zone in 3 villages in 2018 and is planning similar TOT in 2018.

During 2017, the Thai Education Foundation (TEF) supported the expansion of the REAL program at in more schools and FFS under the Non Formal Education Centers. TEF received supports from the government's health promotion fund to extend and expand the studies of pesticides impacts to school children to 4 provinces (Chiangmai, Prathumthani, Sakon Nakorn and Phannnga) in each region of Thailand. The program also expanded its scope to build capacity for communities to also include production of safe foods to supply to schools, promotion of increased vegetables intake for children and nutritional lunch menus as well as cooking training for school lunch personnel in addition to the residues testing through test kits and laboratory analysis for policy formulation. As a result, 54 schools joined the program, with 144 teachers (85 females) receiving on-going training from the program. Orientation meetings were held in 4 provinces with 101 participants from schools, Non Formal Education centers, district education offices attending the meetings. Provincial committees were established with 15 – 30 members from all related agencies and local administration, to oversee, coordinate and disseminate the project in each province. The pesticides impacts assessment, the agroecology and nutritional cooking trainings were organized for all participating schools. By the end of December, at least 30 schools implemented their own vegetables gardens with integrated fish, eggs and frog raisings in some schools. Two district meetings were held in Chiangmai and Sakon Nakorn provinces to identify possibilities to establish green markets for communities.

Through the requests and supports from the Mukdaharn Non Formal Education Vocational Training Center and Kamtagra district NFE center of Sakon Nakorn province, TEF provided technical support for Agroecology training for 29 teachers (17 females) with subsequent organization of 18 FFS with participation of 852 farmers (236 woment). In December, 2017, 3 NFE provincial planning meetings were held to plan for expansion of Agroecolgy FFS to 3 additional provinces (Nongkhai, Bungkarn and Nakorn Pranom provinces) in 2018.

During 2017, TEF also provided continuous linkage, support and collaboration with the National Chemical Management Committee meetings for the development of Thailand's national strategic plan and other related matters.

In Vietnam, 1,287 students (734 females) from 22 schools and 3 Community Learning Centers (CLC), under the Department of Continuing Education, with 935 farmers (575 females) participated in the REAL program in 2017. ICERD worked with local Plant Protection Sub Department and CLCs to conduct 6 ABD and 6 PIA surveys, 39 ABD and PIA trainings for students, CLCs and farmers and organized 7 herbal gardents training for farmers and students. and supported conservation of rice-fish-

duck in 5 communes. ICERD also conducted 6 community workshops to establish baseline data on gender roles and provided continuous technical support to program activities. The results from the program shown that conservation and use of fish and aquatic animals in rice field/integration rice-fish-duck were implemented as fish and ducks played a role in weed and pest control and thereby reduce herbicide and pesticide uses and labour cost. Farmers earned 4-7 times more from rice-fish farming compared to growing rice alone.

Parameter	Ngoc Son			Xuan An		
	Rice only (before program)	Rice from "Rice-fish-duck"	Rice-fish-duck	Rice only (before program)	Rice from "rice-fish"	Rice-fish
Rice Yields (kg ha)	10,149	8,200		10,000	9,750	
Revenues (US\$ ha)	2,459	1,987	8,239	2,423	2,362	6,091
Production costs (US\$ ha)	2,173	460	2,129	2,284	1,834	2,286
Gross margin (US\$ ha)	286	1527	6,110	139	528	3,806

Table showing Yield and Economic data of Rice-Fish system in Ngoc Son and Xuan An, Yen Dung Dist. Bac Giang

In Lao Cai, 2 cooperatives (Ta Chai Cooperative and Na Hoi Cooperative of Bac Ha District) maintained conservation and production of indigenous vegetables and market access. Ta Chai Cooperative sold 93,310 kg of indigenous vegetables and obtained an amount equivalent to 50,581 USD/year. Na Hoi Cooperative sold 148,720kg of indigenous vegetables and obtained an amount equivalent to 80,618USD/year (see data in Table 5c). Indigenous vegetable products produced by the 2 cooperatives were sold through 10 shops/markets/supermarket locally and in Hanoi.

Parameter	Ngoc Son	
	Ta Chai Cooperative, Bac Ha Dist. Lao Cai	Na Hoi Cooperative, Bac Ha Dist. Lao Cai
Production/conservation area (ha)	6.8	8.8
Production (kg)	93,310	148,720
Production (USD)/year/ production area	50,581	80,618

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

Narrative report, PAN AP and partners

PANAP

Phasing out Highly Hazardous Pesticides with Agroecology

There is global recognition that agricultural production cannot continue with use of pesticides. In 2017, PANAP and partners continued advocacy work at the national, regional global level on highly hazardous pesticides. Highly hazardous pesticides need to be replaced with agroecology as it offers a viable strategy to increase agricultural productivity, build farmers' resilience and protect the environment.

PANAP participated in the first Asia-Pacific Ministerial Summit on the Environment in Bangkok, Thailand, 5-8 September 2017, which was jointly organized by the Economic and Social Commission for Asia and the Pacific (ESCAP) and UN Environment. Two specific intervention on food security, safety and nutrition was prepared by Ms. Rengam and Ms. Ravindran from PANAP calling on governments to ensure the reduction and ultimate elimination of highly hazardous pesticides; supporting food sovereignty and to strongly support agroecology as a way forward in sustainable food and agricultural production. In addition, PANAP was also assisted in the preparation of a strong statement that was read out focusing on the impacts of chemicals such as pesticides on children's health by a children and youth group representative.

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 a global legally binding treaty on pesticides to strengthen global pesticide regulations. Thus, PANAP as part of PAN International, drafted and distributed a proposal for a pesticide treaty²⁹. PANAP's recommendation was featured in UNEP Asia Pacific YouTube Channel³⁰.

In May 2017, PANAP also provided expert comments on a draft report to UNEA, "Towards a Pollution Free Planet". As an outcome, the report recognised contributions by current use of pesticides to pollution (whereas the draft had only recognised persistent organic pollutants (POPs) as pesticides). PANAP also participated in the third meeting of the UN Environment Assembly (UNEA 3), from 4-6 December 2017, Nairobi, Kenya, and contributed with two interventions.

In 2017, PANAP participated in the first Strategic Approach to International Chemicals Management (SAICM) Intersessional Workshop on the Sound Management of Chemicals beyond 2020 in February 2017, in Brazil. PANAP published and distributed a position paper entitled "Global Governance of Hazardous Pesticides to Protect Children: Beyond 2020". The paper outlines PAN Asia Pacific's concern about the impact of hazardous pesticides on children and the need for greatly improved global governance of pesticides post 2020, to protect the rights of children and to meet the Sustainable

²⁹ <http://files.panap.net/resources/Global-Governance-of-Highly-Hazardous-Pesticides-PAN.pdf>

³⁰ https://www.youtube.com/watch?v=sf_D8IHzeaQ

Development Goals of Agenda 2030³¹. In addition, PANAP submitted comments on the new milestones and objectives of SAICM³².

Pesticide Action Network and International POPs Elimination Network (IPEN) collaborated to produce a series of documents that highlight civil society's views on key topics for the Beyond 2020 process. The papers describe SAICM's importance, how chemical safety can contribute to sustainable development and how actions should be financed. In addition, the papers deal with the relationship between women and chemical safety, how the industry should reduce and eliminate hazard through design and the connection between human rights and chemical safety. The following papers were drafted:

- Beyond 2020: Women and chemical safety
<http://www.saicm.org/Portals/12/documents/meetings/IP1/Beyond-2020-Women-and-chemical-safety-24-Jan-2017.pdf>;
- Beyond 2020: Chemical safety and Agenda 2030
<http://www.saicm.org/Portals/12/documents/meetings/IP1/Beyond-2020-Chemical-safety-and-Agenda-2030-24-Jan-2017.pdf>
- Beyond 2020: Chemicals safety and human rights
<http://www.saicm.org/Portals/12/documents/meetings/IP1/Beyond-2020-Chemical-safety-and-human-rights-24-Jan-2017.pdf>
- Beyond 2020: Why SAICM is important
<http://www.saicm.org/Portals/12/documents/meetings/IP1/Beyond-2020-Why-SAICM-is-important-24-Jan-2017.pdf>

Due to these growing concerns of how pesticides are impacting children, UNICEF released a new discussion paper to engage with various stakeholders and to improve global pesticide regulations to support children's rights. PANAP and partner's reports was cited in UNICEF's discussion paper on Children and Pesticides³³. The key recommendations in the UNICEF paper are very much in line with the views of PANAP and included suggestions such as exploring agroecology as a method for more sustainable food production, ban of highly hazardous pesticides to address the growing issue that young children in rural areas are negatively impacted by pesticides, adoption of the precautionary principle for pesticide registration, strengthening core business policies of pesticides companies, and for states and governments to develop more robust national legislations.

PANAP participated in the triple COP (13th meeting of the Conference of the Parties to the Basel Convention, 8th meeting of the Conference of the Parties to the Rotterdam Convention and the 8th meeting of the Conference of the Parties to the Stockholm Convention held back to back) from 24 April to 5 May, 2017. PANAP made several interventions and submitted various technical papers on a number of highly hazardous pesticides.

PANAP also participated in the technical review committees of both the Stockholm and Rotterdam Conventions – the POPs Review Committee (POPRC) and the Chemical Review Committee (CRC),

³¹ <http://panap.net/2017/02/global-governance-hazardous-pesticides-protect-children-beyond-2020-2/>

³² <http://www.saicm.org/Portals/12/Documents/IP-consultation/Nov-2017/PAN%20Proposal%20on%20objectives%20and%20milestones.pdf>

³³ https://www.unicef.org/csr/files/Understanding_the_impact_of_pesticides_on_children- Jan_2018.pdf

providing information on agroecological alternatives to dicofol to POPRC, and information on the adverse effects of a number of pesticides to the CRC. The CRC and the POPRC are technical meetings, consisting of a number of experts from the member countries, that review the documentation submitted for chemicals and pesticides and provide decision guidance documents (for CRC) and recommendations (for POPRC) for the inclusion of the chemicals and pesticides in the Rotterdam or Stockholm Convention. These recommendations are then considered and decided at the next COP.

Prior to the meeting, a brief on the toxicity of five pesticides that was listed for the Rotterdam Convention was sent to several focal points and government officials³⁴. In the Philippines, PANAP Staff, Mila Serrano, was invited to attend the briefing by the Philippine Government on their positions on certain pesticides up for discussions in the Rotterdam Convention. PANAP provided suggestions and recommendations to the meeting.

In addition, PANAP also worked with their partners in India and Indonesia to document the horrendous use and impact of paraquat on farmers (India) and plantation workers (Indonesia) as both these countries had blocked the inclusion of paraquat, one of the most highly hazardous pesticides, in the Rotterdam Convention for information sharing. Two CPAM reports were launched as well as a joint technical study on paraquat published by Public Eye, PAN UK and PANAP. A side-event was organised together with Public Eye, a CSO from Switzerland and we shared information on all three reports. Many delegates supported the inclusion of paraquat in the Rotterdam Convention and spoke in support but again India, Indonesia and Guatemala opposed the inclusion.

One major outcome of the POPRC is the proposed listing of dicofol under Annex 1 of the Stockholm Convention with a focus on replacing it with agroecological approaches to pest management in its place.

Other outcomes included the listing of carbofuran and trichlorfon under the Rotterdam Convention, increased awareness on the production and use of POPs-listed sulfluramid, awareness about HHPs in small Island developing states and the existence of alternatives and raised awareness that sustainable chemistry is not an appropriate framework for phasing out HHPs.

PANAP along with PAN India participated in the FAO/WHO Panel of Experts on Pesticide Management (JMPM) held in India, April, 2017. During the meeting PANAP presented current work and CPAM documentation from the Asia Pacific Region. PANAP submitted comments on the draft Guidelines on PPE, licensing and inspection and household pesticides.

PANAP has continued to distribute “the 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 has been a useful tool to distribute and campaign to policy makers.

Other international convention work

PANAP also participated in FAO’s Regional Meeting on Agricultural Biotechnologies in Sustainable Food Systems and Nutrition in Asia-Pacific (RMAB) that took place in September 2017, Kuala Lumpur, Malaysia. PANAP participated in various sessions and gave inputs on the hazards of Genetically Modified Foods (GMOs) on human health and the environment.

³⁴ <http://panap.net/2017/04/pan-asia-pacific-panap-briefing-rotterdam-convention-conference-parties/>

Tools for Pesticide Advocacy Work

PANAP continues to update a list of globally banned pesticides with an aim to assist governments and regulators to understand and to be alerted the hazards certain pesticides³⁵.

PANAP's partner CEDAC, Cambodia

In terms of networking and building stronger coalitions for advocacy, CEDAC's project staff participated in the bi-monthly meetings of Network for Development of Food Security and Safety in Cambodia (NDF-C) for two consecutive times. Besides this, CEDAC also organized a national consultation workshop in Phnom Penh with stakeholders to get comments and suggestions on drafting an agricultural land management law. Overall, the political situations in Cambodia is making it difficult for CSOs to operate and fully organize activities. As a result, the "No Pesticide Use week" was not possible to organized this year.

One exchange visit was organized in Tropeungthom, Khan Cheung commune for 40 participants, including CEDAC staff, cooperative farmers, local authorities and the Provincial Department of Agriculture from Takeo and Kompong Speu, to share technical knowledge on sustainable rice development (SRI), good practices and exchange of experience to create awareness among farmers. Participants expressed that they felt more confident with organic farming after seeing an actual increase of their yields and were more willing to share their learnings with others.

CEDAC also co-organized the 7th National Farmers Forum to provide opportunities for 298 participants (87 women) including small scale farmers, farmers associations, government officers, civil society organizations, academic institutions, private sectors and farmer representatives from 25 provinces/ cities in Cambodia to share their concerns and issues. Some of main topics of the discussed forum included access to resources including water and land, access to markets and relevant capital. Collective decisions of the forum include new approaches to access resources including engaging with the Royal Government of Cambodia to set up more water supply canals for rice farming and improve existing irrigation systems to supply water to agricultural lands. Next, collective decisions in the forum include better product branding, marketing and export strategies and capacity building needs for farmers.

PANAP's partner PEAC from China

PEAC continued to promote pesticide risk reduction by awareness raising, eco-agriculture advocacy, as well as policy advocacy. Additionally, PEAC explored the development of a nation-wide network against pesticide risks by involving participants of government sectors, educational sectors, NGOs, Institutes etc. PEAC has submitted findings from CPAM survey to various offices in MOA, China. In 2017, the government of China announced future bans of pesticides. The ministry has already issued a notice banning the highly toxic substances endosulfan and methyl bromide by 2019. Three others – aldicarb, phorate and isocarbophos – would be withdrawn next year, while substances including omethoate and aluminium phosphide should be removed by 2020 according the South China Morning Post, chloropicrin, carbofuran and methomyl will be phased out by 2022³⁶.

³⁵ pan-international.org/pan-international-consolidated-list-of-banned-pesticides/

³⁶ <http://www.scmp.com/news/china/policies-politics/article/2122904/china-phase-out-more-pesticides-improve-food-safety>

PANAP's partner SAEDA from Laos

SAEDA has continued to create awareness on pesticide related issues and have ongoing dialogues with various government officials on the new Prime Ministerial decree of pesticides management in Lao PDR. Publicity materials on the impacts of pesticides on human health was jointly published and distributed by departments in the Ministry of Agriculture and Forestry Office. Due to on-going campaigns and awareness on the issue of pesticides from various organizations, the government has restricted the expansion of foreign owned banana plantations in Laos due to safety concerns connected to heavy pesticides use.

PANAP's partner PAN Philippines

A consolidated report on the CPAM surveys in banana plantation areas as well as fact-finding and medical missions done in oil palm plantation areas in Mindanao was presented to various sectors, including government officials at the national level. The report was also submitted and distributed in international meetings and to the United Nations Special Rapporteurs. This and other reports have been used in enhancing the campaign for sustainable pest management and biodiversity-based agro-ecological agriculture through seminars, lobbying at the local communities and through other public awareness activities.

Campaigns and lobbying at the local and national levels also continued in 2017, including Protect Our Children Campaign and lobbying for pesticides free buffer zones, particularly around schools and residential areas adjacent to plantations. PAN Phils managed to negotiate with a banana plantation company 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.

PANAP's partners Vietnam

A national seminar was organized in Hanoi in 2014 to present the results of a joint survey on the use of chlorpyrifos and paraquat. The seminar was entitled “the Knowledge, Attitude and Practice (KAP)” on chlorpyrifos and paraquat and the workshop was attended by over 80 participants, including policy makers, scientists, local NGOs, farmers, victims of pesticides poisoning and local media. The results of the survey on chlorpyrifos and paraquat were also shared in provincial levels in Phu Tho, Nam Dinh and An Giang Province that was attended by local authorities and farmers. Since then, partners have had ongoing dialogue and campaigns on the impacts of paraquat at the national and local level.

In 2017, the government of Vietnam announced a ban of paraquat, 2-4-D and certain formulations of glyphosate. SRD and CGFED have continued to share information on the ban of the pesticides paraquat and 2-4-D with farmers and the public. PANAP, SRD, CGFED and RCRD comments on the ban was featured in the Sustainable Pulse Online Newspaper³⁷

³⁷ <https://sustainablepulse.com/2017/02/27/vietnam-bans-paraquat-and-24-d-pesticides-over-human-and-environmental-damage/>

One radio broadcast announcing MARD's decision to remove paraquat and 2.4 D from the list of pesticides was permitted for circulation in Vietnam and four radio broadcasts on SRD's ecological agriculture-based activities in Phu Luong District were implemented by Phu Luong District Television Station and disseminated in media of 16 communes. SRD was featured in an interview on their thoughts of the paraquat ban and the hazards of paraquat on the District Television Station³⁸. Please access the link to see online news:

Narrative report, 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 related to pesticides. This information has also been disseminated and advocated through various exhibitions, meetings, workshops at local, national and regional level including printed, non-printed and digital materials.

Campaign and advocacy

In Cambodia, two pesticide campaigns were organized in Kampong Chhnang and Battambang province with 99 participants (50% women) including students, teachers, community members, local authorities, district agriculture and education offices. The campaign aimed to create awareness of pesticide risks to health and the environment and included demonstrations on how to use test kits to examine pesticide contamination of food products. Participants were very interested to see the testing procedures and results.

As part of the NGO Forum network, ATSA joined and participated in the 7th National Farmer Forum to Access water, capital and marketing on agribusiness held from 13 - 15 December, 2017. Four persons from ATSA (2 farmers from Battambang province and 2 REAL project staffs) attended the event. The forum gave an opportunity for farmers to learn and contribute with ideas related to agribusiness and also to use what they had learned from this events for their future career and to share this with other farmers in their community.



Through the support from TFA, ATSA and TFA organized a national workshop to share the results from the studies on the impacts of pesticides to health and environment, including the use of test kits to detect pesticide residues and chemicals in food products. 32 participants from NGOs, IO, relevant government institutions, farmers and teachers participated in the workshop. Eighteen participants volunteered for blood testing and analysis of pesticide residues in the blood. Only 3 participants were found to have safe levels, 10 were at risk and 5 had unsafe levels. Pak choi, bean sprouts and Chinese cabbage from the markets were found to contain unsafe levels of pesticide residues and residues of Borax were found in the

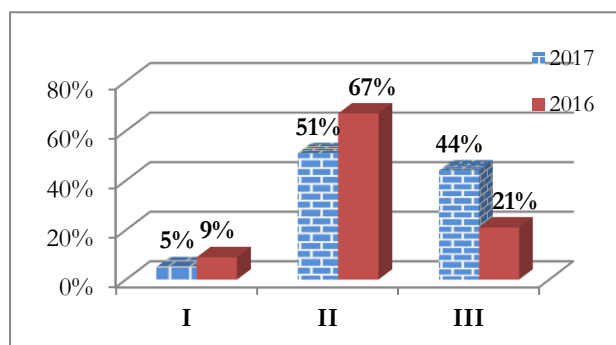
³⁸ <http://thainguyentv.vn/truyen-hinh-phu-luong-ngay-952017.media>

shredded lemongrass. Participants expressed high appreciation to learn and requested more training in the future.

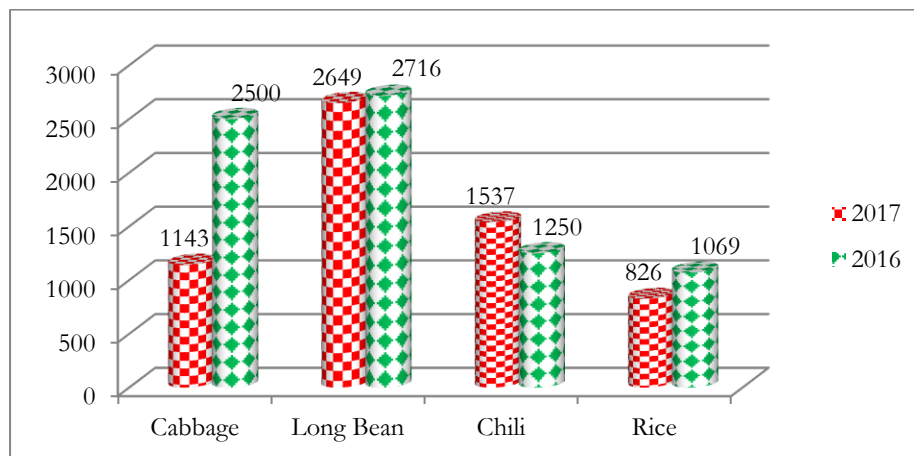
Meetings with schools and education offices

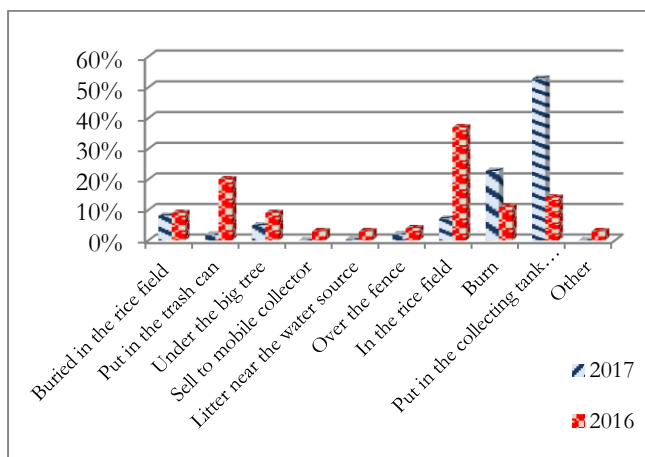
Two meetings (May and October) were held for 28 participating schools in Cambodia to review project activities, data from surveys and plan for the next fiscal year activities.

Data collected from the field were presented to communities to develop action plans to improve the situation related to pesticides. In Cambodia, students conducted annual pesticide surveys in 9 villages and the results were presented to communities. Through the program interventions, farmers in Battambang



were able to choose less toxic pesticides compared to 2016 and use a smaller amount of pesticides in cabbage, chilli, rice and long bean. Although majority of farmers put the pesticides waste containers in the disposal tanks built by the project, there were some farmers who still buried containers in the field and/or burned them in the fields, causing risks human health and the environment. Communities reviewed the results and identified areas for improvement.





In Laos, the results from the blood test were presented back to all participating communities and majority of farmers wanted to receive training to minimize the uses of pesticides.

In Thailand, the residues testing results from vegetables, fruits and blood test were presented to 4 communities in Chiangmai province with an aim to develop local measures to reduce pesticides exposure to school children. The meetings concluded the following recommendations for protecting school from pesticide sprays;

- identify times and duration for sprays during off school hours
- reduce the uses of herbicides in community roadside and canals
- identify suitable disposal areas for what?? before being transport out to relevant agencies or companies
- build capacity for farmers nearby the schools on alternatives to pesticide use.

With regards to the pesticide residues in school lunches, recommendations were made for schools to select only clean ingredients for lunch from green markets and/or know sources of the ingredients in the community, encourage students and parents to grow vegetables at home and sell to school, change lunch menu to local foods on certain days of the week, wash vegetables and fruits in accordance with recommendations, reduce the uses of chemical sources and test the pesticide residues at least once during the school term. The meeting also recommended to promote cooking at home and reduce buying street/market ready made foods, select seasonal vegetables and fruits from known sources and grow vegetables garden at home. Sixteen students and teachers presented their data and works at the provincial Safe Foods Exhibition at the Chiangmai Agricultural Resource and Research Center with 200 attendants in February, 2017. Ten students and teachers from 2 Chiangmai and Chachoengsao provinces also set up exhibitions at the First National Conference on Chemical Management, organized in Bangkok July 19-20, 2017. At this conference TEF staff also presented a paper on pesticide impacts to school children and chaired a session during the event which was attended by more than 600 participants representing all concerned stakeholders.

In 2017, the Kamtakra NFE district center also organized an exhibition to share their learning and information on pesticides and safe food with 200 participants from various agencies. Thai Education Foundation attended and provided feedback to the national workshop organized by the Department of Medical Science, under the Ministry of Public Health in June, 2017 to share efforts and progress in the development of test kits for residues testing with concerned academic and governmental agencies. TEF also presented REAL data at the national workshop to review and confirm the recommendations for

banning of paraquat and chlorpyrifos and restriction of the uses of glyphosate, organized by the office of the permanent secretary, the Ministry of Public Health.

Thai Education Foundation has been attending meetings with the national chemicals management committee for the development of national policies, plans and events at least once a month.

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

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 and pesticide risk reduction in four (4) Programme member countries (Cambodia, China, Lao PDR and Vietnam). In addition to the 58,716 farmers trained at the beginning of the Programme phase 2 in 2013, an additional 21,200 farmers participated in IPM/pesticide risk reduction education programmes by end of 2017 (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). The IPM component also helped develop, provide technical support to and deliver FAO’s flagship Regional Rice Initiative in the three (3) pilot countries of Indonesia, Lao PDR and Philippines. This Initiative is 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 2017, aside from strengthening the work on aquatic biodiversity/rice-fish and shrimp, attention was given to the importance of soil health in rice-based farming systems and the role of women in promoting sustainable agriculture and eradicating food insecurity as well as poverty in the face of challenges such as changing climatic and environmental conditions.

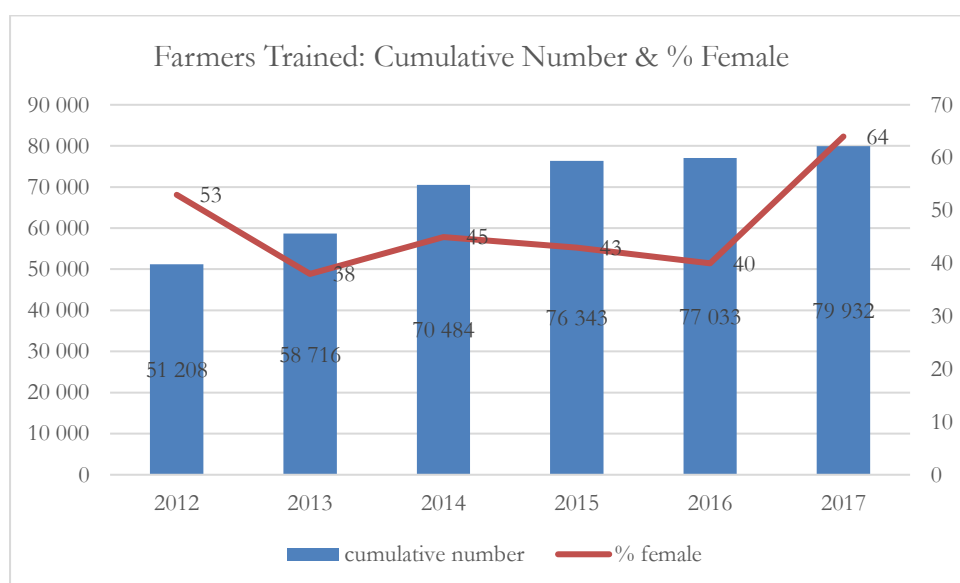


Chart 1: Farmers Trained – Cumulative Number and % Female, 2012-2017

Good implementation progress was made under this objective during 2017. All member countries continued to strengthen and innovate their national IPM/pesticide risk reduction programmes supported by policy declarations. 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 continued to generate buy-ins from other donors such as the World Bank. In Cambodia, although the number of Clubs decreased because of emigration, farmers' investments through savings in IPM Farmers' Clubs vis-à-vis the number of clubs increased. The savings were used to continue group learning activities and support sustainable production (See Chart 2). No major implementation challenges were experienced under this objective.

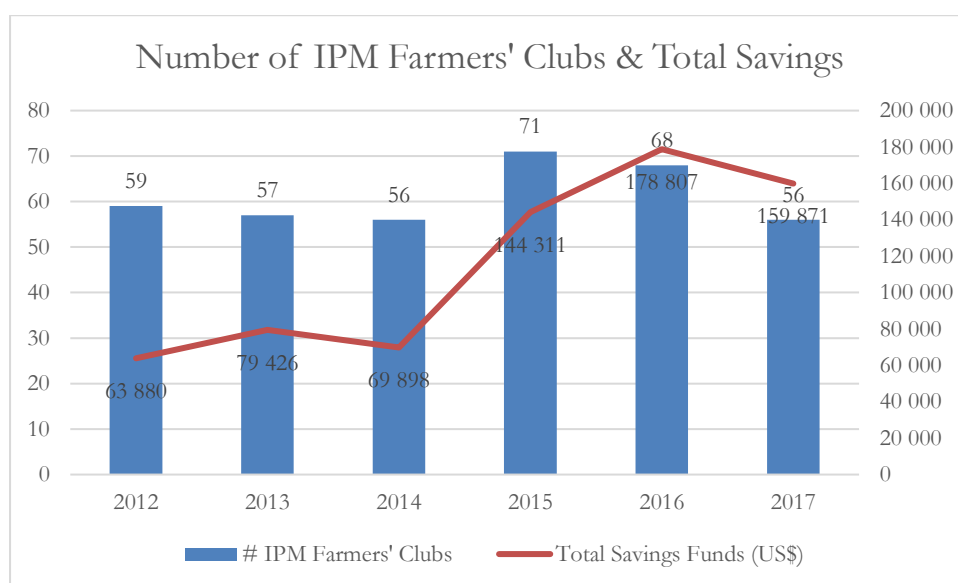


Chart 2: Number of IPM Farmers' Clubs and Total Savings, Cambodia, 2012-2017

The extension of the Pesticide Risk Reduction Programme (2013-2018) has provided the FAO IPM Component an opportunity to assess the long-term impact of the programme using the double delta approach. A third survey was conducted in 2015 - six years after the PRR-FFS training - in the same locations and with the same respondents as in the previous surveys (2008 and 2010). The results of the 2015/16 survey carried out in Cambodia and Vietnam were released in September 2016. In 2017, a follow up study carried out for a PhD research documented significant differences in the reduction of pesticide use between IPM/PRR-trained (3.24 L/ha), exposed (7.49 L/ha) and control (8.02 L/ha) farmers compared to baseline of > 8 L/ha. from 8.74 L/ha to 4.8 L/ha to 3.24 L/ha among trained farmers. This was consistent with the findings of the FAO-published 2016 long-term impact assessment of IPM/Pesticide Risk Reduction Training. The reduction of pesticide risks in Cambodia, was also positively influenced by 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 better ecosystems and services. A case study on rice-farm ecology supports the findings of the long-term impact assessment measuring the impact of reduced pesticide on six indicator species. Higher natural enemy populations were observed on fields of IPM/PRR-trained farmers compared with non-trained farmers.

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

Narrative report, FAO RAP and KemI

In Myanmar, following the promulgation of a new pesticide law in 2016, the programme supported capacity building for improved pesticide registration process following the latest FAO guidance³⁹. The programme coordinated activities and support with a Dutch funded project implemented by Alterra, Wageningen University

In Lao PDR, a Prime Minister Decree on Pesticide Management was promulgated in 2017. The Decree was developed and promoted with substantial programme support. The new Decree replaces the previous pesticide regulation. The decree aims to better protect the environment and human health and calls for inter-ministerial collaboration to strengthen pesticide management.

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 are intended as input to updating pesticide inspection booklets and other guidance materials prior to inspections, scheduled to resume with programme support in 2018.

In 2017, two regional workshops on the application of the FAO Pesticide Registration Toolkit were organized within the framework of the regional programme in South-East Asia. One workshop was held in Beijing, 29 May-3 June (with participants from China, Lao PDR and Cambodia) and one workshop was held in Hanoi, 16-20 October (with participants from Vietnam, Lao PDR and Thailand). Altogether, around 60 registration officers attended the workshops and got in-depth knowledge on the content and structure of the toolkit and how it be used to support pesticide registration in the day to day work. The Food and Agriculture Organization of the United Nations (FAO) has developed a Pesticide Registration Toolkit to support pesticide regulators in countries with limited resources. The Toolkit can be used as a source of information and a reference tool for pesticide registration authorities. It also provides assistance in the process of evaluating pesticide registration dossiers and support for sound decision-making. The workshops aimed at strengthening pesticide regulatory management capacity within the participating countries and enhance regional collaboration between pesticide regulatory authorities. Participants shared experiences and expanded their knowledge on pesticide registration. The workshop programme started with an introduction to the structure and contents of the Pesticide Registration Toolkit. Throughout the workshop, the facilitators presented key concepts used in hazard identification and risk assessment of pesticides and demonstrated how to use the Toolkit to find data and how to use this data to support the decision making process. Participants also worked on a number of exercises connected to the various learning modules, including assessment methods, mitigation measures, occupational risk assessment and highly hazardous pesticides. At the end of the workshop, the participants provided comments on the Toolkit and the workshop programme. Overall, participants found the Toolkit very useful and plan to use the toolkit in their future work. The participants considered that further training would be needed (since some modules of the toolkit were found difficult to



³⁹ <http://www.fao.org/pesticide-registration-toolkit/en/>

understand and use) and hoped that FAO could provide such training in the future. Detailed reports and evaluations from both workshops are available.

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

Narrative report, KemI

February 21-23, KemI, in collaboration with the Ministry of Industry and Commerce of Lao PDR, organized the 11th Regional Chemicals Management Forum. A total of 74 persons, 64 persons from 6 countries (44 % women) together with 10 invited lecturers and other experts (60 % women) took part in the 3 day meeting held in Vientiane. In addition to the regular member countries (i.e. Cambodia, Lao PDR, Myanmar, Thailand and Vietnam), 1 person from Bhutan attended the Forum. This was the second time that Bhutan took part in the regional Forum. Even though the situation in Bhutan is quite different from the member countries (given its location, population and climate) the overarching policies of Bhutan and the government's focus on happiness of the Bhutanese people was considered very inspiring for everyone. For the first time, the relationship between chemicals management and human rights was highlighted 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 were introduced to basic principles of human rights and environment and discussed a number of issues related to this topic in country groups. A 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. Mercury management, regional initiatives/organisations supporting sound management of chemicals, gender equality and chemicals and ideas for future regional cooperation on chemicals management were also presented and discussed during the Forum. The evaluation of the Forum showed that a majority of the participants found the topics relevant or highly relevant for their work that the knowledge and network is useful or very useful. Detailed meeting report and evaluation is available.



June 6-8, KemI organized a 3-day training on principles and key elements of sound chemicals management for a broad range of government officials and other concerned stakeholders in Myanmar (similar to the trainings organized in Lao PDR and Cambodia in 2016). 81 participants, representing a



broad range of concerned stakeholders (10 different ministries, private sector and academia) took part in the training. The host ministry, Ministry of Industry, presented the latest development on chemicals management in the country and participants were then introduced to a number of topics, such as background to the need for chemicals control, international work, hazard assessment and communication (the Globally Harmonized System for Classification and Labeling, GHS), exposure and risk assessment, risk management,

occurrence and use (inventories and registries) and enforcement. Presentations by KemI expert were mixed with group discussions and presentations in plenary. A majority of the participants expressed high overall satisfaction with the training (mean score 3.9 (men) and 3.7 (women) of 5). Further training of provincial staff and training on GHS were highlighted as most prioritized issues for future support from the programme. Agenda and evaluation report from the training are available.

In December 2017, KemI organized a regional 2-day workshop focusing on lists, databases and registers. Most of the countries in the regional are currently struggling with the development of various lists and inventories of chemicals and the workshop was organized in response to identified needs in this area. In addition to presentation of experiences from KemI and the EU, experts from Taiwan, Thailand, Japan and Vietnam shared their experiences from creating various inventories and lists of chemicals. A short evaluation of the workshop showed that the a majority of the participants were very satisfied with the content of the workshop.

To support the member countries' work on implementation of the new Minamata convention on mercury, KemI has supported two different pilot projects. One project on mercury in artisanal small scale gold mining (ASGM) was launched in 2016 and finalized in 2017 and one project on phase out of mercury in the health care sector was launched in 2017 and will be reported in 2018. The project on mercury in ASGM was implemented in Cambodia by the civil society organization BAN Toxics in collaboration with PANAP's local partners in Cambodia, CEDAC, and other allied CSOs. The aim of the project was to address mercury pollution in ASGM communities in Cambodia and to capacitate community groups and CSOs in to work on long-term management of chemicals with a focus on mercury. The project revealed that most mine workers are subject to harsh working conditions. Child labour and gender based violence was reported. There is a need for policy interventions to promote proper management of mercury and promotion of safer working conditions for miners. Further research and knowledge on the situation regarding ASGM in Cambodia is also needed as well as measures to address the occurrence of gender based violence and child labour. There is also a need to raise the general awareness on the toxicity of mercury among miners and other community members. A detailed project report is available.

During 2017, KemI continued the dialogue with representatives from the ASEAN Working Group on Chemicals and Waste (AWGCW). Representatives from the ASEAN secretariat were invited to the 11th Regional Forum but could unfortunately not attend. Kemi were, in its turn, invited to attend the open session of the 2nd annual meeting of the AWGCW but due to other conflicting activities KemI was not able to participate. The invitation was, however, seen as an important step towards closer collaboration between AWGCW and KemI. In December, KemI and a representative from the ASEAN secretariat met for a follow-up meeting and discussed possibilities and ways for future collaboration in more detail. At the 3rd annual meeting of the working group (May 2018), a representative from KemI will present ideas for future collaboration between ASEAN and KemI to the member states, which will hopefully result in concrete activities to support sound management of chemicals in the region.

The dialogue and collaboration with UN Environment Regional Office for Asia and the Pacific also continued in 2017. Representatives from UN Environment were invited to the 11th Regional chemicals management Forum to present its work and to highlight gender aspects in the area of chemicals management. A representative from UN Environment was also invited to take part in the workshop on databases and inventories.

With support from the communication unit at KemI, specific webpages for the programme and the regional Forum were added to the KemI website⁴⁰. These pages were further developed during 2017. Links to relevant reports, publications and guidance as well as contact details are now easily available to everyone.

Regional activities

The FAO-IPM component continued to provide programme development support and technical assistance for delivery of FAO's Regular Programme funded Regional Rice Initiative in three (3) pilot countries (Indonesia, Lao PDR and Philippines).

The Programme 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 facilitates participation in the regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides. Under the plans for the 2016-2017 bi-ennium, a workshop on Empowering Farmers through FFS-IPM Training in Support of Sustainable Intensification of Crop Production was held in Kathmandu, Nepal, on 27 February to 2 March 2017 – with seed funding from APPPC. This support is highly valued 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.

The FAO-IPM component also supported the participation of key counterparts from GMS countries including Cambodia, Laos and Myanmar in the 30th Session of the Asia Pacific Plant Protection Commission (APPPC) held in Rotorua, New Zealand in November 2017. The Progress Report of the Standing Committee on IPM highlighted efforts that have strengthened regional and in-country information sharing and capacity building during the 2016-17 biennium on regional initiatives on spread prevention and management of invasive agricultural crop pest and diseases, promotion of IPM and reduction in risks related to distribution and use of pesticides in agriculture.

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On September 1-3, 2017, 34 groups from 12 countries in Asia gathered in Phnom Penh, with CEDAC in Cambodia for the agroecology workshop dubbed as “Samaki” which means solidarity in Khmer. “Samaki: Community -building for Agroecology” aimed at strengthening partnerships among communities, youth

⁴⁰ <http://www.kemi.se/en/about-us/our-work/international-work/regional-cooperation-in-south-east-asia>

groups and the International People Agroecology Multiversity (IPAM), Field Learning Sites and come up with a plan of action ; to create platform for farmers, youth and advocates to push forward the global conversations in agroecology and to fortify solidarity in the Asia Pacific region, contributing to the global movement towards a “pesticides- free world” through Agroecology. One exchange visit on agro-ecological practices was organized for the participants.

In 2017, two regional workshops on the application of the FAO Pesticide Registration Toolkit were organized within the framework of the regional programme in South-East Asia. One workshop was held in Beijing, 29 May-3 June (with participants from China, Lao PDR and Cambodia) and one workshop was held in Hanoi, 16-20 October (with participants from Vietnam, Lao PDR and Thailand). Altogether, around 60 registration officers attended the workshops and got in-depth knowledge on the content and structure of the toolkit and how it be used to support pesticide registration in the day to day work.

In December 2017, KemI organized a regional 2-day workshop focusing on lists, databases and registers. In addition to presentation of experiences from KemI and the EU, experts from Taiwan, Thailand and Vietnam shared their experiences from creating various inventories and lists of chemicals.

Collaboration with other projects and organisations

The membership of FAO in the Sustainable Rice Platform (SRP) was formalized in October 2016. SRP is a multi-stakeholder partnership to promote resource efficiency and sustainability both on-farm and throughout the rice value chain. The SRP is led by UN Environment Regional Office for Asia and the Pacific and the International Rice Research Institute (IRRI) and works in collaboration with partners in the public and private sectors as well as the NGO community. Since markets have a great deal of influence on what and how farmers produce, in 2017 FAO continued to provide technical advice to the international 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.

In Myanmar, the programme continued coordinating programme activities with Wageningen Environmental Research, Alterra. Alterra is currently implementing a project aiming at building capacity of staff at the Plant Protection Division (PPD), representatives of relevant ministries and scientific partners as well as to develop a resource efficient procedure to handle applications for approval of pesticides using scientific assessments performed in other countries with similar conditions. The Alterra project will also support identification, assessment and possible removal of highly hazardous pesticides from the Myanmar market.

TFA co-supported partners’ sharing of experiences from the REAL program as well as innovations from Youth in Agriculture at the 3 days Annual Mekong Extension and Learning Alliance (MELA) workshop. Nearly 50 participants included policy makers, various governmental agencies, academics, international organization, civil societies and farmers from Cambodia, Laos, Myanmar, Thailand and Vietnam. Focus of the workshop was pesticides impacts to children and health and innovations from young farmers. Panel discussion on impacts of pesticides based on results from residues testing from Thai Education Foundation, Helvetas Laos, and Biothai generated much interests and a wish to extend dissemination and capacity building at the country level. Cambodia youth organic network for abused women, Myanmar mobile phone application for farmers to access information about farming by young farmers and Young

Smart Farmers from Thailand. Ministry of Agriculture of Thailand and Thai Education Foundation will co-host the next MELA workshop, which will focus on Youth and Agroecology, in mid-2018.

TFA attended and presented the REAL program at the Regional Workshop on Mainstreaming Biodiversity in Agriculture for Sustainable Development and Food Security in Southeast Asia. PANAP was invited to be a speaker on gender and biodiversity. Stories from the Field and the benefits of agroecology for women was presented in the workshop. The workshop was organized by ASEAN Center for Biodiversity Diversity (CBD) and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) and was held at Maejo University in Chiang Mai, Thailand on 12-14 September 2017. The regional workshop gathered 64 experts and representatives from government, non-government, and academic institutions from both the environment and agriculture sector and institutions working on agricultural biodiversity in the ASEAN Member States in an effort to find common areas of collaboration to ensure successful and long-term effort of mainstreaming biodiversity into agriculture. Recommendations for future regional development included assessment on the status of the ABD, innovations, policies, mainstreaming and capacity building, networking and collaboration, education/information & communication and program development.

TFA was invited as a panelist on Agroecology at the Luangprabang Film Festival on December 10, 2017. TFA also sponsored Young Smart Farmers to exchange and exhibit their works with the Lao Young Farmer groups during the event. TFA supported policy makers from the Non-Formal Education and/or Continuing Education from Laos and Vietnam to visit the farmer education programs in Thailand and supported farmer leaders and teachers from Cambodia to visit various innovations near the Thai border.

PANAP was invited as a resources person for two workshops, to highlight the issue of informal/illegal trade of highly hazardous pesticides in Cambodia and Myanmar. One of the workshops was the Fifth Workshop of Regional Enforcement Network for Chemicals and Waste (REN), held in November, 2017, in Shezen, China. The workshop was organized by UNEP Asia Pacific. The workshops were attended by government officials from various departments as well as custom officers. PANAP's presentation highlighted the importance of regional cooperation in controlling illegal pesticides to avoid exposure of highly hazardous pesticides to farmers, consumers and the environment.

PANAP also participated in FAO's Regional Meeting on Agricultural Biotechnologies in Sustainable Food Systems and Nutrition in Asia-Pacific (RMAB) that took place in September 2017, Kuala Lumpur, Malaysia. PANAP participated in various sessions and gave inputs on the hazards of Genetically Modified Foods (GMOs) on human health and the environment.

Highlighted meetings

FAO staff and selected government delegates participated in several regional and global conferences to present programme work and results thereof. This included participation in various Asia and Pacific Plant Protection Commission meetings (Rotorua, New Zealand, November 2017) and workshops (Kathmandu, Nepal, March 2017) as well as international conferences (Agriculture and Climate Change, Barcelona, Spain, March 2017, Sustainable Rice, Bangkok, November 2017).

TFA attended meetings with the Department of Continuing Education in Vietnam and the Department of the Non-Formal Education in Laos to provide technical supports for development of curriculum and materials on ABD and PIA from the REAL program.

KemI was invited to attend the open sessions of the second meeting of ASEAN Working Group on Chemicals and Waste (AWGCW). Due to other conflicting activities, KemI was not able to attend the meeting. The invitation was, however, seen as an important step towards closer collaboration between AWGCW and KemI. In December KemI and a representative from the ASEAN secretariat met for a follow-up meeting and discussed possibilities and ways for future collaboration in more detail.



Annex 3: Results matrices with data from 2017

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)					
Efficient pesticide risks reduction and chemicals management within and among partner countries by strengthening capacity and regional collaboration.					
Indicators	Baseline	Target (2018)	Results up to 2017	Assessment 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: 25 additional cases (113 % of new target value). Result from 2017 (12 additional cases): <ul style="list-style-type: none"> • 3 cases in North Laos (PANAP) • 3 cases from North and South Vietnam (PANAP) • 1 Fact Finding Mission in Philippines (PANAP) • 1 survey in Yunnan, China (PANAP) • 1 case I Lao PDR (TFA) • 2 cases in Thailand (TFA) • 1 case in Vietnam (TFA) 	😊	
2. Number of farmers in the region implementing pesticide management according to IPM.	Approximately 44 000 farmers	Approximately 100 % increase	Total: Approximately 21,200 additional IPM farmers (48 % increase) have reduced pesticide use and made increased use of biological control. Result from 2017: Approximately another 2,899 farmers have reduced pesticide use and made increased use of biological control.	😊	GMS governments and 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.



Programme objective (med-term objective)					
Efficient pesticide risks reduction and chemicals management within and among partner countries by strengthening capacity and regional collaboration.					
Indicators	Baseline	Target (2018)	Results up to 2017	Assessment of status	Comments
3. Examples of chemicals management measures taken in partner countries	No available baseline	Approximately 20 examples of chemicals management measures	18 examples in total (90 % of target value) Results from 2017 (3 examples): <ul style="list-style-type: none"> • Promulgation of a Prime Ministerial Decree on pesticide management in Lao PDR • Organization of the first national conference on chemicals management in Thailand with participation from all concerned stakeholders (approximately 800 participants from government, private sector, civil society and academia) • Lao PDR, Thailand and Vietnam ratified the Minamata convention, an important step towards phase out of mercury in the region. • Studies carried out on impacts of pesticides to children and communities in Laos, Philippines, Thailand and Vietnam. 		
4. Level of regional cooperation on pesticide risk reduction and chemicals management	No available baseline	Approximately 10 examples of regional cooperation on pesticide risk reduction and chemicals management	7 examples in total (70 % of target value). Results from 2017: <ul style="list-style-type: none"> • No results to report. 		




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 up to 2017	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 107,350 persons (134 % of new target value) Result from 2017: <ul style="list-style-type: none"> • Outreach to another 18,437 persons (PANAP) • 64 Communities with 13,563 persons (7,018 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 59,500 persons (119 % of new target value) Results from 2017: <ul style="list-style-type: none"> • 5000 farmers, women, youth and other sectors participating in schemes to apply alternative and ecological practices (PANAP) • 10,509 persons (5,250 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: 12,533,826 (125 % of target value) Results from 2017: Nothing to report.		Due to changes to website host (www.panap.net) and design, the web hits and number of publication could not be reported.
	431 Likes on Facebook	New target value: Approximately another 2,100 likes on Facebook	Total: Another 2,422 likes (115 % of new target value)		

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 up to 2017	Assessment of status	Comments
		(Previous target value: Approximately another 1,000 likes on Facebook)	Result from 2017: 388 new likes in 2017		
	REAL project televised 3 times	At least 4 REAL project televised	Total: 6 REAL projects televised (150 % of target value). Results from 2017: <ul style="list-style-type: none"> • Live video via FB on “Safety of School Lunch under We Grow campaign, Thailand, 2017 • REAL project in Lao Cai broadcasted on VTV2, Vietnam Television 		
	Approximately 600 viewers on school projects at YouTube	At least 4 articles/papers published At least 4000 hits on website and Facebook	Total: 4 articles/papers published (100 % of target value) Results from 2017: <ul style="list-style-type: none"> • No results to report. 		
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 2017: <ul style="list-style-type: none"> • 12 curriculum workshops/ trainings 		
	No baseline available	At least 25 in-countries meetings/trainings and 4 regional meetings/ training/exchange workshops	Total: 94 in-countries meetings/trainings (376 % of target value) and 4 regional collaboration workshops (100 % of target value). Results from 2017: <ul style="list-style-type: none"> • 60 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 up to 2017	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	<p>New target values: Approximately 20 additional workshops/national seminars 7 regional exchanges 15 national campaigns on HHPs</p> <p>(Previous target value: Approximately 5 additional workshops /national seminars 2 regional exchanges 5 national campaigns on highly hazardous pesticides)</p>	<p>Total: 12 additional workshops /national seminars (60 % of target value) 5 regional exchanges (71 % of target value) 22 national campaigns on highly hazardous pesticides (147 % of target value)</p> <p>Results from 2017:</p> <ul style="list-style-type: none"> • 2 national exchanges • 1 national workshop was held in Cambodia • 1 regional workshop and exchange in Cambodia. • 7 national campaigns on HHPs 		
	2 Provincial and 1 National forum held in the region	Approximately 5 additional national forum/campaigns held in the region	<p>Total: 23 additional national forum/campaigns held in the region (460 % of target value)</p> <p>Results from 2017:</p> <ul style="list-style-type: none"> • 2 Pesticide campaigns, • 4 Green Environment campaigns • 1 Safe school lunch (We grow) campaign • 5 field days • 1 NGO collaboration forum • 3 NFE Provincial policy meetings 		


Immediate objective 2 (short-term outcome)					
Enhanced international, national, and local advocacy on sustainable pest management/agriculture					
Indicators:	Baseline	Target (2018)	Results up to 2017	Assessment of status	Comments
2.2 Examples of cases when documentation of pesticide poisonings and other incidents have been utilized for advocacy at all levels.	4 communes with about 30 communities participated and 1000 copies of Asian Regional report on documentation of pesticide problems distributed	Report adherence of the on the FAO Code of Conduct completed and published and 2000 copies distributed and downloaded and documentation of pesticide problems in 40 communities available	<p>Total:</p> <p>Documentation of pesticide problems in 41 communities (103 % of target value). Around 3,100 copies of Report adherence of the on the FAO Code of Conduct downloaded/distributed (155 % of target value).</p> <p>Results from 2017:</p> <ul style="list-style-type: none"> 8 communities participated in community level documentation in China, Laos, Vietnam and Philippines. Publications: "Stories from the Field" and "Replacing Chemicals with Biology" were widely distributed in UN meetings, regional national workshops and PANAP meetings. In addition, several journals have cited our publications and factsheets as reference materials. 		
	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	<p>Total: Pesticide impact assessment data used in 136 additional communities (272 % of target value) and 7 times (140 % of target value) at national level</p> <p>Results from 2017:</p> <ul style="list-style-type: none"> PIA data were used 63 communities for planning and presented at 1 National conference on Chemical Management. 		
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.	<p>Total: Participation in all relevant meetings connected to the Stockholm and Rotterdam conventions, SAICM and FAO JMPM.</p> <p>Around 45 interventions on pesticide issues (128 % of target value).</p>		



Immediate objective 2 (short-term outcome)					
Enhanced international, national, and local advocacy on sustainable pest management/agriculture					
Indicators:	Baseline	Target (2018)	Results up to 2017	Assessment of status	Comments
		<p>New target value: approximately 35 interventions on pesticide issues</p> <p>(Previous target value: including 2 interventions on pesticide issues).</p>	<p>Results from 2017:</p> <ul style="list-style-type: none"> • 15 interventions were made in the regional and international meetings relevant to the Stockholm and Rotterdam conventions, SAICM, UNEA, and FAO JMPM (PANAP) • TEF provided continuous support to the national chemical management committee for development of plans and policies in Thailand 		



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 up to 2017	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	<p>Total: 4 countries (67 % of target value)</p> <p>Results from 2017:</p> <p>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 Vietnam, a curriculum for integrated agro-aquatic biodiversity was designed with a strong focus on pesticide risk reduction to make fish/shrimp rearing possible.</p> <p>In Lao PDR, the pesticide risk reduction training manual and farmers workbook was revised and pilot tested in farmer training on pesticide risk reduction in northern Lao provinces.</p> <p>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 <i>Metarhizium anisopliae</i> 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 updated.</p>		



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 up to 2017	Assessment of status	Comments
			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 on-going.		
3.2 Number of (and gender-disaggregated data) IPM trained extension workers and farmer trainers 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, farmer trainers and farmers	Total increase: Trainers: 578 % (1,735 additional) Farmers: 91 % (40,040 additional) Results from 2017: Capacity to conduct IPM and PRR farmer training through organization of Training of Trainers and Refresher TOT courses expanded in all 4 GMS countries. A total of about 115 (32% female) IPM Trainers from Government and Farmer Trainers are actively involved in the conduct of IPM-PRR farmer training. Some 2,899 (64 % female) additional farmers in the Mekong region, participated in 'fortified' Farmers Field Schools or focused 3-day Pesticide Risk Reduction trainings		
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	Annual Regional Meeting held for Programme Evaluation and Planning	5 Annual Regional Meetings held for Programme Evaluation and Planning & IPM technical subject matters	Total: 7 regional meetings (140 % of target value) Results from 2017: The FAO-IPM component worked with the Asia and Pacific Plant Protection Commission and the Government of Nepal organized a Regional on Empowering Farmers through IPM FFS Training held in Kathmandu, Nepal in February 2017. The		


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 up to 2017	Assessment of status	Comments
and regional level as to ensure implementation of more relevant, innovative and effective training programmes with a focus on pesticide risk reduction			<p>workshop provided opportunity for 30 IPM counterparts (7 women) from 13 countries in the region (i.e, Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Thailand, Timor Leste and Viet Nam) to exchange experiences and discuss about innovations, sustainability and institutionalization of farmer education on IPM/pesticide risk reduction.</p> <p>The project supported participation of selected government staff in a training on biological control with sessions simultaneously held in Hanoi and Beijing in September 2017. The training was organized by the International Organization of Biological Control in collaboration with relevant national research institutions in both Vietnam and China.</p> <p>The project supported the participation of key counterparts from GMS countries including Cambodia, Laos and Myanmar in the 30th Session of the Asia Pacific Plant Protection Commission (APPPC) held in Rotorua, New Zealand from 20-24 November 2017. The counterparts represented their countries and in particular in the Standing Committees on IPM and Pesticides.</p>		
	Number of website hits: 71 782 hits to date on FAO Asia IPM website:	Approximately 150 000 hits on FAO Asia IPM website: www.vegetableipmasia.org	The regional IPM programme website is regularly updated and used widely and frequently, with some 119 270 hits (80 % of target value) as of December 2017.		

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 up to 2017	Assessment of status	Comments
	www.vegetableipm.asia.org				
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	<p>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.</p> <p>Preliminary stage of institutionalization in 1 country. In Lao PDR, the government is allocating IFAD funds for upscaling of pesticide risk reduction farmer training in 9 districts in 2 northern Lao provinces within context of the Soum Son Seun Jai rural development project during the 2015-17 period.</p>		
	Government investments in IPM-FFS programme 15 Million US\$ on annual basis	Approximately 100 % increase of government annual investments in IPM-FFS	<p>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).</p> <p>The Laos Government has invested approximately 1 Million US\$ in IFAD grant.</p> <p>The Government of Cambodia will invest about US\$ 2,333,600 in the IFAD-funded “<i>Agricultural Services Programme for Innovations, Resilience and Extension</i>” (ASPIRE) project (2018-2021) as a follow up to an ongoing IFAD-funded “<i>Project for Agriculture Development and Economic Empowerment</i>” (PADEE) of</p>		




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 up to 2017	Assessment of status	Comments
			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 of 79,932 farmers (89 % 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 2017: Some 2,899 (64 % female) additional farmers participated in 'fortified' Farmers Field Schools or focused 3-day Pesticide Risk Reduction trainings.		
	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 %.	Approximately 80 % 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

Programme objective 4 (med-term objective)					
Strengthened regulatory framework for the control of pesticides in selected partner countries.					
Indicators	Baseline	Target (2018)	Results up to 2017	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 2017: Promulgation of Prime Minister Decree on Pesticide Management in 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 2017: Inspections remained on hold in Cambodia and Lao PDR pending clarification on legal basis for enforcement and necessary updates in inspection guidance materials.		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 is expected to continue in 2018. In Cambodia, DAL leadership has re-taken ownership in the collaboration with FAO and KemI and started work on finalizing of key documents needed to continue the inspections. Programme support to enforcement

Programme objective 4 (med-term objective)					
Strengthened regulatory framework for the control of pesticides in selected partner countries.					
Indicators	Baseline	Target (2018)	Results up to 2017	Assessment of status	
					is expected to resume in 2018.
4.3 Percentage of pesticide labels in local language	No baseline available	Main distributors in two countries have labels in local language on their products	Total: Cambodia reported that based on baselines set during Phase I, the percentage of pesticides with Khmer labels has increased steadily as per latest survey findings in 2017. Results from 2017: Above Cambodia results confirmed in pesticide retail shops surveys, field during 4 th quarter of 2017. In Lao PDR, the new PM Decree on Pesticide Management now provides the legal basis for mandatory improvements in labelling.		See above.

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

Programme objective 5 (med-term objective)					
Strengthened chemicals management capacity within authorities, industries and among relevant CSOs in the partner countries					
Indicators	Baseline	Target (2018)	Results up to 2017	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: 116 % (192 new participants, 55 % women) at Forum meetings 7-11. Result from 2017: 37 new participants (46 % women) took part in Forum 11 in Vientiane, Lao PDR.		
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: The evaluation of Forum 11 showed that a majority of the participants (98 %) were satisfied or very satisfied with the Forum (presentations, topics etc.).		
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: 42 (84 % of target value) Results from 2017 (9 examples): <ul style="list-style-type: none"> Thailand organized its first National Conference on Chemicals Management with participants from all concerned ministries, CSOs, academia and the private sector Vietnam adopted a new decree and circular guiding the implementation of the chemicals law A joint committee of three ministries in Thailand (Ministry of Public health, Ministry of 		

Programme objective 5 (med-term objective)					
Strengthened chemicals management capacity within authorities, industries and among relevant CSOs in the partner countries					
Indicators	Baseline	Target (2018)	Results up to 2017	Assessment of status	Comments
			<p>Industry and Ministry of Agriculture and Cooperatives) agreed to submit a proposal to ban the highly hazardous pesticides paraquat and chlorpyrifos and put restriction on the use of glyphosate in Thailand.</p> <ul style="list-style-type: none"> • Thailand became a party to the Minamata convention, 22 June 2017 • Vietnam became a party to the Minamata convention, 23 June 2017 • Lao PDR became a party to the Minamata convention, 21 September 2017 • Increased compliance with regulations on chemicals from chemical industry in Vietnam as a result of regular inspections • Broad participation from all concerned stakeholders in Myanmar during the 3 day training on key elements of chemicals management (81 participants from 10 different ministries, private sector and academia) • Ministry of Public Health and Ministry of Agriculture and Cooperatives of Thailand jointly developed its first national strategic plan on antimicrobial resistance (2017-2021) 		