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



## Progress report 2016 - FINAL

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## **Annex 1: Risk matrix 2016**

## **Annex 2: Detailed narrative reports with results from 2016**

## **Annex 3: Results matrices with data from 2016**

## 1 Acronyms and abbreviations

Acronym	
ABD	Agro-biodiversity
AEC	ASEAN Economic Community
APPPC	Asia & Pacific Plant Protection Commission
ASEAN	Association of Southeast Asian Nations
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
GHS	Globally Harmonised System for Classification and Labelling
GMS	Greater Mekong Sub-region
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
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
SAICM	Strategic Approach to International Chemical Management
SEK	Swedish kroner
SENSA	Swedish Environmental Secretariat for Asia
Sida	Swedish International Development Cooperation Agency
SRI	System for Rice Intensification

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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 programme “Towards a non-toxic South-East Asia” continues to contribute to reduced risks from chemicals to human health and the environment and supports regional collaboration on management of pesticides, industrial and consumer chemicals.

With support from the programme, an additional 18,500 farmers in 2016 have switched to more sustainable agricultural practices, adopting IPM with reduced or eliminated use of chemical pesticides. A long-term Impact assessment of IPM/Pesticide Risk Reduction Training in Cambodia and Vietnam, published by FAO in 2016, shows that the reduction of pesticide risks in both Cambodia and Vietnam greatly improved the occupational safety of farmers in both countries since 2008, albeit positively influenced by the banning of WHO Class I pesticides. This study also showed that there was a lasting increase in knowledge among community officials and farmers, pesticide shops have improved their safety measures, pesticide use among IPM trained farmers was roughly cut in half in both countries - though more among FFS participants than control farmers, and highly toxic pesticides were no longer being used. This has resulted in fewer reported poisoning cases and richer and better ecosystems and services.

Countries in the region continue the development of legislation on pesticides and other chemicals and the programme has been providing continuous advice on technical as well as legal issues. In Myanmar, a new pesticide regulation was promulgated in January 2016. The new regulation contains revised penalties, defines the responsibility of end-users (both private sector (pesticide retail/wholesale sector and contract/concession farming industry) and farmers) and defines the registration board and its members. Lao PDR continued the work to up-grade the pesticide regulation to a pesticide decree that will facilitate cross-ministerial collaboration and bring more weight to pesticide related issues. In November 2016, the parliament of Lao PDR approved the country’s first chemicals law, an important step in the work towards sound management of chemicals.

The ban and phase out of highly hazardous pesticides (HHPs) continues in the region and important decisions were taken in 2016 by Vietnam, Lao PDR and China (ban of paraquat in Vietnam and Lao PDR, ban of liquid paraquat and restricted use of chlorpyrifos in China).

The programme has been supporting development of the FAO Pesticide Registration Toolkit, an on-line tool 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. In 2016, the toolkit became fully operational and training workshops contributed to strengthened capacity within national registrations authorities and generated suggestions on how to further develop the toolkit. The toolkit offers important guidance in support of countries’ efforts to phase out highly hazardous pesticides.

Collection of data from real life situations in the field has always been an important part of the programme and has contributed important information which is used for the development of national, regional as well as global policies and regulations on pesticides. The data collection and evaluation has recently been further improved with the launch of a mobile application. The application offers a possibility to directly report pesticide monitoring data and to save the answers in a uniform manner that facilitates analysis of the results and production of reports.

The programme's achievements were recognized by the external mid-term review team that, in August-September 2016, assessed the progress of the programme from mid-2013 to mid-2016.

Below are a few statement from the consultant's report:

- *The conclusion is that the Programme has produced more and better outputs compared to the targets set in the results framework in the Programme document.*
- *More support is needed to continue the process of institution building for a spectrum of government institutions having responsibilities pertaining to the management of non-agricultural chemicals, such as implementation of regulations, registration, border inspection and import control, worker safety, food safety control, waste and data management. Also the government services for IPM need further support.*
- *The Programme is deemed by the MTR to be relevant both in relation to the needs and priorities in the region and the participating countries and from the donor perspective.*
- *The regional collaboration within the Programme has been appreciated by the participants in the six countries. There are large Regional Forums every year, and workshops and partner meetings in-between. Topics have varied according to needs and circumstances in a flexible way.*
- *At the national level, the Programme support to new laws, regulation and control has contributed to sustainable results.*

## 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 (TFA). 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.

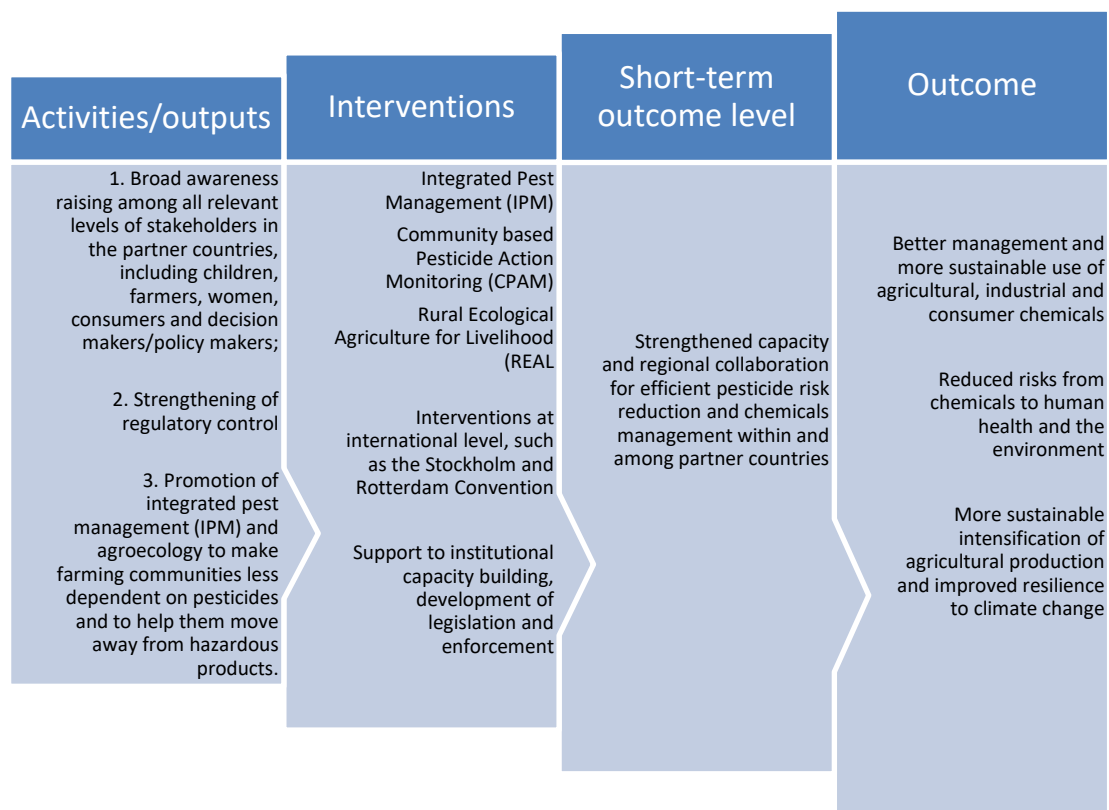
### **3.2 The programme's strategy for change**

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 chemicals management and sustainable intensification of agricultural production are crucial parts of 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, climate action and partnerships for the goals.

	<p><b>End poverty in all its forms everywhere</b></p> <p>"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.</p>
	<p><b>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b></p> <p>"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.</p>

	<p><b>Ensure healthy lives and promote well-being for all at all ages</b>                      “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.</p>
	<p><b>Ensure availability and sustainable management of water and sanitation for all</b>                      “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.</p>
	<p><b>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>                      “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.</p>
	<p><b>Make cities and human settlements inclusive, safe, resilient and sustainable</b>                      “Towards a non-toxic South-East Asia” contributes to reduced environmental impact from cities by preventing release and distribution of hazardous chemicals.</p>
	<p><b>Ensure sustainable consumption and production patterns</b>                      “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.</p>
	<p><b>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b>                      “Towards a non-toxic South-East Asia” contributes to protection of the oceans and <i>in-situ</i> preservation of biological diversity and ecosystem services in agricultural production landscapes by preventing release and distribution of hazardous chemicals.</p>
	<p><b>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</b>                      “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.</p>

## 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 products 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 use and production of these and some of the more hazardous pesticides; something that will affect all neighbouring countries.

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 Asia<sup>1</sup>. 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 (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 on chemicals 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 hopefully more concrete actions and activities will be observed in the near future. Since ASEAN is an important regional actor, Keml has been in continuous contact with the working group and have offered support to their work, if requested. Representatives from ASEAN were invited to the 11<sup>th</sup> regional chemicals management forum to present their work and take part in the discussion on regional collaboration on chemicals management beyond 2018.

All member countries in the 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 they find the knowledge and network useful. The Forum is considered 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. 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. 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 study participants to reconsider their chemical exposure and request additional education regarding prevention and health impacts of pesticides. Partners also provide farmers with knowledge and

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<sup>1</sup> [http://www.keepeek.com/Digital-Asset-Management/oced/environment/oced-environmental-outlook-to-2050\\_9789264122246-en#.WNjNBdKKCUk#page1](http://www.keepeek.com/Digital-Asset-Management/oced/environment/oced-environmental-outlook-to-2050_9789264122246-en#.WNjNBdKKCUk#page1)

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 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 is also increasing in the region. In addition to China and Vietnam, the governments of Cambodia and Lao PDR have started to invest in up-scaling of FAO-piloted IPM and PRR training for farmers.

Corruption remains widespread in the region, something that is affecting the poorest and most marginalised groups in particular. Existing laws and regulations risk being ineffective or non-functional due to difficulties to enforce the laws and weak government structures and lack of resources. Powerful multinational corporations promoting chemical pesticides as the 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 and China make it more difficult for CSOs to operate in these countries and cause a lot of concerns since they have potential to impede their operations.

Thailand continues to be an important actor in the regional collaboration on chemicals management. 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). The on-going reform of the system for chemicals management in Thailand provides valuable input to the other countries in the region. The political situation in Thailand remained unchanged during 2016 with the military still in power. All agencies continued their operations to support the government policies.

In Cambodia the large restructuring of the Ministry of Environment has been finalized but it is still too early to see how and if this will affect the work on chemicals management. The government has decided to develop an environmental code, including a specific chapter on chemicals, and drafting of the code is on-going (the program has provided comments on the draft). It is positive to see that the chemicals will be regulated in a more comprehensive way. The pressure to finalize the code within a short time-frame is, however, compromising the quality and applicability of the legislation since there is limited time for review of the different pieces of legislation that are now being compiled into one document. Significant work to develop secondary legislation will have to be undertaken in order to make the code functional and contribute to the achievement of sound chemicals management.

In Myanmar, the government resumed operations as normal after the elections and officials are engaged in national and regional activities. It was observed that peri-urban farmers were using more pesticides than the rural poor farmers. In addition, with regards to the quality of the FFS being implemented by both governmental and non-governmental agencies, there seems to be lack of consistency and clear understanding of the quality FFS. There is a need to share and assess the quality of the farmer training programs to better strengthen institutional capacities

## 5 Progress report

### 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.

Gender equity is at the core of the design of FAO's community education programmes on IPM/pesticide risk reduction and National IPM Programmes. However, due to the feminization of agriculture resulting from the migration of men to urban areas to earn livelihoods, a higher percentage of women now attend training activities also as they assume more responsibility for managing agricultural production. 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. 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.

Gender awareness and women's empowerment are also important focus areas for PANAP and local partners. Female 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. (Communities in Peril: Global report on health impacts of pesticide use in agriculture, Breast Cancer: A wake up call and Breast Cancer and You!). 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. In 2015, 16 Days of Global Action campaign brought together more than 200 partners and network groups in 20 countries in Asia, Pacific, Africa and Europe, and in turn, mobilized more than 25,000 people around the globe.

In order to move beyond the level of participation PANAP and partners have also supported strengthened leadership among women. In Cambodia, 100 women were selected to be leaders in the National Farmers' Forum that was organized by CEDAC. The main aim of the forum was to highlight the challenges of small scale women farmers in accessing agricultural resources like water, seeds and

land. The forum also emphasized that women's participation is crucial in developing national agricultural policies. In a joint statement, women farmer's views, challenges and suggestions were compiled and sent to relevant government agencies, the National Assembly, development partners and CSOs.

TFA began using tools to assess gender roles in agriculture in 2014 and have continued until present. The tools help programs identify men's and women's roles in making decisions and their behavior in handling pesticides. The results are used to discuss ways to minimize the risks and/or to tailor specific training for the target groups.

In 2016, TFA, FAO RAP and PANAP documented the positive results from this continuous and collective work to advance gender equality and the stories were collected in a joint publication "Stories from the Field: Women Working Towards a Non-Toxic Environment". The book 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 book is available in printed form as well as in electronic format and was officially launched on International Women's Day, March 8, 2017.



### 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 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. 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 allow them to attain higher profits. It also helps produce safer food, protect the environment and improve livelihoods for better quality of life.

Since the beginning of phase 2 of the programme, TFA has adjusted their program to specifically select target sites in the poor rural areas. Income generation activities such as home gardening, weaving and small animals raising have been initiated for the needed women and children. In 2015, TFA initiated a regional study on impacts of pesticides to children and communities in the high risks areas in Laos, Philippines, Thailand and Vietnam with the aim to raise awareness and formulate responsive measures to minimize the pesticides exposure to children and communities.

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 7<sup>th</sup> 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. In addition, a fact-finding mission to document the impacts of pesticides in Palestine was made by PANAP and the Arab Network for Protection of Nature. The document has been sent to the UN Special Rapporteur on human rights and hazardous substances and wastes.

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. The proceedings of the Permanent People's Tribunal session on Agrochemical Trans National Cooperations was launched in 2016. The proceedings included the indictment, the judgement and the testimonies of victims and experts. The indictment provided a strong human rights framework and documented violations of human rights of people, children, farmers, indigenous communities and women by agrochemical TNCs.

Keml has initiated a 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. Keml has also established contact with the UN Special Rapporteur on Human Rights and Toxics, Mr Baskut Tuncak. Keml will 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 registered Cooperatives or 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.

Since the beginning of phase 2, TFA and partners have continued to seek and secure contributions from government and/or other donors to support program activities and ensure sustainability. In Cambodia and Laos, parts of the REAL activities are being co-funded by other donors. The Office of the Non-Formal Education in Thailand has contributed over 2 million baht annually from the national

and local level to support capacity building of trainers and FFS implementation since 2014. In Laos, approximately 22,000 USD was contributed by Helvetas (an international network of independent affiliate member organisations working in the field of development cooperation and emergency response) to support the study of pesticides impact to children and community in Kham District of Xiang Khuang province in 2016. In Vietnam, the local government and communities contributed in-kind and cash contributions of approximately 21,500 USD for the construction of the 270 Cement Pesticides Containers Waste Tanks. The provincial Crop Production and Plant Protection Sub Department allocated budget for collection and disposal of pesticide containers. Budget allocation from the government (province and commune level), CSOs, private companies and communities for extension of farmer's initiatives is estimated about 1,920,000,000 VND (96,000 USD) per year for expansion of REAL projects.

In order to secure a stable and sustainable financial situation, PANAP and partners have continued to search for various methods to fund raise. PANAP is exploring other donor sources. CEDAC is offering consultative services to various organization for research and training for farmers. PEAC in China, has opened eco-stores and is using the internet to sell their products from their project sites. SAEDA is also exploring similar possibilities to market their farmers' products.

PANAP and partners are exploring e-learning platforms to further sustain the momentum on agroecology by the launch of International People's Agroecology Multiversity (IPAM). IPAM was successfully launched on 5 June 2016 in Penang in time for the World Environment Day. The event was attended by close to 50 advocates and experts of agroecology and food sovereignty. Local farmers, environmental activists, organic food advocates, the media, students and fellow NGOs supported the half-day event that showcased the importance of both the online portal and the global network of field learning sites. The portal and field learning sites that are integral part of IPAM are work in progress and continue to be improved and information and learning options are being added.

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. 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.

Since the beginning of phase 2, Keml 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, Keml has had continuous dialogue 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. No formal agreements on collaboration has been established but the dialogue and contacts continue. The addition of Thailand in the Keml coordinated regional



collaboration on chemicals management has contributed to good relations with the Thai government agencies responsible for chemicals management. Thailand is currently chairing two regional working groups on chemicals and waste, one within ASEAN and one within the Asia-Pacific Forum on Health and Environment, and Kemi has offered support to Thailand in this work in order to promote/facilitate further advancement of sound chemicals management in the South-East Asian region.

At present, the Kemi-supported regional collaboration on chemicals management is an important complement to the work/support from regional actors such as ASEAN and UN Environment Regional Office for Asia and the Pacific. Kemi have, since the beginning of phase 2, been providing practical advice on various aspects of chemicals management (enforcement, pesticide registration, development of registries etc.) and have contributed to increased awareness and capacity of government agencies in the region. 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. 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.

In order 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. TFA and PANAP participated in the Fraud and Bribery workshop organized by the Embassy of Sweden in Bangkok and have shared the outcome and the report with their local partners.

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 2016, some 4 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 115 850 hits (77 % of target value) as of December 2016. Also, 4 case studies were developed documenting the results of pesticide risk reduction activities. In addition, the programme has started to communicate with a broader audience using Facebook.

FAO uses the electronic network of pesticide registration authorities that was established after a regional meeting on highly hazardous pesticides in 2014 to disseminate information of regional or international importance, such as new technical guidelines prepared in support of the International Code of Conduct on Pesticide Management.

TFA continues to share and disseminate program information in various national and regional meetings and workshops. The TFA website and Facebook was updated in 2015 and the REAL case studies were published and disseminated in 2016. TFA also provides information for articles in order to spread information on pesticide related risks to human health and the environment. TFA has also been maintaining active communication through the digital channels of Facebook and LINE. Following the 2015 Regional Workshop, slide presentations were also shared for program participants and the general public via SlideShare.

PANAP and partners continue to use conventional media; making television and radio appearances, and being featured in newspapers. Blogs and press releases have been used to get the attention of local and international media as well.

After Phase I, PANAP learned that it is important to engage the public not only with traditional media but also with social media. To help improve the skills and capacity of partners and staff on media outreach, a three-day training on Media and Advocacy in Penang in September 2014 was organized. About 50 participants from 13 countries representing PANAP partners and staff joined the training, which was both productive and fun. The training helped the participants acquire new skills and capacity in media work. As a result, partners have been able to design effective media campaign plans to support on-going campaigns on the issues of rural women, pesticides and food sovereignty. CEDAC, SAEADA and RCRD, SRD & CGFED have since promoted materials on their own Facebook pages. The training also provided PANAP impetus to use Twitter and Facebook for campaigns in a more systematic and sustained way. PANAP is continuously improving access to its communication channels to share a variety of useful and relevant information and resources through its websites. In 2016, PANAP developed its new website ([www.panap.net](http://www.panap.net)) that is more focused on campaign support.

Based on needs and wishes expressed by participants in the regional collaboration on chemicals management, Kemi has continued their efforts to make information from Forum meetings and other programme activities available to a broader audience than those attending the specific meetings/workshops. Presentations etc. are available on Dropbox and all participants can share access to the folder with their colleagues. Kemi has also created a specific webpage for the regional collaboration (<http://www.kemi.se/en/about-us/our-work/international-work/regional-cooperation-in-south-east-asia>) with contact details, links to progress reports, publications etc. There is a specific page for the forum on chemicals management. The webpage is still under development and more information will continuously be added.

### **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.

The implementation of some project activities has been delayed due to unforeseen climatic changes. The risk was addressed by shifting the timeframe for implementation of activities that were affected. At farmer level, strategies and practices have been identified and are being tested in farmer training programmes as to make communities more resilient in the face of changing environmental conditions.

To avoid shortage of funds from the government and other donors, FAO have continued stressing the importance of IPM and Pesticide Risk Reduction farmer training and investments in policy dialogues with senior government officials and various resource partners at national and regional levels. This led for example to IFAD funded investments in up-scaling of the pesticide risk reduction field training work in 2 northern Lao provinces as part of an MAF implemented rural development project (SSSJ), 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.

TFA has experienced staff turnover within their partner organizations and this resulted in some program implementation delays till new staff were employed. TFA continues to monitor and support new staff through these transitions in order to preserve programme continuity.

Some activities connected to enforcement have been delayed due to development of new/revised legislation. To adjust to new situations and opportunities, the programme has worked with rolling work-plans that are updated on regular basis in dialogue with the countries to adjust to the current situation and priorities and enable programme support to relevant activities.

For more details on risk levels and implemented risk mitigation measures during 2016, see risk matrix in Annex 1.

### **Private sector collaboration**

Partnerships have been explored and linkages of farmers have been facilitated with private sector ranging from sources of good seeds to alternatives to pesticides to better market access. Since markets have a great deal of influence on what and how farmers produce, in 2016 FAO joined an 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.

TFA and partners continue to seek collaborations from private and public sectors. Linking farmers to markets and foods companies was initiated in Vietnam in 2014. In 2015, the program supported the establishment of two “safe vegetables cooperatives” to support minority hill tribe farmers to supply approximately 200 – 300 kg of vegetables per day to local and markets in Hanoi. Linking farmers to supply schools and hospitals with healthy agricultural products has also been initiated in Thailand. Participating schools in Thailand have grown their own vegetable gardens and procure pesticides free vegetables from local farmers for the school lunch instead of buying from the market. Rural hospitals near schools were also encouraged to buy clean vegetables directly from farmers while some city hospital and NFE centers organized “green market” on certain days of the week to link farmers directly with consumers. However, the rural hospitals often have few in-patients and only buy vegetables weekly while large schools with hundreds of children needed regular supply that could not be met by few farmers and still depended on buying at the market. Schools’ efforts to discuss and encourage more local farmers to jointly produce for school lunch are being pursued.

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. 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 also collaborated with Tinh Gia Fish Company and other groups that support agroecologically based food production in Hanoi to promote and sell the farmers’ products. CEDAC supports farmer markets in 7 provinces, and 8 shops in Phnom Penh. CEDAC is also involved in forming farmer groups/cooperatives to produce organic products and to link them to local and international markets like the US and Europe.

CEDAC in Cambodia and SEADA in Laos are involved in various marketing certification schemes like Participatory Guarantee System (PGS), Fair Trade so that farmers can access local and international markets (CEDAC). While organic certification is expensive for farmers, PGS and other systems provide farmers with easier process 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 North Vietnam, 3,500 farmers no longer use pesticides as a result of ongoing trainings. In the north of Vietnam, SRD and CGFED organized an “organic dialogue” linking 70 business owners, scientists, civil society organizations (CSOs) and farmers to have initial dialogues to explore new innovations, expand and promote organic markets in Vietnam. Two organic product markets in Ciputra Hanoi and a local specialty market in Royal City, Hanoi were organized to link farmers from SRD and CGFED’s project sites with consumers. In partnership with Tam Dat, Uncle Tom and Mr. Clean enterprises, pesticide-free and organic agricultural products (meat and eggs from chickens raised by organic feed, chemical-free rice, wild honey, fish sauce without preservatives) were sold in the markets.

As for PEAC in China, there are eco-restaurants and shops to help sell organic or pesticide free products. The products are also sold online and through an Eco-Farmers’ Market, which is organized every last Saturday of the month in Kunming to build direct links between consumers and farmers. In northern Laos, farmers from the Organic Farmers Network, sell their chickens and vegetables to local restaurants and at the district organic market, which is supported by the local government.

## 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 Regular Programme funded 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. Governments of participating countries have now started to invest public funding to scale up the adaption of the concept and approaches initiated by RRI.

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. 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.

Since the beginning of phase 2 of the programme, FAO in collaboration with regional and local partners have organized two regional meetings to review and summarize the accomplishments of community education programmes on pesticide risk reduction, identify implementation challenges faced and formulate revised strategies to strengthen collaboration and explore/demonstrate the added value of all partners working together to address pesticide risks in convergence areas.

Since 2012, TFA have 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, the Agrobiodiversity and various ecological agricultural practices from government and private sectors.

TFA has initiated a regional study on pesticide residues in children and farmers in the high risk areas in 2016. TFA partners and officials from public health have conducted surveys with approximately 3,800 students, farmers and consumers in Laos, Philippines, Thailand and Vietnam. The preliminary results shown that students and farmers in the high risks areas in all countries have higher residue of OP and C in their blood compared with the control/consumer group who are not in the high risk area. A full report of the studies will be completed in 2017 and will be disseminated at the national and regional levels. See more details in countries report.

PANAP has organised regional exchanges on agro-ecological practices. In order to facilitate an exchange with CEDAC in Cambodia and to study their capacity building of farmers on agroecology, their marketing and sustainability strategies, PANAP organized a visit for partners from six countries including China, Laos, Vietnam and Philippines as well as Sri Lanka and Malaysia (participants from Malaysia and Sri Lanka were covered by additional funding). This regional exchange facilitated better understanding on agro-ecological practices and innovation of farmers in Cambodia working with CEDAC, their livelihood opportunities and marketing of organic products.

Since 2009, KemI in collaboration with the member countries, have organized regional chemicals management Forums. Participants from Cambodia, Lao PDR, Myanmar, Thailand, Vietnam and other invited countries have been introduced to a number of different topics on chemicals management and have shared country updates with their neighboring countries. The Forums serve as an important regional platform for capacity building, information exchange and dialogue on sound chemicals management. 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.

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 has had continuous dialogue 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 meetings and workshops 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. No formal agreements on collaboration has been established but the dialogue and contacts continue. The addition of Thailand in the KemI coordinated regional collaboration on chemicals management has contributed to good relations with the Thai government agencies responsible for chemicals management. Thailand is currently chairing two regional working groups on chemicals and waste, one within ASEAN and one within the Asia-Pacific Forum on Health and Environment, and KemI has offered support to Thailand in this work in order to promote/facilitate further advancement of sound chemicals management in the South-East Asian region.

### 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, dialogue and support to the development of legislation on pesticides, industrial and consumer chemicals.

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. From 2013 to 2016 an additional 60,000 farmers have adopted better risk reduction practices and some 18,500 farmers adopted IPM after having participated in season-long IPM FFS and intensive pesticide risk reduction training. 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's major role has been focused on capacity building for partners and concerned agencies on pesticides risks reduction and chemicals management. The Rural Ecological Agriculture for Livelihood (REAL) was initiated in Phase I and in Phase II expansion has taken place in all participating countries.

The Pesticides Impacts Assessment (PIA) was piloted in Thailand in 1998 and since then it has been adapted and used by many agencies. PIA is an integral part of the REAL program for school and communities to assess the status of the pesticides uses and impacts to health and 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 on-going surveys. Ecological agriculture practices has been promoted to help communities reduce the use and risks of pesticides and to increase production and income. The Agrobiodiversity (ADB) Conservation and Utilization is another integrated activity in the REAL program. The ADB helps create awareness on the importance of the ABD to community livelihood and promote conservation and sustainable utilization of various species.

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.



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 2016, 4 regional forums have been organized with a total number of about 250 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 4 forums is 155 persons (57 % women).

The programme's continued support to the implementation of work plans of the Asia Pacific Plant Protection Commission (APPPC), the regional subsidiary of the International Plant Protection Convention, has also contributed to strengthened regional collaboration. In particular, the programme has provided technical support and facilitated participation in the regular workshop events organized by the APPPC Standing Committees on IPM and Pesticides. 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.

**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 countries.**

**Summary of results, TFA and partners**

TFA and partners have been building capacity for schools and communities on assessment and monitoring of pesticides impact to health and the environment and promote ecological agricultural practices and conservation of biodiversity to reduce the risks and improve their livelihood. 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"> <li>• The PIA and ABD curriculum were translated in 4 languages and implemented in REAL schools and community education program.</li> <li>• Over 2,500 students, teachers and farmers were trained.</li> <li>• Awareness raised on pesticides impacts to health and environment</li> </ul>	<ul style="list-style-type: none"> <li>• Ecological agricultural practices and study of pesticides residues in children and school lunch added to the curriculum</li> <li>• Added Thailand and Myanmar</li> <li>• 20,000 students, teachers and farmers trained under REAL program</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of pesticides uses and proper handling of pesticides and waste</li> <li>• Increased income, foods nutrition and yields</li> <li>• Increased biodiversity and sustainable utilization for community livelihood</li> <li>• Measures, policies and plans supporting awareness raising, reduction of pesticides uses, exposure and waste management implemented.</li> </ul>



Since 2012, TFA has been expanding the REAL program consistently, from 26 Schools in 2012 to 94 schools in 2016 with approximately 13,022 students, teachers and farmers actively participating in the program.

<b>REAL Data 2012 -2016</b>	<b>2012</b>	<b>2013</b>	<b>2104</b>	<b>2015</b>	<b>2016</b>
No. of Schools	26	33	60	29	94
No. of Students & Teachers	2011	1935	5598	6250	9885
No. of Farmers	1597	2812	4038	3300	3137
<b>Total</b>	<b>3608</b>	<b>4747</b>	<b>9636</b>	<b>9550</b>	<b>13022</b>
% females			53%	58%	53%

According to the 2016 PIA surveys, Lao farmers have become the largest pesticides users in the region (@6,334 liters/ person/ year) due to commercialized and contract farming from neighboring countries. Myanmar has also become a heavy user of pesticides (@4,190 liters/person/year) for their commercial crops. Vietnamese farmers may not use large amount per person (@1,421 liters/person/year) but applied an average of 4,762 liters of pesticides per hectare annually for the intensive farming on their small plots of land. The high frequency of spray days in Laos (55 days/person/year) and Myanmar (34/days/person/ year) is causing high exposure to schools and communities. Two severe cases of pesticides poisoning were identified in Laos and will be followed up for documentation.

The PIA data have been used to develop action plans to reduce pesticides use and risks to health and environment. As a result from raised awareness on pesticides, farmers have increased the use of basic protective gears such as rubber boots, gloves, hat, goggles, long sleeve shirts, hat as well as fixing the leaks from equipment. Farmers also improved their storage and disposal behaviors to minimize risks to children, foods, animals and the environment. In Cambodia and Vietnam, concrete tanks for disposal of pesticides containers were built to minimize the contamination of water sources and the environment. In 2016, more than 3,000 pesticides containers were disposed in the tanks in 6 villages in Cambodia. In Vietnam, the provincial crop protection office has annual financing for collection of containers from the disposal tanks to be incinerated. ICERD was involved in drafting the ministerial management documents “management of pesticide container” in 2015 and the Joint Circular on Guidelines of collecting, transporting and processing waste pesticide container (No. 05/2016/BNN-BTNMT TTLT ) was in May 2016 by the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment.



Ecological agriculture practices such as IPM, SRI, botanical pesticides, liquid fertilizers and compost has continuously been promoted as alternatives to chemical pesticides and fertilizers in all countries. A majority of REAL schools have implemented school vegetable gardens where the produce is used

for school lunch and sold to markets to create income for the school and poor students. In 2015, data were collected from 483 farmers (68 % female) in Vietnam who applied the SRI-climate change model. These farmers were able to increase their rice yield by 10 % and profits by 12 %, on average, in comparison with other current practices. The SRI fields also showed an increased number of natural enemies (+27 %), aquatic animal species (+22 %) as well as reduced pesticide application (-67 %), water consumption (-31 %) and greenhouse gas emissions (-30 %) in comparison with traditional practices. Techniques applied in the model also help improve rice health for better tolerance with extreme climate changes. The rice has stronger and deeper roots and is able to withstand strong wind or drought.

The Agrobiodiversity Conservation and Utilization has helped farmers in the region improve their livelihoods and has contributed to increased biodiversity in the farmland. In Cambodia, hundreds of farmers installed aquatic concrete rings in the rice field to create habitat for aquatic species. In 2016, 69 families in Battambang were able to harvest more than 600 kg of aquatic species for their consumption and income.



In Laos, at least 30 villages have implemented the ABD conservation of various plants and animal species for their food, income, medicine and materials uses. Farmers' dependency on natural biodiversity is the highest in the region. Currently, 27 schools grow varieties of vegetables, banana and herbal plants in their garden. The products were used for school lunch and sold to markets. Approximately 17 Schools earned 1,600,000 Kip (USD 200) from a season of crop.

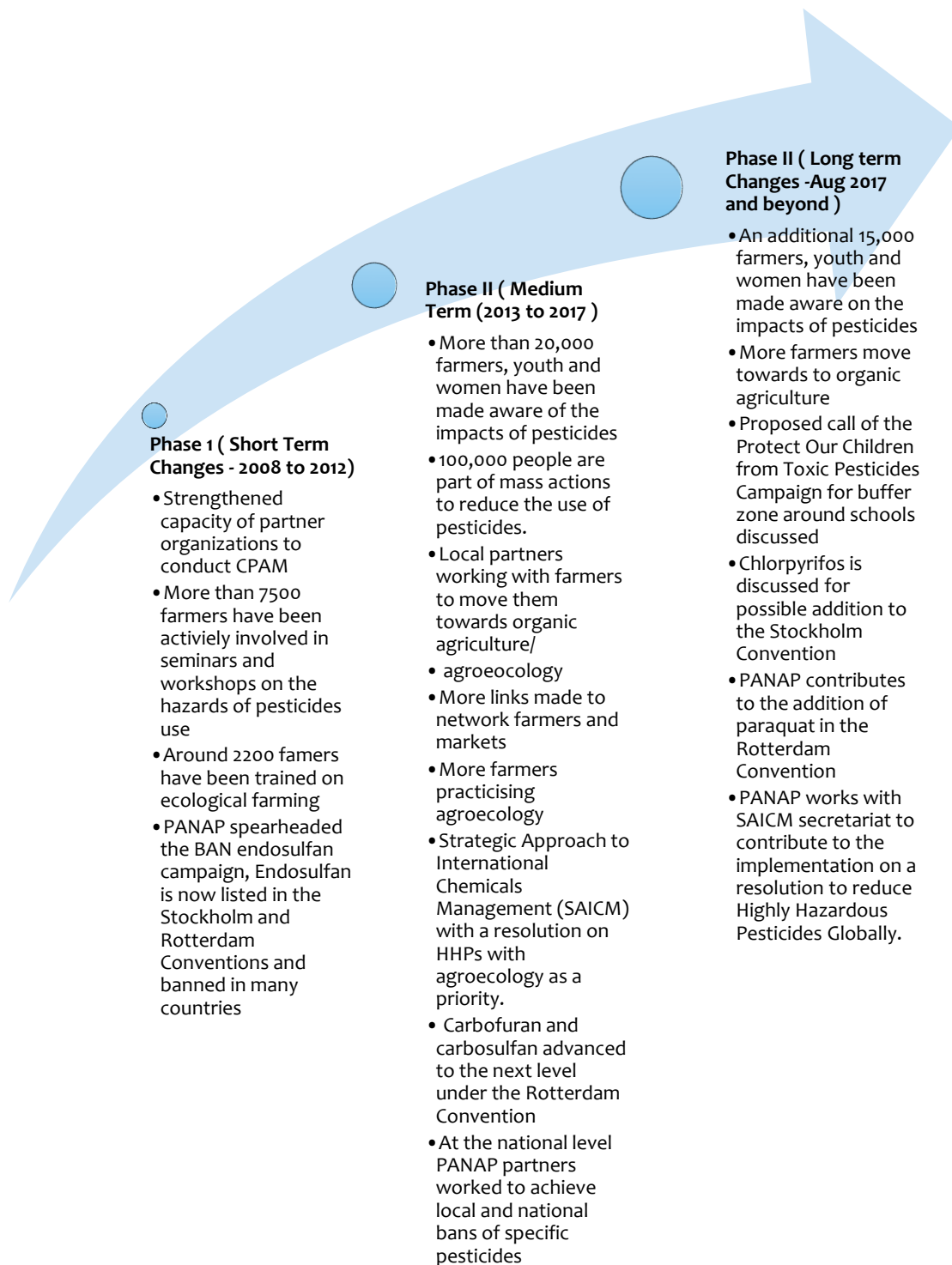


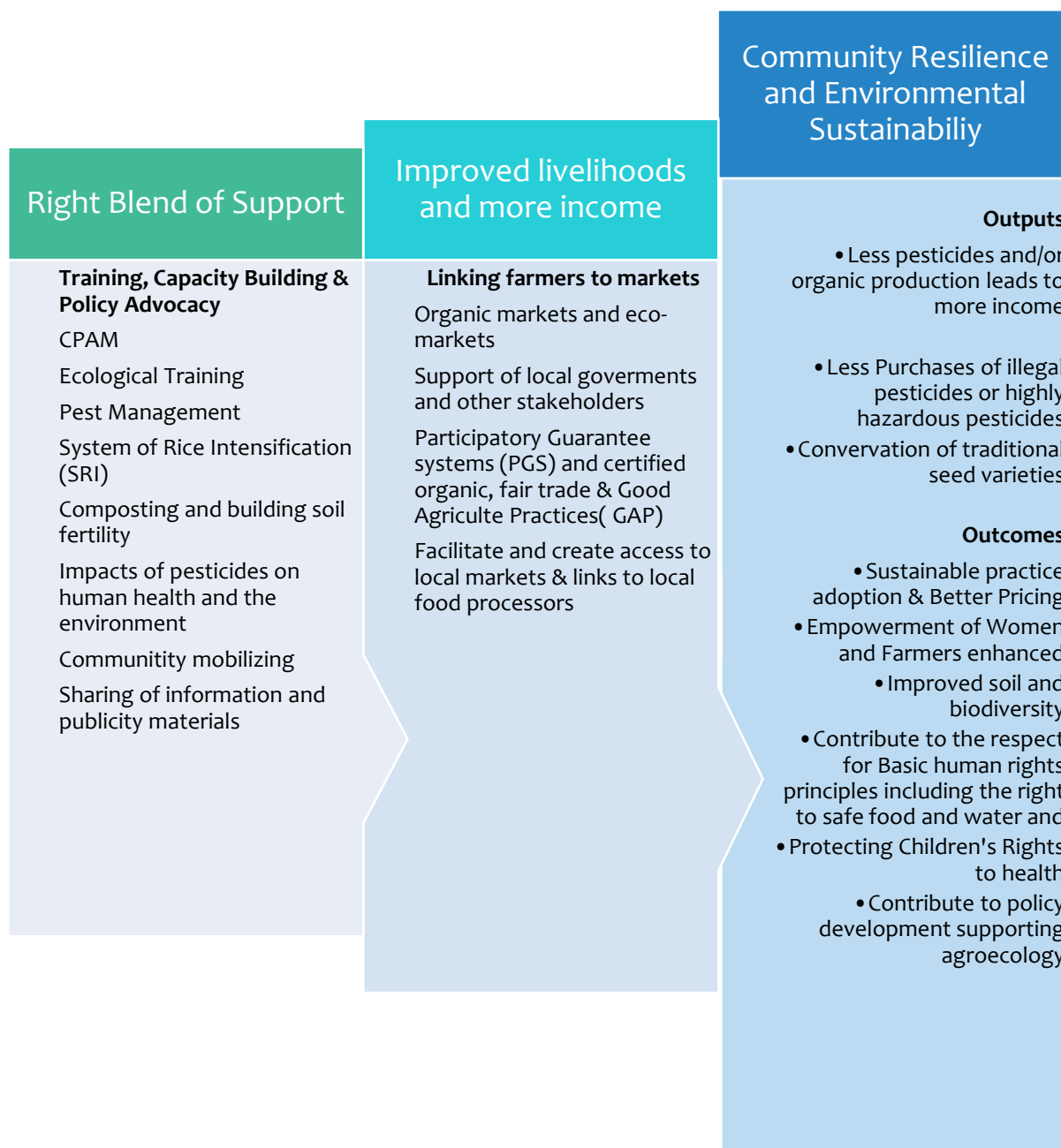
In Vietnam, a total of 240 farmers (65 % female) from 4 provinces have been maintaining "conservation of fish and aquatic animals in rice field". Hmong ethnic minority group in Laocai conserve indigenous vegetables and link their produce to various local markets and restaurants. Home vegetables garden have also been promoted among female farmers in participating communes.



In Thailand, the Thai Education Foundation was appointed as a national committee working group on Chemical Management Plan. In 2016, TEF's pesticides risks reduction program was adopted as one of 6 flagship projects under the national chemical management plan.

*Summary of results, PANAP and partners*





**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 among farmers. This intervention has led to improved agricultural value chains, which leads to community resilience and overall sustainability.

PANAP has further expanded CPAM trainings and surveys in communes and villages in China, Cambodia, Laos and Vietnam. Upon training by PANAP, CPAM surveys have been conducted by more than 400 key farmers and local facilitators. Over the span of three years, more than 50,000 farmers, women, youth and other sectors have participated in schemes to apply alternative and ecological

practices and 30 to 60 percent of them are women. The CPAM Handbook on community monitoring has been updated, to include the use of the CPAM mobile application.

PANAP still finds illegal and banned pesticides in Laos and Cambodia coming from Thailand, China and Vietnam. The trade of some of the banned pesticides in Laos and Cambodia have been identified and documented (see report <http://panap.net/2013/12/illegal-pesticide-trade-mekong-countries-case-studies-cambodia-lao-pdr/>)

One of the reasons for the involvement of partners in the Philippines in the project is to help provide technical, advocacy and campaign strategies and share these strategies with the Mekong countries. Partners in the Philippines have more than 25 years of work in the area of pesticide campaigns. They have the scientific and technical competence and they have built networks of farmers, scientists, doctors, lawyers and policy makers who they work with to bring up the issues of pesticides. These technical, network building, advocacy, campaign strategies have been very useful for Mekong partners to learn from and to use in their work. The partnerships really strengthen the work in these countries and provide the support to enable achievements in this component of the project.

One of the focus areas in Mindanao is the massive aerial spraying that is happening. A strong citizen's movement to ban aerial spraying has emerged as a result of PAN Philippines and its partners' awareness building campaigns and workshops. A broad coalition of citizen groups calling themselves BATOAN (roughly translated to Citizens Opposing to Aerial Spraying of Pesticides) have been organized and have initiated public awareness events, mass actions and lobbying activities against pesticides use by banana plantations. One bill to ban aerial spraying has been filed at the national level (Link: [http://www.congress.gov.ph/legisdocs/basic\\_17/HB04491.pdf](http://www.congress.gov.ph/legisdocs/basic_17/HB04491.pdf)). Two more bills to ban paraquat and glyphosate are being drafted to be filled at the lower house.

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, China and Vietnam. 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.

43,200 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.

PANAP and partners have mobilized more than 100,000 people 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.

As of 2016, CEDAC has a broad network of 22,000 farmers who are members of CEDAC's network (with counterpart funds). 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.

After initial contact with the communities, PANAP's partners also transfer knowledge back to the community and local governments. This is clearly demonstrated in Laos in Xiengkhuang where SAEDA trained farmers and local government officials who then continued training other farmers. The new trainers also experimented with innovative ways of ecological agriculture. PEAC in China have built capacity of more than 4,000 people. Farmers (60 % women) and consumers were trained on pesticide risk reduction and ecological farming. As a result, in Hei Nigou Village for example, 57 percent of trained farmers have stopped using pesticides on corn and more farmers are moving towards ecological practices. Farmers trained by PEAC have increased profits and increased their capacity to practice agroecology. PEAC in China has an organic cooperative with over 120 households, two Mutual Help Groups with around 8 households established at the village level.

In North Vietnam, 3,500 farmers no longer use pesticides as a result of ongoing trainings. In the north of Vietnam, SRD and CGFED organized an "organic dialogue" linking 70 business owners, scientists, civil society organizations (CSOs) and farmers to have initial dialogues to explore new innovations, expand and promote organic markets in Vietnam. Two organic product markets in Ciputra Hanoi and a local specialty market in Royal City, Hanoi were organized to link farmers from SRD and CGFED's project sites with consumers. In partnership with Tam Dat, Uncle Tom and Mr. Clean enterprises, pesticide-free and organic agricultural products (meat and eggs from chickens raised by organic feed, chemical-free rice, wild honey, fish sauce without preservatives) were sold in the markets.

In South Vietnam, around 100 farmers are now practicing the floating rice model in collaboration with local commune authorities with the Plant Protection Department in RCRD's project site. Farmers have been able to diversify their crops, from cassava, leeks, and pumpkins, to chili on the same land after the floating rice crops are harvested. The quality of the floating rice crops is appreciated by consumers, who were willing to buy rice that was valued three times more than normal rice. At a festival, the possibility of developing the floating rice model as an eco-tourism initiative to attract local and international visitors was also explored, and appeared to be a promising avenue for future activities. Results on the benefits of the floating rice varieties and various studies were published in journals to raise awareness on key findings for policy makers and other fellow scientists. For example, a paper based on CPAM entitled "*The Impacts of Paraquat and Chlorpyrifos in Agricultural Production on Environment and Farmers' Health in An Giang Province, Vietnam*" was published in the Imperial Journal, <http://www.onlinejournal.in/IJIRV2I6/164.pdf> and "*Inventory of panicle shapes of floating rice*" was published by the Agricultural Publishing House of Vietnam.

### **Campaign to protect children from toxic pesticides**

The campaign entitled Protect Our Children from Toxic Pesticides (POC) has been organized annually for the past 3 years. Campaigns are organized the 5<sup>th</sup> of June for World Environmental Day, the 20<sup>th</sup> of November for International Children's Day and from 3<sup>rd</sup> to 10<sup>th</sup> of December for No Pesticide Use Week. Activities have been organized in 9 countries (Vietnam, Laos, Cambodia, Philippines, Malaysia, India, Sri Lanka, Nepal and China). PANAP and partners hit social media with **#PesticidesFreeWorld** hashtag. This campaign gathered 90,000 impressions (viewers) on Twitter and over 529 organizations

from 109 countries, have signed on for the global petition against HHPs. In 2016, the Minister of Agricultural Development of Nepal, Gauri Shankar Choudhary, led a walkathon, a fundraising event that consists of a long-distance walk along a designated course to raise awareness on the impacts of pesticides. It was participated by government officials, farmers, members of civil society organizations and FAO experts. More than 400 men and women marched on the streets of the city carrying placards with awareness building slogans and messages. (News Link: <http://www.fao.org/nepal/news/detail/en/c/456436/>)

More than 20,000 materials on HHPs, impacts of pesticides and agroecology have been distributed. Various campaign materials including posters on the *20 Terrible Pesticides that are Toxic to Children*, infographics and posters were produced and translated into local languages. The campaign was published in conventional media and social media including Facebook and Twitter. The book *Zee the Bee*, targeted at children and parents revolves around the adventure of a bee against the use of pesticide. (link to material: <http://panap.net/childrenandpesticide/>). The new campaign page has garnered more than 68,000 page views over the past two years.

#### **Social Media and Conventional Media outreach**

In 2014, PANAP held a workshop on the use of social media and approaches to conventional media for various partners.

PANAP and partners have increased their overall email listserv reaching out to more people. PEAC in China through its website, 6weidu has an outreach of 6 million (page visits). 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.

In 2013, CEDAC was given an extra time slot for their radio shows on Radio Sarika. Over the 3 years, CEDAC had over 100 talk shows. The talk shows covered a broad range of topics including System of Rice Intensification (SRI), food safety and many consumer issues. No Pesticide Use Week and the Protect Our Children from Toxic Pesticides campaign were also highlighted. During the live sessions of the programme there were at least three to seven callers who raised questions and shared their experiences, which gave an indication of effective outreach of the programme.

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 105 partners and are part of three coalitions.

PANAP has also had significant engagements with Mr Baskut Tuncak, the present UN Special Rapporteur on human rights and hazardous substances and wastes, UN-Environment and Mother Jones (a news agency).

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

### ***Summary of results, TFA and partners***

TFA has been utilizing field data from the PIA and ABD to advocate for responsive plans, measures and policies for pesticides risks reduction and sustainable pest management/agriculture at the local, national and regional levels.

TFA selected target sites to pilot biodiversity conservation, pesticides reduction, run off and sustainable agriculture in the RAMSAR sites of the Tonle Sap Lake in Cambodia, Bueng Khong Long in Bung Karn Province of Thailand and in 2016 the Myanmar Inle Lake in Taunggyi.

Since 2012, over 100 exhibitions have been organized by all participating schools to disseminate their learning to communities and concerned agencies. Schools and communities campaigns were organized regularly to promote pesticides reduction and waste disposal of containers. Green environment day campaigns were organized annually by participated schools to promote pesticides reduction and agrobiodiversity conservation.

In 2013, TFA and partner from 5 countries reviewed the incidental reporting system for the Rotterdam Convention with the focal point from the Thailand Ministry of Natural Resource and Environment. The English and Thai handbooks were given to participants and the workshop aimed to inform partners of the reporting system and data generated from PIA surveys that is needed for the reporting. Unfortunately, the information needed for the report required trained officials or staff in order to collect and fill out the form which is too complicated for most farmers or untrained local government. TFA partners were encouraged to contact focal point agencies in their countries to seek clarification of the efforts and share the PIA data to make linkage with the system. It was concluded that the information of the incidental reporting system was not widely shared with other concerned agencies or CSOs but kept within the departments under the Ministry of Environment in most countries.

Thai Education Foundation, Food and Drug Administration and TFA co-organized a regional training workshop for representatives from Ministry of Health from 5 countries on the study of pesticide impact to children and communities in high risk areas in 2015. The workshop provided an overview of the needs for the study and Chiangmai University Laboratory trained participating officials on how to administer the blood test using reactive papers. In 2016, the participating officials conducted the survey with TFA partners in Laos, Philippines and Vietnam and data were disseminated at the local and national level. The process of using reactive paper to test pesticides residue (OP and C) was very much appreciated by the concerned agencies under the Ministry of Health in the participating countries due to the inexpensive cost of the paper, easy process to identify residue problems and effective tools to create awareness among farmers. The participating agencies also suggested that TFA should organized more regional training workshops on the development of various test kits or processes to detect pesticides residue in humans and the environment as they are very much needed and it is not currently available.



TFA organized a regional workshop on agroecology training curriculum for farmers in 2016 for partners and interested agencies from 6 countries with FAO. The workshop help partners review and refine their training curriculum to be in accordance with the FAO global agroecology principles.

Thai Education Foundation is currently a member of the national chemical management working group in developing national short term and long term chemical management plans. TEF also integrated “safe environment from chemicals” into the drafted national child protection policies for the ministry of education of Thailand to be endorsed in 2017.

The Ministry of Education and Training, Vietnam adopted the "Training Manual on agro-biodiversity, Pesticide risk reduction" and promote the training through community learning centers throughout the country.

Community based pesticides disposal systems were initiated in Cambodia and Vietnam at the beginning of phase II and as a result, the programme has helped Vietnam to develop a national policy on handling of pesticides waste containers in 2015.

### *Summary of results, PANAP and partners*

Ongoing campaigns and advocacy works have advanced the progressive ban of HHPs, promoted safer alternatives including biodiversity based ecological agriculture and challenged the power of agrochemical companies in influencing agricultural policies and practices through interventions, briefing papers and campaigns.

**Strategic Approach to International Chemicals Management (SAICM)** – PANAP has collaborated with IPEN and worked with FAO to push for a resolution on HHPs to be adopted with an emphasis on agroecology. In moving towards the goal, PANAP in collaboration with PAN International developed and produced a comprehensive publication, “Replacing Chemicals with Biology: Phasing out highly hazardous pesticides with agroecology”. It was launched in a side-event chaired by the EU Delegation. More than 529 organizations have signed on the petition to ban and phase out HHPs. In addition, PAN has been active at numerous regional processes to highlight the need for an urgent action to tackle the issue of HHPs and the need to transition into agroecology. PANAP continued to work with FAO, Rome, and the final resolution elevated “agroecological based alternatives” as a primary focus in the process.

**Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Chemical Review Committee (CRC), Rome, October 2015** - PANAP actively participated in the CRC on achieving agreement on the notification of final regulatory action on certain HHPs. After the conference, a decision guidance documents (DGDs) will be prepared for carbofuran and carbosulfan.

The eleventh meeting of the **Stockholm Convention's Persistent Organic Pollutants Review Committee (POPRC11)**. PANAP as part of PAN International participated in the POPRC 11, and

advocated for the listing of the HHP dicofol. The nomination of dicofol by the EU to be accepted as meeting the screening criteria as a POP. However, the listing was blocked by India and will be reviewed at the next committee meeting.

PANAP on behalf of PAN International has produced the Consolidated List of Banned Pesticides – a list of banned pesticides in various countries which is a useful tool for pesticide regulators to have information on the pesticides that are banned in different countries.

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 the human rights perspective and has sent two submissions to the UN Special Rapporteur on the Right to Food and UN Special Rapporteur on human rights and hazardous substances and waste. In a joint report, both the rapporteurs highlighted how states should take active steps to reduce the exposure of pesticides, especially on children and explore agroecology and other non-chemical alternatives.

One regional exchange was held in 2015 in Cambodia on agroecological practices. In order to facilitate an exchange with CEDAC, Cambodia to study their capacity building of farmers on agroecology, their marketing and sustainability strategies, PANAP organized a visit for our partners from six countries including China, Laos, Vietnam and Philippines as well as Sri Lanka and Malaysia (the participants from the two countries were covered by additional funding). In total 19 participants (12 women) were part of an agroecological field trip. This regional exchange facilitated better understanding on agroecological practices and innovation of farmers in Cambodia working with CEDAC, their livelihood opportunities and marketing of organic products.

Since 2013, more than five CPAM cases have been documented and shared for advocacy at commune, province and national level by PANAP's partners in Vietnam. In 2014, CGFED, RCRD and SRD conducted a joint study with 300 farmers from North and South Vietnam on their knowledge and understanding of paraquat and chlorpyrifos. The documentation found that women in Vietnam lacked access to information and are more likely to be unaware of the dangers of pesticides to their health. Farmers are also unaware of the detrimental effects of paraquat and chlorpyrifos on the environment. The results of the survey on chlorpyrifos and paraquat were shared at provincial level in Phu Tho, Nam Dinh and An Giang provinces. The sessions were attended by local authorities and farmers. In 2014, the seminar and workshop entitled, *Knowledge, Attitude and Practice (KAP)* on chlorpyrifos and paraquat was attended by over 80 participants, including policy makers from the Ministry of Agriculture and Rural Development, scientists, local NGOs, farmers, victims of pesticide poisoning and local media. The government thanked PANAP's partners for sharing the information and required more information. After this, CGFED along with the women farmers in Hai Hau district went on live television to talk about the impacts of paraquat. The women of Hai Hau district, were still determined to highlight the impacts of pesticides and continued to campaign & documented the impacts of pesticides in Namh Dinh Province. In January, the government issued Decision No 03/QĐ-BNN-BVTV (03/01/2017) which bans carbendazim (109 trademarks), benomyl (16 trademarks) and thiophanate-methyl (90 trademarks). PANAP's and partners' campaigns and efforts contributed to the phase out of paraquat, and 2,4-dichlorophenoxyacetic acid (2,4-D), an organic compound found in Agent Orange during the Vietnam War and some formulation on glyphosate by the government of

Vietnam in February 2017 (Decision No 278/QĐ-BNN-BVTV) (read full story here: <http://panap.net/2017/02/pan-vietnam-welcomes-the-ban-of-paraquat-and-24-d/>).

In Cambodia, CEDAC has been part of a continuous dialogue on the National Action Plan for the Implementation of the Rotterdam Convention, organized by Ministry of Agriculture, Forestry and Fisheries (MAFF) and FAO for the past four years. This has contributed to the new law governing the use of fertilizers and pesticides in Cambodia. CEDAC together with the NGO forum has also been drafting a position paper on a new food safety law. PEAC's ongoing effort on policy advocacy in China has contributed to a national ban of endosulfan, phase out of liquid paraquat in 2016, and national ban on chlorpyrifos in vegetables in 2016.

Lobbying at local and national levels were also done in the Philippines, including making presentations at local legislative assembly meetings. As a result, one provincial legislator filed a bill to ban aerial spraying of pesticides in South Cotabato province of Philippines. Two bills to ban paraquat and glyphosate are being drafted and one bill to ban aerial spraying has been drafted at the national level.

In Laos, ongoing efforts of SAEDA's intervention in Xien Khuang province of northern Laos have resulted in support of the local District Agriculture and Forestry Office (DAFO). DAFO has allocated a specific venue for farmers to sell organic products without imposing any charges for the use of the space. Three provincial level workshops were organized focusing on pesticides issues that also included government officials in Laos and PANAP attended as resource persons. SAEDA also contributed to the announcement of the national government for Laos to support organic agricultural production.

A national seminar was organized in Hanoi to present the results of the joint survey on the use of chlorpyrifos and paraquat and three local seminars. The seminars entitled *Knowledge, Attitude and Practice* (KAP) discussed issues on the use of chlorpyrifos and paraquat and the workshop was attended by over 80 participants, including policy makers, scientists, local NGOs, farmers, victims of pesticide poisoning and local media. This has contributed to the phase out of paraquat and 2,4-D.

### **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 and pesticide risk reduction 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 18,317 farmers had participated in IPM/pesticide risk reduction education/training programmes by the end of 2016 (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).<sup>2</sup>

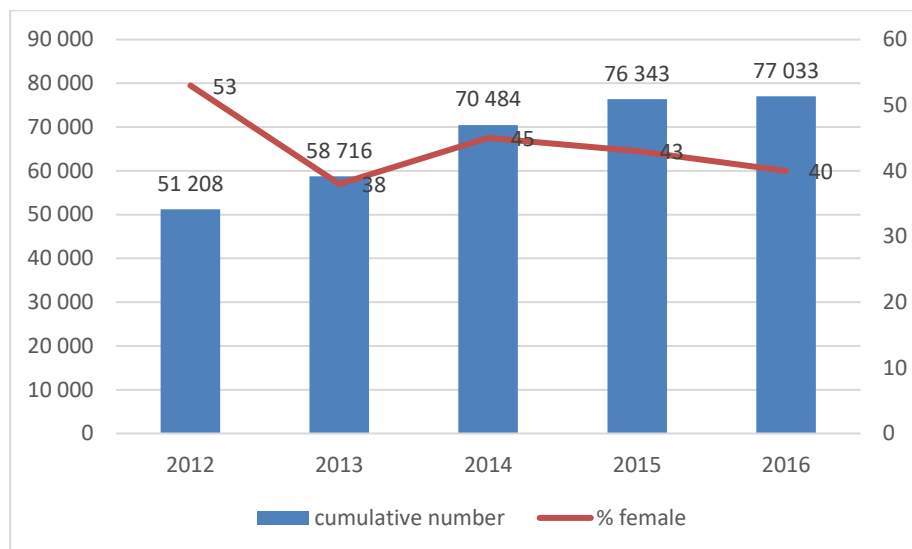


Chart 1: Farmers Trained – Cumulative Number and % Female, 2012-2016

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/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. Examples have been documented of farmers investing through savings in IPM Farmers’ Clubs to continue group learning activities and support sustainable production have increased (See Chart 2). No major implementation challenges have been experienced under this objective.

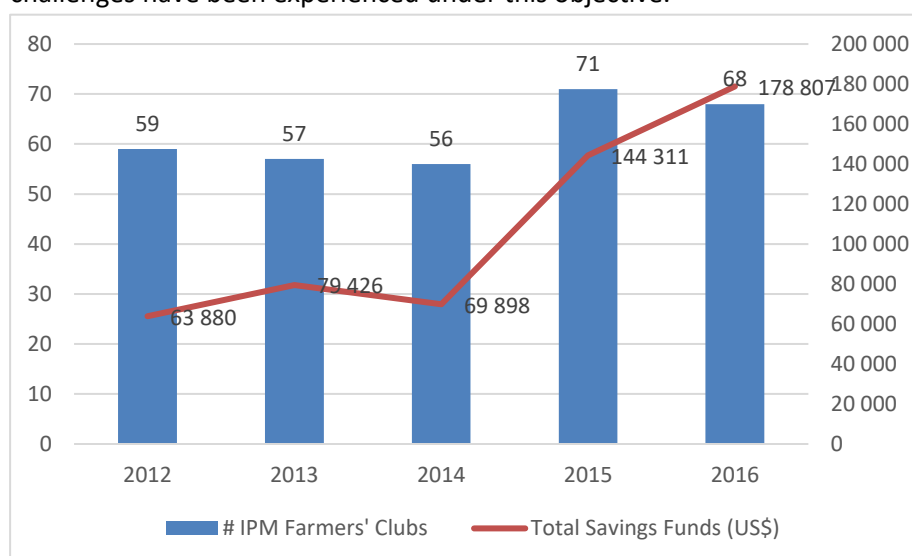


Chart 2: Number of IPM Farmers’ Clubs and Total Savings, Cambodia

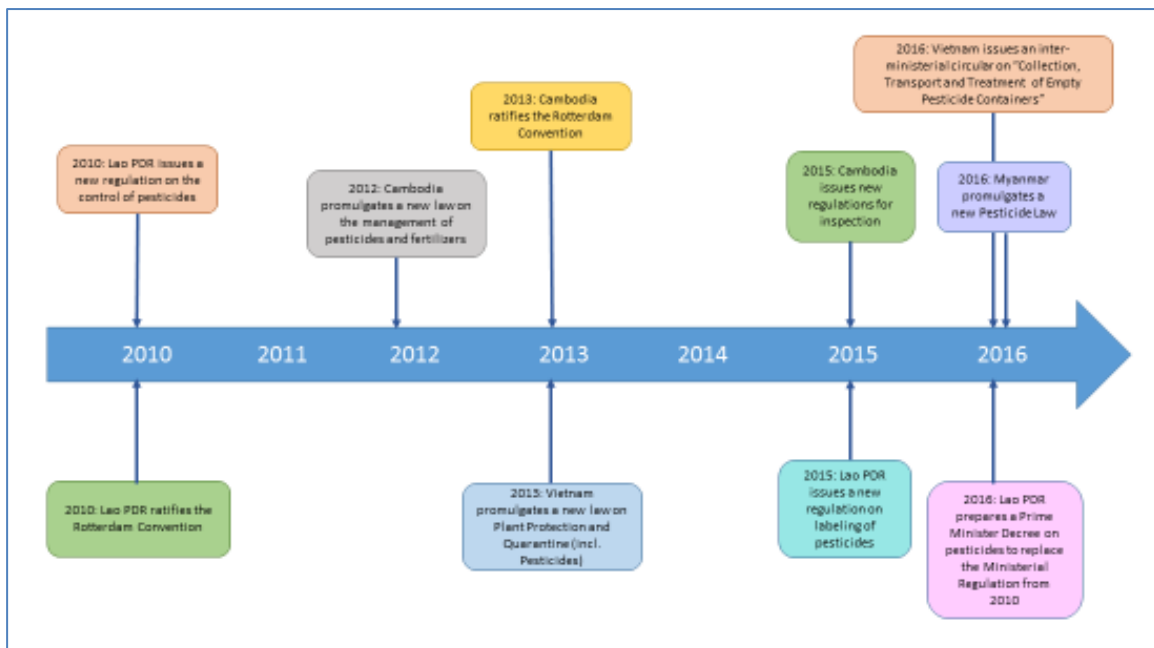
<sup>2</sup> For details on these contributions, see relevant table in MTR-2016 final report.

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 IPM component also continued 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 in rain-fed rice production in 3 project countries (Cambodia, Lao PDR and Vietnam) during 2013-2018.

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 2016, aside from strengthening the work on aquatic biodiversity/rice-fish, attention was given to the importance of soil health in rice-based farming systems and the role of legumes in enhancing soil health and its contribution to family nutrition.

**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.



Programme experiences from the review of pesticide legislation development and establishment of inspection schemes in project countries were also 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.

The programme has also supported 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.

A regional workshop on “Practical aspects of pesticide risk assessment and phasing out of Highly Hazardous Pesticides” organized in 2014 provided an opportunity for 15 Asian countries to compare experiences in pesticide risk assessment and laid a foundation for further collaboration through creation of an electronic information exchange forum.

Programme information and experiences have been able to feed back into FAO’s international normative work on pesticide management and its lead in developing the SAICM/ICCM4 initiative on Highly Hazardous Pesticides (HHPs). The latter involved the preparation of a SAICM Strategy to address HHPs and the drafting of an ICCM4 resolution to recognize HHPs as an issue of concern and to call for concerted international action to address HHPs based on the strategy.

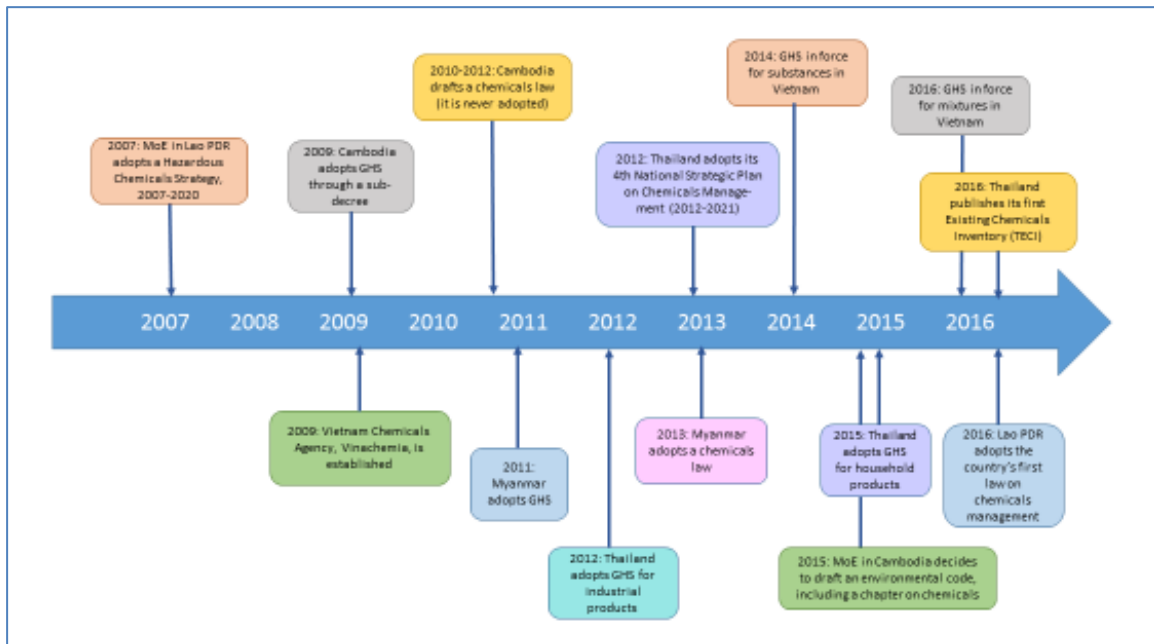
The programme has also contributed with important input and advice in the development of FAO’s Pesticide Registration Toolkit. The toolkit is an on-line decision support system for pesticide registrars in countries around the world, especially developing countries with limited resources. It assists registrars 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. These workshops have contributed to increased knowledge on registration strategies, risk assessments etc. among pesticide registration staff in the participating countries. Feedback from the participants has also provided important input to FAO for further development and adaption of the Toolkit to meet countries’ needs.

The programme has made use of rolling work plans that are adjusted each year to the new situation. This enables a step-by-step approach that directly addresses newly arisen impediments, and also captures newly arising opportunities. An example is the inspection work in Lao PDR. After establishment of a national inspection scheme and three rounds of nation-wide inspections it was found that the legal mandate for inspectors to punish pesticide retailers who continue to violate the

pesticide legislation was not sufficiently clear and led to non-action. During 2015, a process was implemented to patch-up this problem. This involved a national legal consultant and a national technical consultant who worked under guidance and supervision of FAO\HQ and Kemi, and national consultative meetings among relevant government departments. The result is an agreement on a new enforcement mechanism that is laid down in a new manual. The discussion also led to a conclusion by the Government that it is time to upgrade the National Pesticide Regulation (under the Ministry of Agriculture and Forestry) into a Prime Minister Decree, which would enhance inter-ministerial cooperation. Legislative impediments hampering effective enforcement of the pesticide regulation in Lao PDR have been resolved and new manuals for inspection and punishment in case of violations have been developed. Finalization of the manuals and subsequent training of inspectors and pilot inspection will follow as soon as the pesticide decree is issued.

**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.



Multilateral Environmental Agreements governing chemicals such as the Basel, Stockholm, Rotterdam and the new Minamata Conventions are also being ratified or have already been implemented in national legislation. The Globally Harmonized System for Classification and Labelling of Chemicals (GHS) is slowly being implementation in the member countries.

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 Keml have organized specialized workshops on subjects such as GHS and enforcement, development of legislation and key element and principles of chemicals management. Almost 200 persons (25 % 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 Keml 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 2016, 4 regional forums have been organized with a total number of about 250 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 4 forums is 155 persons (57 % 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). Participants have been introduced to a number of different topics on chemicals management and have shared country updates with their neighboring countries.

In November 2016 the parliament of Lao PDR adopted their first chemicals law. It was the result of a long process where the programme and the regional chemicals management forums had facilitated meeting opportunities and expert advice from several countries in the region and Sweden. Draft legal texts were scrutinized and discussed and different ways of categorizing chemicals were presented. Models for organization and division of responsibilities has been introduced and government staff has been trained in a specially designed training introducing the basic components in sound chemicals management. With the adoption of the law, Lao PDR has taken an important step towards sound chemicals management.

## **6 Organisation and coordination**

### **6.1 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. FAO will validate standards and indicators for Sustainable Rice Cultivation through ongoing programmes including the Swedish-supported IPM/pesticide risk reduction as well as the FAO-funded Regional Rice Initiative.

For the purpose of developing a MoU between FAO and IRRI, dialogue commenced in 2016 between the two organizations on areas of potential collaboration and was translated into a work plan for activities in Asia and Africa. IRRI and FAO share a common mission and vision but have unique



advantages in their respective mandated areas. IRRI brings to the partnership breadth and depth in technical scientific knowledge on rice from a multidisciplinary approach. FAO brings to the partnership its strong global convening power and broader policy knowledge on the agricultural system in the developing world and the role of rice within it. The partnership between FAO and IRRI is foreseen to scale impact and accelerate speed of research for development for the shared specific goals as identified in the work plan. The partnership will strengthen FAO's work on sustainable intensification of crop production.

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

TEF, TFA and FAO IPM assisted FAO Rome to organize a regional workshop on Institutionalization of FFS with 40 participants from Bangladesh, Cambodia, China, India, Indonesia, Laos PDR, Myanmar, Nepal, Pakistan, Philippines, Thailand, Vietnam, Rome, Mongolia and Near East Africa. The aim of the workshop was to share experiences on how to institutionalize FFS at the local and national level and to develop network and recommendations for future development. Workshop participants formulated a resolution urging FAO to take the lead in institutionalization of FFS learning system at local, national, regional and global levels and setting up the FFS support centers at appropriate levels. The participants also urged their respective governments to approach FAO for its continuous support in the institutionalization process. The FFS Guidance Document has now been officially launched. FFS programmes are used in all IPM/pesticide risk reduction programmes supported under this regional programme on Towards a Non-toxic South-East Asia.

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. This support is highly value 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.

The collaboration UN Environment regional office for Asia and the Pacific (specifically the regional sub-programme on chemicals and waste) and the programme has been strengthened as a result of regular meetings between Kemi's programme manager in Bangkok and the regional sub-programme coordinator for chemicals and waste. Work-plans were shared in order to assure coordinated activities and invitations to take part in relevant meetings arranged by each organization.

## **6.2 Internal collaboration/coordination**

The presence of Kemi's programme coordinator in the region has contributed to improved communication and collaboration among the regional partners. The transfer of responsibility for the FAO policy component from HQ in Rome to the Regional office in Bangkok was facilitated by Kemi's presence in Bangkok and the fact that Kemi is now more involved in this work have taken over some of the responsibilities. 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, has been very positive and 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 Keml's official financial follow up and official/audited financial reports from partners (FAO RAP, TFA and PANAP). Keml's official financial follow up can be found in a separate report dated June 15, 2017 (Reviderad finansiell redovisning 2016 avseende regional samarbete i Sydostasien (ersätter tidigare rapport daterad 2017-03-29), diarienummer 08d-H13-01013). The below tables reflects figures in this report.

## 7.1 Overall budget follow up (divided by objective)

Overall budget and follow-up year 2016		Remaining balance from 2015 (local currency)	Budget according to agreement (SEK)	Proposed budget for 2016 (SEK)	Transferred by Keml (SEK)	Received by partners (in local currency)	Exchange rate	Total budget, incl remaining balance from previous year (local currency)	Expenditure 2016 (local currency)	Expenditure 2016 (SEK)	Percentage of total expenditure	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 associated with pesticide use and enhanced use of alternatives.	PAN AP	2 012 500	2 012 500					1 148 069 MYR	2 506 503	74			1
		TFA	1 925 000	1 814 908					7 261 533 THB	1 741 191	83			
2	Enhanced international, national and local advocacy on sustainable pest management/agriculture	PAN AP	787 500	787 500					393 929 MYR	860 039	26			
		TFA	175 000	614 420					1 489 485 THB	357 153	17			
<b>Total PAN AP</b>		<b>-685 MYR</b>	<b>2 800 000</b>	<b>2 800 000</b>	<b>2 500 000</b>	<b>1 145 090 MYR</b>	<b>2,183</b>	<b>1 144 405 MYR</b>	<b>1 541 998 MYR</b>	<b>3 366 542</b>		<b>-397 593 MYR</b>	<b>-868 038</b>	
Transfer by PAN AP to partner organisation		Work related to objective 1		858 900					670 453 MYR	1 463 755				2
		Work related to objective 2		200 900					0 MYR	0				3
<b>Total TFA</b>		<b>2 275 490 THB</b>	<b>2 100 000</b>	<b>2 429 328</b>	<b>1 553 460</b>	<b>6 478 613 THB</b>	<b>0,240</b>	<b>8 754 103 THB</b>	<b>8 751 018 THB</b>	<b>2 098 344</b>		<b>3 085 THB</b>	<b>740</b>	
Transfer by TFA to partner organisation		Work related to objective 1		1 202 905					4 232 273 THB	1 014 826				4
		Work related to objective 2		292 313					675 830 THB	162 052				5
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					886 258 USD	7 544 625	94			
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	FAO HQ	1 750 000	1 750 000					60 961 USD	518 955	6			6
<b>Total FAO</b>		<b>215 957 USD</b>	<b>8 540 000</b>	<b>8 540 000</b>	<b>7 690 000</b>	<b>903 335 USD</b>	<b>8,513</b>	<b>1 119 292 USD</b>	<b>947 219 USD</b>	<b>8 063 580</b>		<b>172 073 USD</b>	<b>1 464 840</b>	
4	Strengthened regulatory framework for the control of pesticides in selected partner countries.	Keml	700 000	645 000						416 230	9			7
5	Strengthened capacity for chemicals management within authorities, industries and among relevant CSOs in the partner countries.		2 716 000	3 270 000						2 455 876	54			8
General technical support to the programme			1 085 000	1 225 000						0	0			9
Overall programme coordination (including review, evaluation, reporting and communication)			1 260 000	1 260 000						1 688 012	37			10
<b>Total Keml</b>			<b>5 761 000</b>	<b>6 400 000</b>				<b>6 400 000</b>		<b>4 560 118</b>			<b>1 839 882</b>	
<b>TOTAL</b>			<b>19 201 000</b>	<b>20 169 328</b>	<b>11 743 460</b>			<b>17 417 800</b>		<b>18 088 584</b>			<b>597 542</b>	<b>11</b>

*Comments to the overall budget follow up:*

1. PANAP: Higher level of spending for objective 1 than proposed budget due to erroneous budgeting of work connected to objective 2 for local partners. This budget (200 900 SEK) should have been included in the budget for objective 1. In addition, new NGO laws in China made it necessary to transfer allocations for 2016, 2017 and 2018 to PANAP's partner in China already in 2016 (329 892 SEK).
2. PANAP: See above explanation (no. 2).
3. PANAP: The budget for work related to objective 2 was a mistake at the planning stage. Partners have only done work connected to objective 1.
4. TFA: Reduced transfer of funds to local partners due to additional contribution from other donor for work in Laos and delayed start of activities in Myanmar.
5. TFA: Reduced transfer of funds to local partners due to additional contribution from other donor for work in Laos and delayed start of activities in Myanmar.
6. FAO Policy: Low level of spending primarily due to delays in adoption of key legislation at national government level and -only to some extent- re-assignment of coordination of policy component tasks and responsibilities from HQ to RAP-based staff during 2016. For further explanatory details, see comments in connection to detailed budget follow up.
7. KemI: Lower level of spending than expected due to delays in adoption of key legislation at national government level.
8. KemI: Lower level of spendings than expected due to lack of pilot project proposals from the countries, one postponed activity in Myanmar (training moved from 2016 to 2017).
9. KemI: Part of this budget was expected to cover expenditures connected to stationing of KemI staff in Bangkok. These costs have instead been reported in connection to objective 4 and 5 and programme coordination to reflect actual costs for these activities. Expenditures connected to pilot projects implemented by external consultants have been reported under objective 5.
10. KemI: See above explanation (no. 9).
11. Overall balance: 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 program unless KemI sends a specific request to transfer funds from one year to the next. Remaining funds from KemI is therefore not included in the total balance.

## 7.2 Detailed budget follow up (divided by costs kinds)

Detailed budget and follow up year 2016	Type of cost	Proposed budget for 2016 (SEK)	Percentage of total budget	Expenditure 2016 (local currency)	Expenditure 2016 (SEK)	Percentage of total expenditure	Comments
Organisation							
Pesticide Action Network Asia Pacific	Salaries	436 100	25	266 976 MYR	582 872	31	1
	Travel expenses	366 800	21	184 309 MYR	402 389	21	2
	Other costs	937 300	54	420 260 MYR	917 527	48	
<b>Subtotal, PAN AP</b>		<b>1 740 200</b>		<b>871 545 MYR</b>	<b>1 902 787</b>		
	Transfer to partners	1 059 800	61	670 453 MYR	1 463 755	77	3
<b>Total PAN AP (incl. transfer to partners)</b>		<b>2 800 000</b>		<b>1 541 998 MYR</b>	<b>3 366 542</b>		
The Field Alliance (TFA)	Salaries	718 546	30	2 855 305 THB	684 653	33	
	Travel expenses	71 855	3	293 984 THB	70 492	3	
	Other costs	143 709	6	693 756 THB	166 351	8	
<b>Subtotal TFA</b>		<b>934 110</b>		<b>3 843 045 THB</b>	<b>921 496</b>		
	Transfer to partners	1 495 218	62	4 907 973 THB	1 176 848	56	4
<b>Total TFA (incl. transfer to partners)</b>		<b>2 429 328</b>		<b>8 751 018 THB</b>	<b>2 098 344</b>		
FAO Regional Office Asia Pacific (FAO RAP), IPM component	Salaries	2 172 800	32	383 585 USD	3 265 421	43	5
	Travel expenses	475 300	7	43 105 USD	366 949	5	
	Other costs	4 141 900	61	459 569 USD	3 912 265	52	
<b>Total FAO IPM</b>		<b>6 790 000</b>		<b>886 259 USD</b>	<b>7 544 634</b>		
FAO Regional Office Asia Pacific (FAO RAP), Policy component	Salaries	650 000	37	16 905 USD	143 911	28	6
	Travel expenses	150 000	9	21 868 USD	186 160	36	
	Other costs	950 000	54	22 188 USD	188 884	36	7
<b>Total FAO Policy</b>		<b>1 750 000</b>		<b>60 961 USD</b>	<b>518 955</b>		
<b>Total FAO (IPM and policy component)</b>		<b>8 540 000</b>		<b>947 220 USD</b>	<b>8 063 589</b>		
Swedish Chemicals Agency (Keml)	Salaries	2 440 000	38		2 139 357	47	8
	Travel expenses	260 000	4		376 065	8	9
	Other costs	3 700 000	58		2 044 695	45	10
<b>Total Keml</b>		<b>6 400 000</b>			<b>4 560 117</b>		
<b>Total</b>	<b>Salaries:</b>	<b>6 417 446</b>	<b>32</b>		<b>6 816 213</b>	<b>38</b>	
	<b>Travel expenses:</b>	<b>1 323 955</b>	<b>7</b>		<b>1 402 055</b>	<b>8</b>	
	<b>Other costs</b>	<b>12 427 928</b>	<b>62</b>		<b>9 870 324</b>	<b>55</b>	Including transfer to partners
	<b>Total:</b>	<b>20 169 328</b>			<b>18 088 592</b>		

*Comments to the detailed budget follow up:*

1. PANAP: A consultant was hired to assist in the Children and Pesticides Campaign and a more skilled staff person was also appointed to focus on the media outreach for the campaign.
2. PANAP: Overall the cost of air tickets went up and in addition the Malaysian ringgit value dropped and this contributed to the increased cost of travel. There was also a number of additional trainings and piloting of the mobile app in different countries which required travel.
3. PANAP: Due to the new NGO laws in China, allocations for 2017 and 2018 for PANAP's partner in China had to be transferred in 2016.
4. TFA: Reduced transfer of funds to local partners due to additional contribution from other donor for work in Laos and delayed start of activities in Myanmar.
5. FAO RAP: FAO professional technical staff expenditure higher than anticipated because all staff costs booked against the IPM component budget whereas some of these costs (2 months @ P-5 costs level) should have been charged to the policy component following assumption of policy work by RAP staff upon retirement of HQ staff (Harry van der Wulp). Corrections in FAO financial system no longer possible but action will be timely taken in 2017 to make the necessary expenditure corrections during the course of 2017 to be reflected in the 2017 annual financial report.
6. FAO RAP: See explanation provided above. 2-3 months of RAP staff costs should have been charged to policy component in line with proposed budget. Corrective action for 2016 no longer possible but action will be taken in 2017 to reflect correct spending.
7. FAO RAP: Low level of spending primarily due to delays in adoption of key legislation at national government level which in turn forced the delays in implementation of related capacity building activities and -only to some extent- re-assignment of coordination of policy component tasks and responsibilities from HQ to RAP-based staff during 2016.
8. Kemi: Low level of spending due to delays in adoption of key legislation at national government level which in turn forced the delays in implementation of related capacity building activities.
9. Kemi: Increased expenditures for travels due to lack of economy class tickets in connection to one activity (3 persons travelling from Stockholm-Phnom Penh-Vientiane-Stockholm) and one travel Bangkok-Rome-Bangkok that was not foreseen during the planning stage (1 person from Kemi attending a 2 week Trainer of Trainer WS on the FAO pesticide registration toolkit in Rome, Italy).
10. Kemi: Lower level of spendings than expected due to lack of pilot project proposals from the countries, one postponed activity in Myanmar (training moved from 2016 to 2017).



### 7.3 Details on transfer of funds to local partners

#### PANAP

Country	Organisation	Funds received 2016 (MYR)	Funds received 2016 (SEK)
Cambodia	CEDAC	72 317	157 885
China	PEAC	151 103	329 892
Lao PDR	SAEDA	48 324	105 503
Myanmar	Metta	20 376	44 485
Philippines	PAN Philippines	69 040	150 729
Vietnam	CGFED	47 439	103 571
	RCRD	46 370	101 238
	SRD	41 399	90 383
<b>TOTAL</b>		<b>496 367</b>	<b>1 083 686</b>

Funds transferred to China includes funds for 2016, 2017 and 2018. Due to the new NGO laws in China, allocations for 2017 and 2018 for PANAP's partner in China had to be transferred in 2016.

#### TFA

Country	Organisation	Funds received 2016 (THB)	Funds received 2016 (SEK)
Cambodia	ATSA	621 400	149 001
Lao PDR	Rural Development Sole Co. Ltd.	880 503	211 129
Myanmar	MIID	801 651	192 222
Philippines		0	0
Thailand	TEF	1 249 490	299 606
Vietnam	ICERD	1 354 929	324 889
<b>TOTAL</b>		<b>4 907 973</b>	<b>1 176 848</b>

#### FAO RAP

Country	Funds received 2016 (USD)	Funds received 2016 (SEK)
Cambodia	90 936	774 129
China	1 862	15 851
Lao PDR	61 487	523 433
Myanmar	7 694	65 498
Vietnam	53 136	452 341
<b>TOTAL</b>	<b>215 115</b>	<b>1 831 252</b>

**Total**

Country	Total amount of funds received 2016 (SEK)
Cambodia	1 081 015
China	345 743
Lao PDR	840 066
Myanmar	302 205
Philippines	150 729
Thailand	299 606
Vietnam	1 072 421
<b>TOTAL</b>	<b>4 091 786</b>

**8 Follow up of audit issues (2015)**

Based on issues raised by Keml's external auditor, Grant Thornton, Keml's international unit and the economy unit have decided to make the following improvements:

- Amendment of the internal reports derived from the financial system Agresso to make it possible to reflect costs kinds as defined by Sida.
- Revision of internal routine documents to introduce of a new step in the review and assessment and approval of report from the economy system, Agresso. In the future, final financial reports will be signed by the responsible project manager.
- Inclusion of a new table in the annual report presenting the Swedish Chemicals Agency's costs divided by component and cost kind (in order to make the financial reporting more in line with other financial report for Sida funded projects.
- Send narrative report to the external auditor at the same time as financial report to make the audit process more efficient.
- Continue implementation of new routines to ensure that auditors hired by partner organisations are authorized and that information on audit standards is submitted to Keml beforehand.

**9 Proposals for future work****9.1 General**

The programme will continue to roll out and expand programme activities in order to reach an increasing number of beneficiaries.

In response to recommendations made by the mid-term review team, programme partners will arrange national workshops in order to strengthen the national coordination of activities. Since the work in Myanmar is still under development, the first workshop will be organized here in 2017.

TFA will continue to expand the REAL program till the end of Phase II. TEF is soliciting collaboration between concerned ministries to continue the studies of pesticides impact to school children and is planning to organize a national workshop for dissemination and development of measures to

minimize the exposure. A follow up regional workshop will be organized to share practical protocols for testing pesticide residues in vegetables and in humans.

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) will be launched and implemented next year. The documentation will include impacts of pesticides on farmers, agricultural workers, women and children. Work on documenting the impact of paraquat and chlorpyrifos on health and the environment will continue and PANAP is exploring the use of a kit to test blood and water for paraquat, which will be piloted in the Philippines. If it works well this method will be introduced in other countries. The Protect the Children from Toxic Pesticides Campaign will continue to create awareness of the impact of pesticides on children's health and intelligence and PANAP will explore introduction of buffer zones as a possible strategic focus in some countries.

The FAO-IPM component will continue to provide programme development support and technical assistance for the implementation of community education and farmer training programmes on IPM/pesticide risk reduction in the programme countries. Likewise, the FAO-IPM component will continue provide programme development support and technical assistance to delivery of FAO's Regular Programme funded Regional Rice Initiative in three pilot countries (Indonesia, Lao PDR and Philippines). 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.

Keml will continue to support capacity building of governments in all member countries and short trainings on principles and key elements of sound chemicals management will be arranged in additional countries.

In order to get an updated picture of the present status of chemicals management in the region, Keml will procure a chemicals study/survey that can serve as input to the development and design of a new project proposal. Keml will also initiate a dialogue with concerned government institutions in the current member countries in order to capture the countries' priorities and needs during the coming years and to be make sure that these issues are addressed in a future project.

## 9.2 Gender issues

In order to further advance the programme's gender responsiveness, partners have finalized 25 gender case studies during 2016. The programme will launch the booklet entitled "Stories from the Field" on March 8, 2017 (International Women's Day). The booklet contains a collection of stories of 25 women from five countries who are involved in an inspiring, ongoing campaign to eliminate use of chemical pesticides and promote agroecology in the Mekong Region. The stories are about the situation and issues that women face and the differences in the impact of pesticides/chemicals on their health and well-being, both physical and mental, compared to men. The stories promote equality between women and men, girls and boys in the area of pesticide risk reduction and also

promote ecological agriculture and opportunities for women to participate equally in decision-making. More campaigning, promotion and advocacy with the booklet will be done in 2017.

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. 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.

TFA will focus on documenting successful cases of women roles in reducing pesticides exposure. The Sida Gender Toolkit was presented to all TFA partners at the Regional Curriculum Workshop on agroecology in Hanoi, Vietnam and the toolkit will be used to support further work to address gender issues.

Keml will explore the possibility to include a specific component on gender equality in the government sector in the future project proposal. A dialogue with UN Women in Bangkok has been initiated and will continue in 2017. In order to further strengthen Keml's internal capacity to integrate gender aspects and to discuss the issue with other Swedish agencies, Keml 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.

### **9.3 Poverty and human rights perspective**

The FAO IPM Component will pursue possible collaboration to strengthen the work in the countries along pesticide residue testing in food crops (National Food Agency) and curriculum development on impact assessment of pesticides on aquatic biodiversity (Swedish University of Agricultural Sciences).

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.

TFA will document successful cases of measures to reduce exposure of pesticides to school and communities at the local and national levels. TFA will also document impacts from income generation activities for school children and women groups.

Keml will continue the collaboration and dialogue with Raoul Wallenberg Institute for Humanitarian Law and the UN Special Rapporteur for human rights and toxic chemicals in order to learn more about the linkages between human rights and chemicals and how to use the human rights based approach to further strengthen the protection of human health and the environment from toxic chemicals. At the 11<sup>th</sup> Regional Chemicals Management Forum, a specific session will be devoted to chemicals and human rights and participants will be introduced to basic concepts and have time to discuss the issue.

## 9.4 Sustainability

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 continue to pilot and expand ecological agriculture training for youth groups to fill the gaps of aging farmers and linkage with markets to increase organic production. TFA and partners will continue to solicit contributions from government, international and local organizations to support the expansion of the program.

PANAP will further explore online portals and e-databases so that information, publications, reports and documentation could be stored online, accessible to more people. PANAP is also planning to launch a portal on agroecology ([www.ipamglobal.org](http://www.ipamglobal.org)) that will be linked with field learning sites or agroecological farms, projects or training centers that would provide trainings and sharing of their innovations, ideas and practices.

Since Thailand is chairing two important regional working groups on chemicals and waste, Keml will continue the dialogue and offer support to relevant ministries in Thailand. Keml will also continue the collaboration with UN Environment Regional office in Bangkok in order to assure that activities are coordinated and complement each other.

## 9.5 Anti-corruption

Keml will continue the implementation of new routines to make sure that partners' auditors fulfill Sida's requirements.

FAO will continue compliance with internal and external audits and ensure that all project staff are aware of the 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

TFA will maintain active communication through the digital channels of Facebook and the LINE application. Program activities, presentations and live video are used for the general public. The TFA website is updated and the process of making documents and reports available for download will begin in 2017, [www.thefieldalliance.org](http://www.thefieldalliance.org)

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 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 use of FAO's electronic network of pesticide registration authorities will be promoted to disseminate information of regional or international importance, such as new technical guidelines prepared in support of the International Code of Conduct on Pesticide Management.

After consultations with a media consultant, PANAP is planning to launch a redesigned website that is mobile friendly and with a more optimized search engine. The new website address is [www.panap.net](http://www.panap.net). The site will enhance social engagement, sharing and brand interaction, which can lead to increased online advocacy. This will also assist PANAP in its outreach to a younger and more diverse audience.

Kemi will continue the development of their webpages to make more information available (<http://www.kemi.se/en/about-us/our-work/international-work/regional-cooperation-in-south-east-asia>). Kemi will also explore the possibility to strengthen communication in a future project and make more training materials available as videos etc.

## 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.

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

TFA and partners continue to seek and expand collaboration with private sectors, particularly food distributors and markets. ICERD has been linking various food restaurants, market, company and supermarkets with farmer groups. TEF continue to seek collaborations from hospital and schools to pesticides free produce from farmers. TFA is also integrating marketing survey in the training curriculum for trainers, farmers and schools. TFA has met with CASP program to identify possibilities for collaboration with the CASP value chain program.

PANAP and partners in Laos, China and Cambodia will continue to facilitate and create access to local markets & links to local food processors for their farmers in the respective project sites.

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. More concrete actions will be pursued under the UNEP/IRRI led Sustainable Rice Platform to field test standards for sustainable production that would give preference to farmer groups trained under the project who comply with the standards.