

Newsletter of Bangkok-based projects by GIZ and PARTNERS

AGRICULTURE & FOOD SAFETY • CLIMATE CHANGE • ENERGY • ECONOMICS & EMPLOYMENT
• ENVIRONMENT & NATURAL RESOURCES • URBAN & INDUSTRIAL DEVELOPMENT • GOOD GOVERNANCE

www.thai-german-cooperation.info

Dear Readers,
Welcome to the first quarter of the year!

We finished 2016 with several significant events and started 2017 by celebrating 60 Years of Thai- German Partnership for Sustainable Development. Let us learn from the successes and challenges from last year to lead us to an even greater contribution this year.

In this first edition of the year, we have brought together updates from our projects. The reports include 'Visionary Thai Island Communities Choose Renewable Energy', 'BMZ visits BRIA Project Site in Indonesia', 'Chiang Mai City Moats' Water Pumps and Health Centre Building Receive Technical Assistance', 'Thailand's Readiness Plan to Combat Climate Change under the Paris Agreement', 'Solid Waste Management Sites Visit in China', 'SNRD Asia – Window to the World!', 'Promotion of Sufficiency Economy and Value Chain Approaches in Agricultural Extension in Timor-Leste', 'Duties and responsibilities: How to live in the world of Chemicals in Agriculture', 'G7 InsuResilience to Benefit the Vulnerable in Climate Risk Insurance' and many other activities from other projects.

Also, GIZ Training Services Bangkok has interesting new courses lined up for regional, technical and methodological expertise as well as international management know-how. Those interested can apply online through www.training.thai-german-cooperation.info/index.php/training

For more regular updates, please visit our website at www.thai-german-cooperation.info and Facebook www.facebook.com/gizthailand

Best regards,
The newsletter team

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Owned by the German government, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH provides services in the field of international cooperation for sustainable development. GIZ works on behalf of public and private sector clients both in Germany and overseas. These include the governments of other countries, European Union Institutions, the United Nations, World Bank and other donor organisations.

GIZ operates in more than 130 countries. We have approximately 17,000 staff around the globe, some 70% of whom are local.

Editors:

Vorathep Songpanya
Pariya Wongsarot
Kanjana Ngamkalong

For further information on the articles and all news related information please contact

Pariya Wongsarot
Public Relations Officer
E-mail: pariya.wongsarot@giz.de

Kanjana Ngamkalong
Public Relations and Communications Officer
E-mail: kanjana.ngamkalong@giz.de

GIZ Office Bangkok

193/63 Lake Rajada Office Complex (16th Floor)
New Ratchadapisek Road, Klongtoey, Bangkok 10110
Tel: 02-661-9273 Fax: 02-661-9281-2

Website: www.thai-german-cooperation.info

GIZ projects based in Thailand



Agriculture & Food Safety

- ASEAN Sustainable Agrifood Systems (ASEAN SAS)
- Better Rice Initiative Asia (BRIA)
- Remote Sensing-based Information and Insurance for Crops in Emerging Economies (RIICE)



Climate Change

- Advancing and Measuring Sustainable Consumption and Production for a Low-Carbon Economy in Middle-Income and Newly Industrialised Countries (Advance SCP)
- Risk-based National Adaptation Plan (Risk-NAP)
- Support to the Development and Implementation of the Thai Climate Change Policy (CCA)
- Water and Wastewater Companies for Climate Mitigation Thailand (WaCCliM)
- Thailand Refrigeration and Air Conditioning Nationally Appropriate Mitigation Action (RAC NAMA)



Energy

- Renewable Energy Project Development Programme (PDP) in South-East Asia
- Renewable Energy Hybrid Grid Systems for Thai Islands



Economics & Employment

- Regional Cooperation Programme to Improve the Training of TVET Personnel (RECOTVET)
- Thai - German Trilateral Cooperation Programme (TRICO)



Environment & Natural Resources

- Global Initiative on Disaster Risk Management (GIDRM)
- Improved Management of Extreme Events through Ecosystem-based Adaptation in Watersheds (ECOSWat)



Urban & Industrial Development

- Energy Efficiency and Climate Change Mitigation in the Land Transport Sector in the ASEAN Region (TCC)
- EU Project on Sustainable Freight Transport and Logistics in the Mekong Region
- Integrated Resource Management in Asian Cities: the Urban NEXUS



Good Governance

- Global Partnership on Drug Policies and Development (GPDPP)
- Improving Safety in Health Care for Protecting Patients and Healthcare Workers Health

Academy for International Cooperation-Bangkok (Training Services for Sustainable Development)



- High-quality training for GIZ staff and public and private sector personnel across Asia
- Over 40 courses on management consulting, communication, leadership and various technical competencies

More information: www.training.thai-german-cooperation.info

Features & News

• 60 YEARS: Thai – German Partnership for Sustainable Development	5
• G7 InsuResilience to Benefit the Vulnerable in Climate Risk Insurance	8
• BRIA Contributing to the Implementation of the SRP Standard	10
• BMZ Visits BRIA Project Site in Indonesia	12
• Duties and Responsibilities: How to Live in the World of 'Chemicals in Agriculture'	14
• Reflection on the Past for a Better Future Food safety project manager says government body will complete her jigsaw	16
• Thailand's Readiness Plan to Combat Climate Change under the Paris Agreement	19
• Water Engineers Adopt Ecosystem-based Adaptation	21
• Visionary Thai Island Communities Choose Renewable Energy	23
• Workshop Prompts Member Countries to Reduce GHG / Carbon Emissions from Non-Electrical Products and Construction Works Materials	24
• New Collaboration on Truck Freight Transport System with Cambodia	25
• TCC Project Runs Event Series on Sustainable Transport in the ASEAN Region	26
• Chiang Mai City Moats' Water Pumps and Health Centre Building Receive Technical Assistance	28
• Solid Waste Management Sites Visit in China	30
• Promotion of Sufficiency Economy and Value Chain Approaches in Agricultural Extension in Timor-Leste	32
• Standard Upgrade and Capacity Development of Financial Auditors in the Lao PDR	34
• SNRD Asia – Window to the World!	35



60 YEARS:

Thai – German Partnership for Sustainable Development



Mr. Panyarak Poolthup,
Deputy Permanent Secretary,
the Ministry of Foreign Affairs
of Thailand



Mr. Peter Prügel,
German Ambassador to Thailand

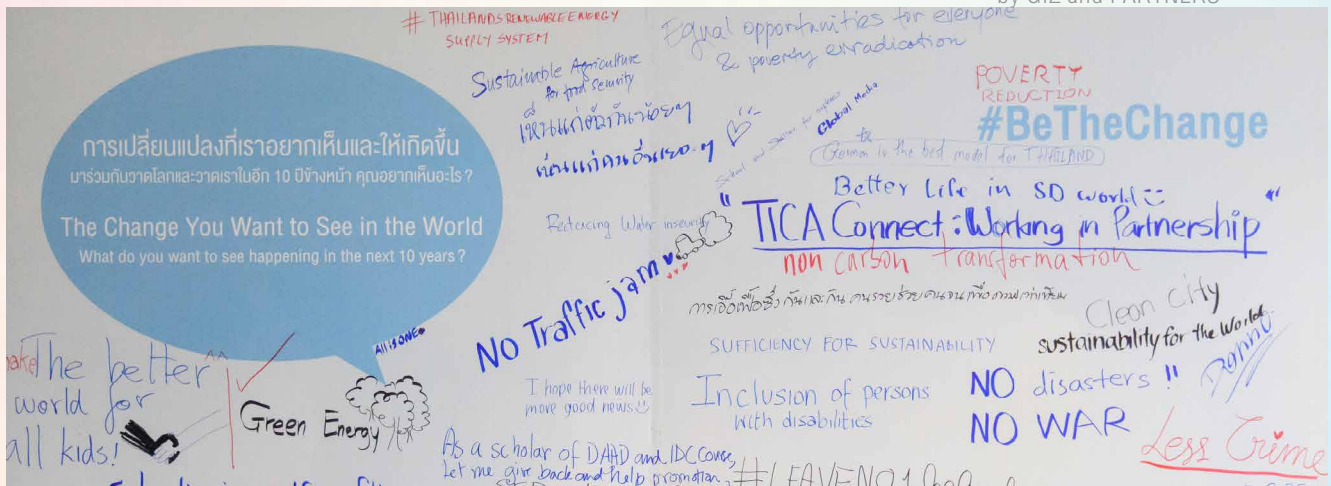


On 18 January 2017, Thailand and Germany celebrated 60 years of successful Thai-German cooperation for sustainable development at Vithes Samosorn, the Ministry of Foreign Affairs.

This event was designed to disseminate knowledge, experience and the implementation of sustainable development through Thai-German development cooperation over the past 60 years in various fields including agriculture, health, energy, environment, climate change and technology. Mr. Panyarak Poolthup, Deputy Permanent Secretary, the Ministry of Foreign Affairs of Thailand and H.E. Mr. Peter Prügel, German Ambassador to Thailand presided over the event.

“Thai-German cooperation has been a success story throughout the past 60 years.” Mr. Prügel noted. “Together, we have been able to contribute to the impressive development of Thailand from a developing country to a leading economy and attractive business location for investors today. One key area has always been the education sector. The Thai-German Technical School founded in 1959 has, for example, provided a skilled labour force that was the base for Thailand’s industrial development. This school later became King Mongkut’s University of Technology North Bangkok (KMUTNB) and is today still a leading institution in the field of technical education.”





"While we continue to cooperate in the education sector by collaborating with academia and the business sector to improve the quality of vocational training, our cooperation has also adapted to new developments. As Thailand has transformed from a recipient to a provider of aid for sustainable development, we now jointly focus on addressing pressing global challenges such as combatting climate change or promoting renewable energy and energy efficiency. Other areas of our cooperation include sustainable transport, agriculture, and urban and business development. Given its attractiveness, Thailand has become a hub for Germany's activities in the whole ASEAN region and beyond. This is also highlighted by the fact that Germany's development cooperation staff from all over Asia are trained at the GIZ training facility in Bangkok."

Mr. Panyarak added: "Thailand and Germany have enjoyed good cooperation in various fields for more than 60 years. The success during that time has been due to the matching of ideas between the two countries – the sufficiency economy philosophy pioneered by the late King on the Thai side, and the concept of a social market economy on the German side. Projects created through Thai-German cooperation have not only helped the business sector, but also reduced negative impacts on society and the environment. This path of sustainable development and the success of these projects could not have been achieved without the determination of and cooperation between the public and private sectors. Moreover, the experience and success from the cooperation on these projects can be used to develop trilateral cooperation, leading to the current assistance

for Laos, Cambodia, Vietnam and Timor Leste. This path of cooperation will certainly continue, with a balance of economic, social and environmental concerns for sustainable development, which is our objective."

The event also featured a panel discussion titled "Stories from the Past for the Future towards Sustainable Development Goals (SDGs)" with speakers exchanging their past and present experiences and directions for development cooperation in the future using the Sufficiency Economy Philosophy (SEP) approach to develop the country to reach SDGs.

Moreover, an exhibition displaying the implementation results of Thai-German cooperation in sustainable development of more than 300 projects was also showcased and encompassed several booths from Rain Tree Foundation, Goethe-Institut Thailand, Konrad Adenauer Stiftung, the Rice Department, CBM (Christoffel-Blindenmission), the Office of the Natural Resources and Environmental Policy and Planning (Thailand) and King Mongkut's University of Technology North Bangkok (KMUTNB).

The products exhibited along with a documentary film, brochure, exhibition timeline from 1956 to the present, and the thematic exhibition, Sustainable City, can be found here www.thai-german-cooperation.info/theme. Click here to See the photos from the event.



Thomas Silberhorn, German Parliamentary State Secretary

G7 InsuResilience to Benefit the Vulnerable in Climate Risk Insurance

By Benedikt Lemnitzer

Remote Sensing-based Information and Insurance for Crops in Emerging Economies (RIICE)

At the UN world climate conference in Morocco, the German Parliamentary State Secretary, Thomas Silberhorn, representing the German Federal Ministry for Economic Cooperation and Development, announced the Joint Statement of the Initiative on Climate Risk Insurance "InsuResilience" supported by Canada, the United States of America, Japan, the United Kingdom, France, Germany, Italy, the Netherlands and the European Union.

The InsuResilience initiative reaffirms and supports the commitment made by the G7 at the Elmau summit in June 2015. Moreover, it reconfirms the intention to provide funding for climate risk insurance and for strengthening resilience to climate change in vulnerable countries.

InsuResilience expects a significant increase in the number of people with access to insurance against the negative impact of climate-related hazards. The Initiative will further work on mobilising additional funding from private sources. Currently, it is working to expand its activities to additional regions and countries and to develop new and more diverse climate insurance products.

RIICE will contribute to reach the goal of the InsuResilience initiative to increase numbers of insured against climate risks



During the German G7 presidency in 2015, the G7 states followed a proposal by the German Federal Government to launch the InsuResilience Initiative. The goal is up to additional 400 million poor and vulnerable people gaining insurance cover against climate risks by 2020.

In addition, 10 climate risk insurance facilities and other insurance-related initiatives are listed in the appendix of the Joint Statement. They are supported by InsuResilience in their implementation and exploration of climate risk insurance solutions for people in vulnerable countries. The Remote Sensing-based Information and Insurance for Crops in Emerging Economies (RIICE) project is one of the climate risk insurance initiatives mentioned in the Joint Statement of InsuResilience. Other facilities include the African Risk Capacity (ARC) and the Caribbean and Central American Catastrophe Risk Insurance Facility (CCRIF).

Associated partners of the InsuResilience Initiative are the Insurance Development Forum, the World Bank and the World Food Programme.

Further information:

- www.bmz.de/en/press/aktuelleMeldungen/2016/november/161115_pm_098_Insurance-coverage-against-climate-risks-BMZ-supports-G7-initiative/index.html
- www.bmz.de/g7/includes/Downloadarchiv/G7_Joint_Statement_InsuResilience.pdf
- www.bmz.de/en/press/speeches/Mueller/2015/may/20150507_Opening-speech-by-Gerd-Mueller-at-the-G7-stakeholder-conference.html





BRIA Contributing to the Implementation of the SRP Standard

By Kamol Taukitphaisarn
Better Rice Initiative Asia (BRIA)

The SRP Standard on Sustainable Rice Cultivation can be regarded as the world's first sustainability standard for rice.

As part of its efforts to strengthen Southeast Asia's rice sector, BRIA has facilitated various interventions in collaboration with different stakeholders. Beyond the project implementation, the BRIA Regional Secretariat vigorously engages in various rice forums which can support the project in achieving its objective of improving the livelihoods of smallholder rice farmers.

The Sustainable Rice Platform (SRP) is one of the most prominent of these forums, of which GIZ-BRIA is also a member. With a mission to promote resource efficiency and sustainability in the global rice sector, SRP aims to offer the global rice supply sector a proven set of instruments to facilitate wide-scale adoption of sustainability best practices.

The SRP Standard on Sustainable Rice Cultivation – the world's first sustainability standard for rice – defines an overall framework for climate-smart sustainable best practice in any rice-based system.

The standard was developed by a dedicated SRP Working Group and launched in October 2015. At the same time, a set of Performance Indicators (PIs) developed by the International Rice Research Institute (IRRI), was launched as a quantitative tool to measure impacts of adoption of the standard, or indeed any other farm-level intervention towards sustainability. SRP is now focusing on a multi-country field validation programme of the standard, PIs, and assurance system, an activity to which the project is also actively contributing.

The project has supported the development and adoption of the SRP standard in four pilot countries, in addition to on-farm activities for farmer empowerment. The project has been conducting pilot studies as part of the SRP's multi-country field validation programme to assess the applicability, relevance and acceptability of the standard to the farmers as well as piloting the implementation of assurance schemes including the Internal Management System (IMS) for farmer groups in key rice-producing countries. The project works with local authorities and private partners in these interventions.



Thailand's Rice Department (RD), OLAM International, Bayer and BRIA have jointly initiated pilot testing of the SRP Standard with farmer groups in the north-eastern province of Ubon Ratchathani. RD, Olam, Bayer are among the 55 SRP members. Besides, Olam, a major commodity trader, is also a partner in the project **market linkages** component. The pilot testing of the standard in Thailand is also considered as one of the project's interventions to improve market access for rice farmers in this area.

In Thailand, the pilot testing covers an assessment of the applicability of the standard, farmer training, establishment of an IMS, and a group assurance system. In Indonesia, a farmer survey to assess compliance of BRIA farmers with the SRP standard has been conducted.

This year, pilot testing of the SRP standard in Thailand has been verified through a third-party audit. The audit results demonstrated improvements in farm performance when compared to the baseline. Twenty-eight farmers from Bua Ngam Community Rice Centre (CRC) and 43 farmers from Klang CRC have been verified as "working towards sustainability" (as provided for in the SRP's Communication and Assurance Guidelines (Pilot Phase). According to this independent third-party assessment, the farmers' compliance levels with the SRP standard average 84 percent against the SRP Sustainable Rice Cultivation Standard. Since improvement at the farm level may not be enough, BRIA believes the standard will offer innovative business models to help strengthen business relationships among rice value chain actors and to enhance market linkages.

In Indonesia, an assessment survey was carried out by a local university from late August to early September. BRIA farmers from the three districts of Serdang Bedagai, Langkat, and Deli Serdang in North Sumatra Province were selected. According to this self-evaluation, the farmers have complied with an average score of 68.7 per cent against the standard. The result of this study will later form the basis for further assessment by the Ministry of Agriculture on adoption of the SRP standard in Indonesia.

All results of the pilot studies for this year will be collected and provided as feedback to SRP in order to improve the standard and refine the assurance system. All in all, it can be concluded that the standard has proved a helpful tool in assessing the sustainability performance of rice farmers and as an impact-monitoring tool in identifying the risks and areas for improvement.





Meeting with BRIA farmers and rice stakeholders

BMZ Visits BRIA Project Site in Indonesia

By Isnaini Jalil and Kamol Taukitphaisarn
Better Rice Initiative Asia (BRIA)

The Federal Ministry for Economic Cooperation and Development (BMZ) reiterated its commitment to helping rice farmers improve their livelihoods through a recent visit to BRIA Indonesia.

Mrs. Traudel Koehler, BMZ representative, visited Deli Serdang District in North Sumatra Province to observe the programme and public-private collaboration. Accompanied by Mr. Jan Fraeb, Public Private Partnership (PPP) Chairman, GIZ develoPPP.de; Mr. Deniz Sercant from the German Embassy; Mr. Zulazmi, Deputy Country Director of GIZ Indonesia; Mr. Sulaiman Ginting, Focal Person for BRIA Indonesia and Mr. Saurin Shah, Head of Crop Protection Business, BASF, Mrs. Koehler visited the Rice Seed Learning Centre in Tanjung Rejo Village. The Centre, which was established by the Rice Seed Association and BRIA, serves as a hub for farmers to exchange knowledge, improve good farming practices and produce various varieties of quality seeds.

The team learned about rice cultivation technologies transferred via the BRIA Farmer Field School, training materials and activities, project documentation in a Farmer Field School session where BRIA demonstrated seed treatment technology, the 'Legowo' rice planting method, fertilisation based on crop needs and soil nutrient status, and Integrated Pest Management (IPM) to participating farmers. Farmers also practiced using the Paddy Soil Test Kit. Afterwards, the team visited the seed processing unit of one seed grower where they observed on-farm seed production processes, seed sorting and packaging, quality control and certification.

Mr. Deniz Sercant from the German Embassy noted that the cooperation is very beneficial to sustainability. Since BRIA as a project has a limited duration and has been contributing positively to improving rice farming management of farmers, government agencies should continue this programme in the future.



“By visiting this BRIA Project site, I have had a great opportunity to directly observe farmers’ activities in the field. I believe that capacity development is key to improving agricultural production and farmers’ livelihoods and to achieving food security as well,” Mrs. Koehler said, ending the visit on a positive note.

The BRIA programme in Indonesia aims to improve rice farming management by providing technical assistance to farmers for better farming practices and is implemented together with BASF, the private partner, in four districts across two provinces. The programme collaborates with the local government to organise the Farmer Field School (FFS) to impart training to farmers, promote the establishment of agribusiness-oriented farmer groups, train farmers to become seed growers at the farmer group level, and set up a learning centre to promote good quality rice seed production.

Through empowering rice farmers, the project seeks to develop the rice sector, increase rice production and farmers’ incomes. Currently, 2,211 lead farmers in Indonesia have completed the FFS training programme while 1,050 others are poised to undergo this season-long training approach this planting season. In addition, the project also supports and strengthens seed growers, in line with the Ministry of Agriculture’s programme to establish and revitalise seed systems in 1,000 self-sufficient seed villages.

“I believe that capacity development is key to improving agricultural production and farmers’ livelihoods and to achieving food security.”

Mrs. Traudel Koehler, BMZ representative





Duties and Responsibilities: How to Live in the World of ‘Chemicals in Agriculture’

By Rojana Manowalailao

ASEAN Sustainable Agrifood Systems (ASEAN SAS)

The use of chemicals in agriculture is claimed to have a negative effect on health, the environment and climate change. Given that such chemical use is not yet avoidable, alternative measures that focus on responsible use, reduction and replacement are required if we are to live harmoniously with chemicals in agriculture.

Members of the public and private sectors who recently came together for the “4th (Final) Drafting Meeting of National Action Plan (NAP) for Implementation of Biocontrol in Thailand” talked about their roles and plans in promoting the use of biological products and making the world less contaminated.

Ms. Rungrudee Jongseubsak
Assistant Manager
Chemical Registration of BASF



“Changing behavior cannot be done in the days that immediately follow attendance of training workshops. But we still need it. If farmers are to reduce the use of chemical pesticides and apply biocontrol crop protection products, they need to see what they will get from this change. **Farmers will not get a fast result in controlling pests when they use biocontrol crop protection products and they may not be happy about it. So the improved health they will enjoy as a result must be stressed.** This message needs to be highlighted and raised over and over again in the training and workshops for farmers.

Although BASF is known as a chemical company, we want to promote an integrated pest management (IPM) method for appropriate and safe use of chemicals together with biological crop protection products. And we will hold training for farmers to promote the IPM approach in Thailand. Farmers need to be aware of their actions and safety in the use of chemicals in agriculture.”



Mr. Sarute Sudhi-aromna

Director of Pest Management Group
Department of Agriculture (DOA)

“One challenge in promoting the use of biocontrol crop protection products in Thailand is that we do not have the capacity to produce them in large enough quantities to meet the demands of farmers. When we implement pilot projects to encourage farmers to use these biocontrol products and they seem to like the idea, we cannot provide them with an ample supply for their regular use after the pilot projects end.

Currently, only the Department of Agriculture Bangkok has the capacity to produce the bio products and we have a project to expand the production at DOA nationwide. There is a DOA office in each province and, ideally, each office should be able to produce the biocontrol products and distribute them to farmers. However, as this involves both funds and personnel, we will see how far we can go. At DOA Bangkok, we also have limited resources. When we talk about knowledge and skill transfer, we also need to consider if we can manage to find enough people to provide training to all the offices nationwide, and whether the DOA offices in the provinces have human resources ready and the proper facilities and equipment invested.”

“The 4th (Final) Drafting Meeting of National Action Plan (NAP) for the Implementation of Biocontrol in Thailand” was organised at the Department of Agriculture in collaboration with German-ASEAN Sustainable Agrifood Systems in Bangkok on 7 November 2016. The objective was to finalise the final draft of the NAP paper and discuss monitoring measures. The final draft of the NAP will be submitted to the Director General of DOA Thailand for approval. More than 30 participants from both the public and private sectors in Thailand attended the meeting.



Mr. Vinai Pitiyont

Consultant, Central Laboratory
(Thailand) Co., Ltd.

“Producers of biocontrol products must have the responsibility to assure the quality of their products. Checks on quality and standard should be made by a third party to see if the products comply with the labels and meet the internationally recognised standard. This is voluntary and the cost will be at their own expense but it shows a sense of duty and responsibility both to themselves and their customers who are farmers. Also, the producers do not have to worry when the products are displayed on the market as they will be randomly selected for testing by the Department of Agriculture or some public and private agencies.”



Dr. Payorm Cobelli

Agricultural Research Officer
Senior Professional Level
Rice Department of Thailand

“The Brown Plant Hopper is a major insect pest in agriculture. Using chemicals to control the pest has not proved effective as it has created more pest resistance. In Thailand we do not have the biocontrol crop protection product for the Brown Plant Hopper officially registered as yet. And we need to develop a locally made one so that we can recommend it to farmers for their alternative use. Also, since it is locally produced, it will be effective in crop protection and better suit the local context. At Rice Department we have been conducting research into production technology for biological control of the Brown Plant Hopper in order to support and promote the use of biocontrol nationwide.”





Reflection on the Past for a Better Future

Food safety project manager says government body will complete her jigsaw

By Napaporn Rattanamettha and Rojana Manowalailao
ASEAN Sustainable Agrifood Systems (ASEAN SAS)

A question raised at a market linkage workshop I recently attended in Indonesia made me look back and ask myself: What could I have done better in my completed project 'Improved product safety and quality for the Thai fruit juice industry'?

The project, which ended in April 2015, served as a consultant to six Thai national fruit-processing factories to improve their product's hygiene, safety and quality assurance as well as authenticity in complying with the European self-control standard of Sure and Global Fair (SGF) based in Germany. The pilot factories were mostly pineapple juice manufacturers. Thailand is the world largest exporter of pineapple juice concentrate.

Fruit growers who supplied raw materials to the pilot factories were trained in Good Agricultural Practices (GAP). Market surveys on Thai fruit juice safety and authenticity were conducted. Workshops to update trends including issues and challenges of the fruit juice industry were organised and attended by roughly 100 participants from laboratories, associations and private companies. However, none of the involved government agencies were invited.

During the post-monitoring and evaluation assessment in August 2016, the team visited two pilot factories in Prachuap Khiri Khan Province and learned that they had increased their quality and assurance measures to meet the internationally required standards and, as a consequence, broaden their market access and reduce economic loss from rejected products.



Mr. Somneug Wantem



Mr. Amornthep Phummun and his wife



Mr. Somneug Wantem of Pranburi Hotei said he felt more confident and comfortable taking to international buyers. ***"It is like we now speak the same language with buyers since we have improved to meet their internationally recognised standard."***

Additionally, six pineapple growers from three families said that they had acquired the knowledge and skills needed for good agriculture from the pilot factories through regular visits. Some of them also received funds from the factory for a two-year certificate study course at a local agriculture college.

Mr. Amornthep Phummun, Pineapple Farmer in Kuiburi, Thailand said: "The manufacture asked if we were interested in learning about the Good Agricultural Practices (GAP), and we were. So, my wife went back to school with the financial support of the factory. Since then, we have experimented in applying what she learnt from her classes to the knowledge passed down to us from our parents and grandparents."

"On the same plot of land we produce more pineapples but at less cost. We get better quality fruits and reduce unnecessary chemical inputs. The soil quality has improved and we do not have to worry too much about the chemical exposure," said Mr. Amornthep, the father of three.

The meetings with the factory managers and farmers indicated that everything was falling into place though there were still worries about the future. **Due to drought and irregular climate patterns, the constant demand for concentrate fruit juice from the overseas market and lack of any regulation and management plan overseen by a government authority, the sustainability of pineapple industry has a long journey in front of it.**

Ms. Prathumporn Kitthakerng, Vice President of Takerng Pineapple Industrial, one of the pilot factories in Prachuap Khiri Khan Province said: **“Thailand should have an agricultural crop zoning system for pineapple farming, including farmer registration, contract farming, and the allocation of farming and food processing quotas in order to foresee supply, quality and price of the fruit.”**

“This would make everyone in the supply chain enjoy a better life. Farmers and manufacturers would then not have to worry about the fluctuation or shortage of pineapples, neither the high nitrate nor low nitrate residues in pineapples, or the price of the fruits, which sometimes soars and at other times plummets,” she said.

To answer the question, “What could I have done better in the project ‘Improved product safety and quality for the Thai fruit juice industry’?”, I could have involved the government authorities in the project to work more closely in finding solutions to the issues and challenges that the farmers and manufacturers face and develop activities together to better their livelihoods.

The In-house Workshop on Market Linkages in Indonesia helped me reflect on the missing links and key actors who could support and help deliver a better outcome to the fruit juice project.

Through this, I have gained a more thorough vision and earned I need to take a 360-degree look at the options and solutions to improve and complete the gaps in the supply chain.

Reflections of Ms. Napaporn Rattanamettha, Project Manager, Food Safety of ASEAN Sustainable Agrifood Systems.



Ms. Prathumporn Kitthakerng



Ms. Napaporn Rattanamettha



“What could I have done better?”





Thailand's Readiness Plan to Combat Climate Change under the Paris Agreement

By Imporn Ardbutra

Support to the Development and Implementation of Thai Climate Change Policy (CCA)

The outcome of the United Nations Framework Convention on Climate Change Conference of the Parties (COP 22) held from 7-18 November 2016 in Marrakech, Kingdom of Morocco, was disseminated through a seminar and presentation of the Draft Action Plan on the Paris Agreement. The event was organised by the Office of Natural Resources and Environmental Policy and Planning (ONEP), Good Governance for Social Development and Environment Institute (GSEI), Thailand Greenhouse Gas Management Organization (TGO) and GIZ's Support to the Development and Implementation of Thai Climate Change Policy (CCA) project held on 22 December 2016 in Bangkok.

The seminar was attended by more than 200 participants from the public and private sectors.

The highlights of the conferences were as follows:

- 1 Parties have agreed to accelerate the full implementation and finalised Paris rulebook by 2018
- 2 The conference adopted the terms of reference for the Paris Committee on Capacity Building (PCCB), which shall be a capacity-building mechanism for developing the country under the Paris Agreement
- 3 Parties agreed that the Adaptation Fund should also support the Paris Agreement in adaptation efforts of countries impacted by climate change and the implementation study should be completed by 2018.

On 12 December 2015, the meeting adopted the **Paris Agreement**, a long-term cooperation framework for the global communities to combat climate change with three main objectives:

- 1 Holding the increase in the global average temperature to well below 2 °C and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels
- 2 Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development
- 3 Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

The Paris Agreement addresses the reduction of greenhouse gas, adaptation to climate change, climate finance, technology transfer, capacity building of developing countries, enhanced transparency framework for action and support, and global stock take.

Thailand is party to the United Nations Framework Convention on Climate Change (UNFCCC) whose objective is to reduce greenhouse gas concentrations in the atmosphere due to human intervention.

The Office of Natural Resources and Environmental Policy and Planning (ONEP) with the Good Governance for Social Development and Environment Institute (GSEI) have organised several steering and capacity-building projects to serve the goals. ONEP and GSEI have also prepared a “Draft Action Plan on Paris Agreement” that was presented to relevant agencies for comments on 22 December 2016. The suggestions and opinions received will be used to ensure concrete and appropriate implementation under the Paris Agreement as well as provide future linkages with relevant agencies.





Water Engineers Adopt Ecosystem-based Adaptation

By Jaruwan Ngamsing and Ketpharima Sansud

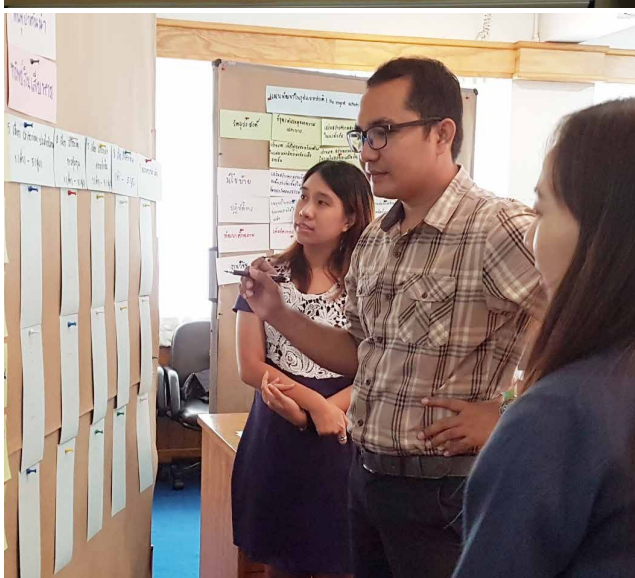
Improved Management of Extreme Events through Ecosystem-based Adaptation in Watersheds (ECOSWat)

The integration of Ecosystem-based Adaptation (EbA) measures into water management plans has already been introduced and has served to strengthen the knowledge of experts in water management organisations in Thailand. ECOSWat organised the training on EbA in the context of climate change with a focus on water resource management as well as on economic evaluation several times during the year 2016.

The training aimed at providing (1) conceptual clarity on EbA and climate change adaptation, and how to apply EbA to water management plans, and (2) a better understanding of ecosystem services, their value and how to evaluate them. The participants included approximately 200 experts from related water management organisations including two key water

management agencies, namely the Department of Water Resources (DWR) and the Royal Irrigation Department (RID) who are responsible for decision making within the water sector in Thailand at both the national and regional levels.

Mr. Nitas Prompan, an engineer with DWR and his team are already designing their first EbA measure for a sedimentation pool to be implemented at Huai Sai Bart sub-river basin in Khon Kaen. The measure will reduce the sediments flowing to Nong Yai Reservoir. Aquatic plants will be grown in order to reduce the sediments and create a better ecosystem for the water. Fish and vegetation will increase as a result, and could prove beneficial to the locals.



“The training environment was helpful to learning... It was very interactive and allowed participants to raise points of clarification, which encouraged new learning. I liked that very much and I also enjoyed the group work. It directed participants to a new direction of thinking about the water management process. I am glad that I learnt so much about EbA”

Mr Nitas Prompan, Engineer, the Bureau of Water Resources Conservation and Rehabilitation, DWR

Previously, ecosystem was not a main focus in the planning of engineering design but the training has marked a significant increase in integration. He has further suggested that specialised training on EbA measure design and criteria for consideration and monitoring of impacts of interventions could also be another area for enhancing the understanding of engineers. Moreover, awareness and understanding of the EbA concept should be raised in local communities, leading to the acceptance of EbA and facilitating its implementation in their river basin.

Integrating of Ecosystem-based Adaptation (EbA) measures into water management plans cannot be successful without the participation of relevant stakeholders. Economic evaluation of ecosystem services helps decision makers get a clearer understanding of their benefits.

“I think this training was very useful. We could easily understand the EbA concept properly from this training. It helped us to find the economic value of ecosystem services. This training should be held continuously and several related agencies should join this programme.”

Ms. Wantanee Sakulsak
Environmental Officer (Practitioner level)
The Office of Project Management, RID





Visionary Thai Island Communities Choose Renewable Energy

By Katrin Lammers

Renewable Energy Hybrid Grid Systems for Thai Islands

“My vision for Phra-Thong Island is that it is 100 % renewable within the next 4 years!”

Mr. Atthapol Meepian

This remarkable statement by Mr. Atthapol Meepian, the head of Koh Phra Thong Sub-District Authority Organisation, shines at the kick-off of the new GIZ **“Renewable Energy Hybrid Grid Systems for Thai Islands”** project in Bangkok. The Sub-District Authority Organisation is the local political body responsible for this island.

While Thailand has done well in electrifying the country and currently has a 99% electrification rate, many island communities are still living with limited access to electricity. Thailand has more than 900 islands, of which 200 are inhabited, yet just 20 islands are connected to the national grid. The remaining islands mainly rely on privately owned diesel generators or a private operator selling power to the community. The problem these islands face is a limited, expensive and intermittent electricity supply.

For the first time, the project and the Rockefeller Foundation are joining forces. The collaboration aims to bring clean technology and sustainable business solutions to Thai islands. RE-Diesel Hybrid Grid systems are increasingly gaining popularity by tapping the electricity access gap in rural areas.

The absence of proper feasibility assessments for such systems is a major barrier to implementation. The project therefore steps into this process to enable system installation on the ground focusing on the development of community-based business models and appropriate modes of operation to ensure local value creation and long-term operation.





Workshop Prompts Member Countries to Reduce GHG / Carbon Emissions from Non-Electrical Products and Construction Works Materials

By Suchaya Khemanusuk and Kanchanatetee Vasuvat

Advancing and Measuring Sustainable Consumption and Production (SCP) for a Low-Carbon Economy
in Middle-Income and Newly Industrialized Countries

The Malaysian Economic Planning Unit (EPU) and the Advance SCP Project organised a regional workshop on the methodologies to calculate carbon emissions and to conduct Life Cycle Costing on product groups for construction works from 15 – 17 November 2016.

Thirty-five participants from Malaysia, Indonesia, Philippines and Thailand were trained by Oeko-Institut from Germany. The training focused on measuring carbon emissions of non-electrical products for Green Public Procurement and Life Cycle Costing for construction works.

As a result of the workshop, some countries have committed to use this tool (Life Cycle Assessment and Life Cycle Costing) for public procurement.

Sustainable Consumption and Production (SCP) patterns establish an essential building block for a low-carbon economy, with access to credible, reliable and 'user-friendly' sustainability information as one of the essential conditions for the shift towards SCP.





New Collaboration on Truck Freight Transport System with Cambodia

By Wilasinee Poonuchaphai

Sustainable Freight Transport and Logistics in the Mekong Region

A new collaboration aimed at improving the truck freight transport system was formalised on 12 December 2016 through the MoU signing ceremony between the Cambodian Ministry of Public Works and Transport of Cambodia (MPWT), the Cambodian Trucking Association (CAMTA), the Cambodian Freight Forwarders Association (CAMFFA) and Sustainable Freight Transport and Logistics in the Mekong Region Project in Phnom Penh.

The collaboration aims to enable the truck freight transport system to develop quality transport operators with required standards and regulations and implementation of related policies.

The Project committed to

- Help the review and improve the regulations
- Support fuel efficiency measures
- Provide training on Eco and Defensive Driving

A seminar on how Eco and Defensive Driving benefits transport and logistics companies was also held as part of the same event to raise awareness, provide knowledge and share experiences. More than 100 participants from various public and private organisations attended the seminar.





The participants of the second regional workshop on sustainable transport indicators discuss how their countries collect information on vehicle registration as part of the so-called “bus-stop exercise” (Source: GIZ).

TCC Project Runs Event Series on Sustainable Transport in the ASEAN Region

By Kyra Hagge

Energy Efficiency and Climate Change Mitigation in the Land Transport Sector in the ASEAN Region (TCC)

From 7-10 November 2016, a series of different events were held in Kuala Lumpur, Malaysia, in connection with two of the four TCC focal areas, which are Fuel Economy (FE), Green Freight and Logistics, Electrical Two Wheelers, and Data, Indicators and Measurement, Reporting and Verification (MRV).

The week started with TCC’s presentation of the **“Malaysia Stocktaking Report on Sustainable Land Transport and Climate Change”**. This illustrates the sustainable transport landscape within Malaysia and serves as a reference document for policy-makers, researchers, international donors and other stakeholders working on sustainable transport and climate change. The Stocktaking Reports (STR) were received exceptionally well. One participant of the workshop on sustainable transport indicators said “we are using the results from the STR as a baseline for our Logistics Masterplan.”

The Second Workshop on “Sustainable Transport Indicators” took place on 8 November 2016 as one of the focal supports of the ASEAN Member States (AMS) with data collection, indicator development and MRV.

The key deliverables were to increase knowledge and capacity regarding sustainable transport indicators and to map out potential next steps and requirements in order to develop regional guidelines on the collection of sustainable transport indicators.

The participants from 11 different countries learned not only the basics about indicators and data collection, but were encouraged to also participate in an interactive session, the “bus-stop exercise”. The questions asked and discussions during the session brought valuable insights on country needs and useful input for drafting the guidelines. Another workshop to discuss first draft elements of the guidelines will be held in March 2017.

“This workshop helped us increase the knowledge on data collection and indicator development, indeed very good capacity building.”

Participant from Malaysia

ASEAN action on fuel economy reached a new milestone at the first forum of the ASEAN Fuel Economy Platform held on 9 November. Forty-two experts from 11 countries representing government agencies, research institutes, and NGOs came together to discuss international practices, and to kick off work on an ASEAN Fuel Economy Roadmap.

ASEAN's recent regional transport strategy (Kuala Lumpur Transport Strategic Plan, KLTSP 2016-2025), supported by the Energy Efficiency and Climate Change Mitigation in the ASEAN Region project, has three milestones for fuel economy action.

First, the establishment of a platform to discuss matters related to fuel economy for the transport sector.

Second, to formulate a regional roadmap that includes policy guidelines for member states.

Third, support to the development and adoption of nationally appropriate policies for cleaner fuels and vehicles.

The week wrapped with the “First Expert Group on Sustainable Land Transport (EGSLT) Meeting”. The EGSLT, which was created as an ad-hoc working group under the ASEAN Land Transport Working Group (LTWG), shall be a consultative body to discuss sustainable transport issues in ASEAN, driving forward the implementation of Sustainable Transport Goals under the Kuala Lumpur Transport Strategic Plan (KLTSP) at the regional level.

The next EGSLT meeting will be held in the last week of March 2017 along with the next “events week”, which will be hosted by Thailand in Bangkok.



“Reducing fuel consumption (L/100km) of all cars on the road by 50% until 2050 (“50 by 50”) can save up to 33 Gt CO₂ and up to USD 8 trillion globally.”

Alex Koerner, GIZ consultant and
main speaker of the first fuel economy platform forum



Chiang Mai City Moats' Water Pumps and Health Centre Building Receive Technical Assistance

By Ruth Erlbeck and Rashane Sala-Ngarm

Integrated Resource Management in Asian Cities: The Urban Nexus

Constant breakdowns and the high energy consumption of 66 water fountain pumps in Chiang Mai City's historical moats led the Municipality to seek ways of increasing pump efficiency and reducing energy consumption in September 2016.

On 31 October - 1 November 2016, pump experts from KSB Co., Ltd and the Nexus team conducted a site survey and undertook a pump efficiency analysis for samples. It was found that these sample pumps tended to overheat and breakdown. The main cause of the breakdown was "dry running" due to the pumps' inlets being blocked by dirt, leaves, and other forms of solid wastes. Moreover, the installation of the pumps was not up to standard. All 66 pumps are installed in concrete boxes with metal lids without any ventilation and protection from condensation and humidity. The incorrect alignment between the inlet and outlet of the pump causes unnecessary vibrations and decreases pump efficiency.

The solutions include:

- **Repair all 66 pumps** to optimal operating condition (prevent blockages, improve ventilation, reduce humidity, re-alignment, and replace necessary parts).
- **Replace the existing pumps with submersible pumps** (which could reduce overheating and vibration problems, as the pumps are underwater).
- **Replace existing pumps** with the combined pump and fountain type, in which the fountain and the pump are integrated into one and float on water.



Investment costs for all three solutions will be provided and compared with the current electricity consumption and operation and maintenance cost to identify the possible return on the investment period.

Back in 2015, the project successfully assisted Nakhon Ratchasima Municipality in reducing electricity consumption at one of the water supply pumping stations by 1 million Baht (25,000 EUR) per month.

Chiang Mai Municipality has also designed a three-floor **Health Centre Building**, which will be open to the public for physical therapy services, day care for the elderly, and Thai traditional medicine. In this regard, the project was approached to study the existing design and propose measures to increase the energy efficiency of the building. The proposal for the building design adjustment will mostly cover such issues as daylight, shading, room partitioning, air-tight

materials and concrete cooling as well as some of the operational aspects including safety issues, open recreational areas, green (garden) areas, car parking space, handicapped accessibility etc.

The final report will provide detailed information on the energy consumption as well as the investment, life cycle costs for the energy efficiency measures and the respective returns on investment period.





Solid Waste Management Sites Visit in China

By Ruth Erlbeck and Rashane Sala-Ngarm

Integrated Resource Management in Asian Cities: The Urban Nexus

Don't Waste your Waste

On 14 – 18 November 2016, the Nexus partner cities delegation visited Solid Waste Management sites in China, concentrating on Maximum Yield Technology (MYT). The delegation included 24 representatives from the Nexus' partner cities; Mayor John Bongat (Naga, Philippines), Mayor Lis Darmansyah (Tanjung Pinang, Indonesia) City Councilor Roy Gonzales (Santa Rosa, Philippines), Vice Mayor Boonlua Charoenwat (Nakhon Ratchasima, Thailand), Advisor to Mayor Somphet Watthanasap (Chiang Mai, Thailand), and other participants from the national and local levels from India (National Environmental Engineering Research Institute/NEERI, Nagpur and Rajkot) and the Philippines (National Solid Waste Management Commission).

During the 5-day trip, the delegation visited Jiangsu WELLE Environment Co., Ltd's headquarters in Changzhou, a kitchen waste collection plant also in Changzhou, a solid waste management complex

in Hangzhou, which includes the environmentally friendly Tianziling landfill, and the MYT pilot plant, and lastly an incineration plant on the outskirts of Shanghai.

Solid waste management is a major problem for several partner cities of the project and they are using (if at all) inadequate technologies for waste treatment, leachate treatment, resource recovery and energy production. As these cities continue to grow, solid waste production increases. As a result, the landfills or dump sites are reaching or exceeding their capacities. Land is now scarce and hence an expensive resource and continuously finding new land to build dumpsites cannot be a sustainable solution. Cities are now therefore actively searching for alternative solid waste treatment processes to reduce the waste going into the dump site and at the same time to lower the impact on the environment and the livelihoods of surrounding communities.



MYT is a new, innovative process for treatment and utilisation of municipal solid waste. It aims to extract complete raw material (up to 90%) and energy content of waste and to use the energy potential as recyclable sources of energy. Instead of landfill or incineration solutions, there is now **the option of optimum economic exploitation of waste in the form of raw materials, quality-assured fuels and energy-rich biogas**. A complete model of MYT is available at The "Kahlenberg (ZAK) MBT Plant" in Germany, which is now treating more than 100,000 tons of residual household waste a year. WEHRLE, Germany, is one of the companies that jointly developed the MYT technology at the Special Purpose Association of Kahlenberg in South West Germany.

With the aim to introduce the MYT to Asia, WEHRLE has partnered with EU WELLE and Jiangsu WELLE Environment Co., Ltd, a Chinese company, to build and operate MYT pilot plants in Hangzhou, China.

This visit enabled the partner cities to see the possibility of achieving sustainability through the application of advanced environmental technologies, improve infrastructure investment efficiency, and recover and re-use resources effectively without consuming huge areas of land. The city representatives took on board the MYT and relevant solid waste management solutions and will engage in further dialogue with the technology suppliers and the GIZ Nexus team for possible implementation in the Nexus pilot projects of their respective cities.

Following the trip to China, solid waste management experts from WEHRLE contracted by GIZ Nexus, visited Danang (Vietnam) and Tanjung Pinang (Indonesia) between 18 to 25 November 2016 to perform feasibility studies for possible implementation of Mechanical Biological Treatment (MBT) in these cities.





Promotion of Sufficiency Economy and Value Chain Approaches in Agricultural Extension in Timor-Leste

By Adelia dos Reis Kebo

Thai-German Trilateral Cooperation Programme

The trilateral project “Sufficiency Economy and Business Promotion in the Agriculture Sector” under the Timorese - Thai - German Trilateral Cooperation organised an on-site training and coaching activity related to farm assessment, productivity improvement and value chain analysis for 10-13 master trainers from the Ministry of Agriculture and Fisheries of Timor-Leste (MAF) from 3 to 11 October 2016 in Dili, Timor-Leste. MAF is supporting extension workers in the field to improve their role and capacity in working with the target farmer groups in four villages, namely Lihu, Ulmera, Metinaro and Hera.

This will enable the target farmer groups to increase the quantity and quality of their products for market promotion and directly sell them for a higher income. The Department of Agricultural Extension (DOAE) and the Capacity Building and Study Center for Community-Based Resources Management, Sukhothai Thammathirat Open University (CRC-STOU) of Thailand provided technical inputs with support from GIZ-TL under the Support to Peaceful Development through Innovative Employment Promotion (IEP) project, together with existing technical expertise of MAF.

The approaches used were mainly participatory and experience-based with presentations and demonstrations on technical inputs and field practice with minimal supervision. A variety of class activities were organised for the extension workers to become familiar with the tools and innovations introduced before applying them with farmers during the field visits. The topics focused on farm assessment tools for data collection, value chain analysis, and innovations and technologies for better farming, such as organic pesticides and fertilisers, seed selection, and stove-making. For example, the farm assessment tools will allow them to record conditions in each village during each period to calculate household production. Moreover, the experts demonstrated how such produce as bananas could be processed into new products and how rice seeds could be developed to taste different.

Using local resources and materials, the technologies were adapted as appropriate within the context of each village. Overall, the reception of the villagers was positive, and they expressed particular enthusiasm in learning about the innovations as it will help them become more self-reliant. During the coming months, the extension workers will work closely with the target groups to monitor the effectiveness and impact of the innovations as well as ensure that the results can be further enhanced and showcased as models for other farmers and extension workers from which to learn. With knowledge about the Sufficiency Economy Philosophy and value chain analysis, the project will also work to identify product champions of each village and develop them as next steps to self-sufficiency.



Mr. Amaro Ximenes
National Director of
Agriculture, Horticulture and
Extension of MAF

“Through the training, target farmers should produce organic fertilisers from their own households. For example, SPS chemical pesticides imported from Indonesia will be minimised in the future. These must be produced by the target farmers in their households and sold, thus reducing imported pesticide products and support farming activities in Timor-Leste.”



Bernardinho Casimiro
Ermera Extensionist

“The training organised by the Trilateral cooperation between Thailand, GIZ and MAF worked with three municipalities (Dili, Ermera and Liquica). The project aims to support the target groups in increasing the production of vegetables for consumption and sale to the market; thus helping to raise the income of the farmers.”



Standard Upgrade and Capacity Development of Financial Auditors in the Lao PDR

By Pimpilas Nuntiphon Khoeiram

Thai-German Trilateral Cooperation Programme

“The consistency of audit quality brings about the credibility of an organisation.”

Vice President of the State Audit Organisation

A Project Proposal Review and Planning Workshop under the Lao-Thai-German Trilateral Cooperation was held on September 26-29, 2016 in Vientiane, Lao PDR by the Thailand International Cooperation Agency (TICA) and GIZ in cooperation with management and officials from the State Audit Organisation.

The cooperation aims to upgrade the operations particularly of junior financial auditors in their financial audit, e.g. data collection and summarisation, with a view to meeting the ISSAI Standard, a standard set up by an international audit institute for regulating audit operations and ensuring they are efficient and effective.

In order to build up skilled and competent financial auditors, the project is planning on analysing and developing training courses on financial audit that suit the context of Lao PDR and which comply with ISSAI regulations. A team of master trainers to facilitate training courses, use learning materials and monitor and evaluate implementation will be developed in parallel. A team of experts from the Thai Office of General Audit (OAG) will provide consultancy support throughout the project duration (2017-2018).



***“That digital change can’t be stopped,
but that today we are still in a position to shape it.”***

–Sabine Müller, head of the Sectoral Department, GIZ

SNRD Asia – Window to the World!

By Anusara Tanpitak

The Sector Network Natural Resources and Rural Development Asia - SNRD Asia

**“That digital change can’t be stopped,
but today we are still in a position to shape it.”**

Sabine Müller, head of the Sectoral Department, GIZ

The Sector Network Natural Resources and Rural Development (SNRD) Asia has been making progress on the digital front over the past year with the launch of its online platform – and it even more useful now thanks to the newly integrated resource section.

Launched in May last year, the [SNRD Asia website](http://www.snrd-asia.org) has been growing both in features and visitors. Its latest feature is the resource center where a search function has been made available. Simply go to www.snrd-asia.org/resource and insert any keywords of your interest. Thanks to contributions from our active members, wide-ranging publications covering everything from agriculture to coastal protection, to the UN’s Sustainable Development Goals, among many others, will be displayed.



SNRD Asia is a community of technical experts, composed of GIZ staff, external partners and consultants, working in Asia in the fields of natural resources and rural development. Recognised as one of the company’s knowledge management instruments, the network serves as a platform for learning, networking, and sharing best practices. A regional player since the mid-80s, SNRD Asia operates following the mandate set out by the German government.

In our attempt to better leverage the digital revolution, we hope you find this useful in your everyday working lives! For any questions, suggestions, feedback or comments, please email us!

snrd-asia@giz.de

Read more about what we do and who we are

www.snrd-asia.org/download/SNRD-Asia-Factsheet.pdf

Interested in becoming a member,

www.snrd-asia.org/membership/