Agroecology Futures

Regional Forum

Hotel Apsara Resort, Siem Reap, Cambodia
6th – 8th of November 2018

Supported by:

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In partnership with

ALiSEA
Agro-ecology Learning alliance in South East Asia

Cansea

Summary

The Regional forum on Agroecology Futures represented the closing session of the ACTAE Project[1] "Toward an agroecological transition in South East Asia" funded by AFD (Agence Française pour le Développement).
It took place in Siem Reap, Cambodia, on 6th – 8th of November 2018.
It has been the biggest event on agroecology in the Mekong Region since the Regional Symposium organized by the UN Food and Agriculture Organization (FAO) in November 2015, in Bangkok, Thailand.

Over **260 participants from 21 nationalities** gathered to discuss the futures of Agroecology during an unprecedented Regional Forum. The event was co-organized by the **General Directorate of Agriculture (GDA) of Cambodia, CIRAD** and **GRET** in a joint effort to promote agroecology.

The overall aim of the forum was to build a momentum around the different dimensions of Agroecology that should be addressed, and consolidate a Regional Agroecology stakeholders' coalition by wrapping up the achievements of ACTAE project (Towards an Agroecological Transition in South-East Asia, AFD) & discussing the future of regional initiative in Agroecology.

Over 3 days, the participants could learn, share and network through 74 presentations in plenary and parallel sessions, an innovation and knowledge fair (with over 20 booths), a poster session (25 were presented) and a seed swap where more than 60 different plant species were exchanged.
Agroecology being diverse and multidimensional, a broad range of issues were addressed such as the fundamental role of crop biodiversity, the highly preoccupying status of agrochemical use in the region, the need for appropriate-scale mechanization, the importance of innovative & participatory intervention mechanisms, the recognition and integration of Indigenous Knowledge, the capacity building of the new generation, the marketing of agroecological products…
A panel discussion bringing together representatives from AFD, the UN Food and Agriculture Organization (FAO), the Livelihood Trust Fund (LIFT), the International Fund for Agriculture Development (IFAD) and the French Embassy highlighted the existing different initiatives for supporting an agroecological transition.

Three main take home messages emerged from all the discussions:
– The importance to invest in soil health and farmer empowerment,
– The necessity to seek convergence between land tenure & agroecology and co-produce a credible narrative for a smallholder pathway towards agricultural development,
– The challenge posed by commodities-based production systems to an agroecological transition.

Lastly, in order to put into practice agroecology, this event was organized in the greener way as possible, choosing an eco-responsible venue, sourcing its coffee and fruits from local organic farms and banning the use of plastic bottles. An assessment of the carbon footprint of the event was carried out and findings were presented.

All the presentations are available on the ALiSEA web site: Forum (https://ali-sea.org/agroecology-futures-regional-forum-supporting-the-agroecological-transition-in-the-mekong-region/)

[1] A regional platform which aims at creating an enabling environment promoting agroecological practices and bringing together civil society organizations (including farmers and consumer's associations), academia and researchers, development practitioners, policy makers and private sector.

The Forum organization

The Forum has been organized by the General Directorate of Agriculture (GDA) in Cambodia with support of CIRAD and GRET. It has been funded par AFD to close the ACTAE regional project and create opportunities to prepare an ACTAE phase 2.

This Forum has been largely supported by policy makers and donors showing a great interest in agroecological transition. It was opened by His Excellency Dr. Veng Sakhon, Minister of Agriculture Forestry and Fisheries in Cambodia and Ms. Naomi Noel, Regional Task Team Leader at the Agriculture, Rural development and Biodiversity Division of AFD. The second day, a panel discussion bringing together representatives from AFD, the UN Food and Agriculture Organization (FAO), the Livelihood Trust Fund (LIFT), the International Fund for Agriculture Development (IFAD) and the French Embassy highlighted the existing different initiatives for supporting an agroecology transition. All of them gave a vision about what could be done to promote agroecology at national, regional and/or international levels.

The Forum Agroecology Future addressed the three following themes:

- **Theme 1**: Current dynamics in production and food systems and AE innovations
- **Theme 2:** Enabling environment for promoting Agroecological transition (communication, education, advocacy, certification, food systems…)
- **Theme 3**: Supporting and converging regional networking and strategies for promoting agroecology.

During three days a lot of presentations, expositions, cultural activities and discussions were organized:

- 7 Key note presentations to set the stage of the main themes (plenary session)
- 1 Panel discussion of donors on how to address agroecological transition and how regional networks can facilitate their implementation
- 11 Parallel thematic sessions and roundtables
- 25 Poster presentations and a funny seed swap (60 different species)
- Many cultural presentations such as dance, innovation fair and photo contest
- 3 successive closed sessions given respectively by the university network, the ALiSEA network and the ASEA R4D network.
- The final closing session by H.E. Dr. Ngin Chhay, General Director of the General Directorate of Agriculture with three key directions to go ahead with the agroecology transition and a green development:
  - Promote agricultural sustainability in a context of climate change
  - Reverse the trend of soil fertility depletion by promoting policies to support an agroecological transition for smallholder farmers
  - Increase the cooperation of all countries and stakeholders to develop environmental friendly agricultural systems.
- A distribution of organic products during forum breaks :
  - Coffee from Saffron (Lao PDR) and Genius Coffee (Myanmar)
  - Fruit juices from Les Vergers du Mekong (Cambodia)
  - Fresh fruits from Eco-Farm Group and SvayCheck Organic Farm (Siem Reap, Cambodia)

The full forum agenda is given in Annex 1 and the list of participants in the Annex 2. All the biographies of the presenters and the presentations are available on the ALiSEA Web Site: https://ali-sea.org/agroecology-futures-regional-forum-supporting-the-agroecological-transition-in-the-mekong-region/
A summary of discussions during the parallel sessions is given in the Annex 3 and the press release in Annex 4.

The key messages of the Forum

Addressing agroecology includes supporting fair value chains (often challenged by commodities) and bringing together a great diversity of stakeholders

Agroecology stakeholders, in the Great Mekong Sub (GMS) region are diverse and numerous. The success of this conference, with over 260 participants, reflects the wealth of initiatives that promote agroecology. Farmers need to be put at the center and to be more involved in both the value chains and the dialogues with policy makers. They need to be more connected to other actors such as research, development activities and private sector to contribute more efficiently to the agroecological transition. In that regard, trust building, mutual understanding and deeper collaboration are more important than ever although it can be challenging.

There is a need for better understanding linkages between markets and policies, and how farmers' groups are considered within the value chains. Experience shows that it is difficult to estimate the real value of agroecological products and services and, therefore, to give a good price to environmental, health and societal added value. How to build markets for agroecological products?

The Participatory Guarantee Systems (PGS) can be used as a mechanism to improve access to market. It is a quality assurance system to build transparency and trustful relationship with consumers. PGS approach allows farmers to gather products, to sell collectively and to empower farmers to negotiate better price.

Research for development (R4D) is challenged to address complex questions

The session was introduced presenting, schematically, two mains "agro socio eco systems":

- Irrigated and rainfed lowland systems confronted to water and pesticide problematic
- Upland farming systems with issues of land degradation, land tenure and loss of biodiversity. It has to be noted that issues faced by each system are not exclusive and can be found in both systems.

And two cross-cutting issues:

- Fair value chains for healthy products.
- Territorial and policy issues for upscaling.

Agro socio eco system was emphasized as economic and social sciences are of paramount importance to tackle the challenges of an agroecological transition **at the territory level**.

R4D has to better take into consideration collective action at community level, in order to contextualize the issues and to ensure better farmers' involvement along the value chain.

Regional and international research and advocacy for agroecology are essential to help farmers adapting agroecological practices along the value chain. The LICA (Lao facilitated initiative for Agroecology) initiative for instance could help strengthening the support of political actors at regional level by adopting this approach.

Innovation requires adaptation and adoption of R4D results by beneficiaries. R4D is an indispensable part of the innovation process to generate and validate new knowledge but needs direct and participative partnership with the others actors such as farmers, civil society, development practitioners, policy makers (including working on land management) and private sector. Involving all the relevant actors at the beginning of the process would avoid the gap between research, appropriation and commercialization of technologies.

R4D actors are increasingly mobilizing participatory decision-making tools, which consolidate knowledge (including traditional knowledge) and sharing knowledge with other actors who contribute to innovations.

R4D must also guide the impact assessment of new agro socio eco systems in relation with all the concerned actors. These activities are of great importance to build advocacy and communicate properly on agroecology from producers to policy-makers and consumers. In addition to technical, environmental and economic indicators, gender, social inclusion, employment, wellbeing, involvement of young farmers should be also regarded.

Mechanization is an important element of an agroecological transition

Many technologies are available that fit with the principles of agroecology preserving soil, water and soil biodiversity while enhancing farm's profitability. The development of appropriate-scale mechanization requires the involvement of all stakeholders along a demand-creation process with smallholder farmers, service providers, retailers, SME and even importers.

Communication and training, especially toward young people, are the essential levers to strengthen the community which will contribute to the agroecological transition

The communication is unbalanced in favor of messages on the use of chemical inputs. Actors in the agroecological transition must improve their communication to convey simple messages on the strengths and weaknesses of the techniques put in place.

The information must be fair and validated to be useful. It is also the role of R4D to support the actors of agroecology in this way so that the recommendations generate confidence.

A good communication is needed at all the fair value chain levels to describe the performance of agroecological socio eco systems through an aggregation of diversity of knowledge in specific contexts. This is what the ALiSEA network has started to do by highlighting very diverse agroecological initiatives as practical examples and illustration for all the actors.

At the policy level, the dialogue between environmental and agricultural policy makers is also crucial to increase coherence in communication

Farmer to farmer learning, E-learning, information using the social media source and education are key actions to change the practices.

ANNEX 1: Forum agenda

Tentative agenda – "Agroecology Futures" Regional Forum
At Apsara Palace Resort, Siem Reap, Cambodia,
6th – 8th November 2018

Day 1 – Tuesday 6th of November

Session	Time	Presentation	Meeting Room
Plenary Sessions Morning	08:00 - 08:30	**Registration**	**Royal Ballroom 1st floor**
	8:30 – 9:15	**Opening session –** *Introductory speeches* Speech by Ms. Naomi Noel (Regional Task Team Leader – Agriculture, Rural development and Biodiversity division- AFD) Introductory remarks by His Excellency Dr. Veng Sakhon, Minister of Agriculture Forestry, and Fisheries	
		Group Photo	
	9:15 – 9:30	**Coffee break & visit of the Innovation Fair**	**Exhibition Area**
	9:30 – 10:15	**Plenary 1** - Smallholder farming in ASEAN / Mekong Region: what are we talking about? *Speaker: Mr. Sopheap Pan, Farmer and Nature Net (FNN)*	**Royal Ballroom 1st floor**
	10:15 – 11:00	**Plenary 2:** Regional networking for promoting Agroecology in South East Asia (ACTAE achievement: CANSEA & ALiSEA) *Speakers: Dr Florent Tivet (CIRAD) & Mr Pierre Ferrand (GRET)*	
	11:00 – 11:45	**Plenary 3:** Agroecology, commodities and agroecosystems transformation *Speaker: Mr Stéphane Boulakia (CIRAD)*	
	11:45 – 12:30	**Plenary 4:** The State of Land in the Mekong Region *Speaker: Dr Jean Christophe Diépart (Mekong Region Land Governance project)*	
	12:30 – 14:00	**Lunch**	
	1st Parallel sessions (14:00 - 15:30) - Theme 1		

Parallel sessions Afternoon	**PS1 -** Agroecology, commodities and agroecosystems transformation - discussing the impacts of main crops on agrarian systems: rice, maize and cassava *Moderators: Dr. Sijun Zheng (YASS) & Mr Stéphane Boulakia (CIRAD)* *Speakers: Mr Jean-Marie Brun (IRAM), Dr John Dixon (ACIAR), Dr Timothy Krupnik (CIMMYT), Mr Hoang Tao (NOMAFSI), Dr Manny Reyes (Kansas State University), Dr Sijun Zheng (YAAS) & Dr. ZHU Hongye (YAAS)*	**Malis 1 ground floor**
Parallel sessions Afternoon	**PS2 -** Innovative intervention mechanisms and tools in support to the agroecological transition *Moderators: Dr Pascal Lienhard (CIRAD) & Dr. Meas Pyseth (MAFF)* *Speakers: Dr Amaury Peeters (Louvain Cooperation), Mr Vira Leng (GDA), Mr Laurent Levard (GRET), Dr Melanie Blanchard (NIAS/CIRAD), Dr Pascal Lienhard (CIRAD)*	**Malis 2 ground floor**
	PS3 - Status of agrochemical use in ASEAN and challenges for an agroecological transition ***Translation in Khmer available*** *Moderators: Dr Krys Wyckhus (University of Queensland & IPP-CAAS) and Dr. Chou Cheythyrith (GDA/IPM)* *Speakers: Ms Deeppa Ravindra (PAN-AP), Dr Dharani Burra (CIAT), Dr Kean Sophea (GDA), Dr Buyung Hadi (IRRI), Mr Jan Ketelaar (FAO), Mr Marut Jatiket (Field Alliance)*	**Kravann ground floor**
	PS4 - Crop Biodiversity: A foundational component of agroecological farming systems *Moderator: Mr Patrick Trail (ECHO Asia) and Mr Thisadee Chounlamountry (DALaM, Lao PDR)* *Speakers: Dr. Chitpasong Kousonsavath (NUoL), Mr Son Sovanda (CASC), Mr Hoá Tran Quoc (CIRAD), Dr. Chanhsamone Phongoudome (NAFRI), Ms Dang To Kien (CENDI), Mr Sayakone Onnaly and Mr Yannick Lamezec (CPC)*	**Champey 1st Floor**
	15:30 – 16:00 **Coffee break**	**Exhibition Area**
	2nd Parallel session (16:00 - 17:30)	
	PS5 - Appropriate-scale machinery, Agroecology and Sustainable Intensification *Moderator: Dr. Chan Saruth (DAEng/GDA) and Mr Stéphane Boulakia (CIRAD*) *Speakers*: *Mr Lytour Lor and Dr. Dyna Theng (RUA-FAE), Mr Hoá Tran Quoc (CIRAD), Ms. Piseng Pheng & Mrs. Leandra Mistelli (Swisscontact), Ms. Camilla Stelitano (CSAM), Dr. Timothy Rendall (University of Illinois Urbana-Champaign)*	**Malis 1** **ground floor**
	PS6 - Climate Change & Indigenous Knowledge & Agroecology ***Translation in Khmer available*** *Moderators: Prof. Hoang Van Phu (Thai Nguyen University / ICC) and Mr Pierre Ferrand (ALiSEA / GRET)*	**Kravann** **Ground floor**

	Speakers: Dr. Hồ Ngọc Sơn (ADC), Ms Kat Bunheng (MIPAD), Mr Manoluck Bounsihalath (NAFRI), Dr N. Maiphuong (ICRAF), Dr My Nguyen Van Thai (RCRD / An Giang University), Mr Souvhantong Namvong (DTEAP/MAF Laos)	
	PS7 - Practical examples for improving soil fertility *Moderator: Dr Htet Kyu, (ALiSEA / GRET) and Mr. Dominique Violas (GRET)* *Speakers: Mr Sothet Chhay (ADG), Mr Le Khai Hoan (NOMAFSI), Dr Lyda Hok (RUA/CE SAIN) and Dr David R. Ader (University of Tennessee), Mr Stephane Fayon (consultant), Dr Phimmasone Sisouvanh (NUoL), Dr Didier Lesueur (CIAT/CIRAD)*	**Champey** **1st floor**
17:30-18:00: Cultural Performance and Agriculture		

Day 2 – Wednesday 7th of November

Session	**Time**	**Presentation**	**Meeting Room**
Plenary Sessions - Morning	08:00 - 08:30	**Registration**	**Royal Ballroom**
	8:30 – 9:15	**Wrapping-up** of parallel sessions of Day 2 (5 min by session)	
	09:15 - 10:00	**Plenary 5** – ASEAN Farmers: Soil Health Champions in Asia *Speaker*: *Dr. Jesie S. Binamira*	
	10:00 - 10:45	**Plenary 6 -** Historical drivers of land use changes and their impacts on livelihoods in the uplands of Cambodia *Speaker*: *Mr. Rada Kong (CASC / GDA)*	
	10:45 – 11:15	**Coffee break**	**Exhibition Area**
	11:15 – 12:00	**Plenary 7** - Blockchain: Investing in global resilience and regeneration with sustainable agro-forestry *Speaker*: *Mr. Nick Laidlaw (Generation Blue)*	**Royal Ballroom**
	12:00 – 12:45	**Plenary 8**: Panel discussion of donors on how to address agroecological transition and how regional networks can facilitate their implementation *Moderators: Mr Laurent Levard (GRET) and Dr Chan Saruth (GDA)* *Speakers: Dr Proyuth Ly (FAO), Ms Naomi Noel (AFD), Mr Kyi Nyein Chan (LIFT), Mr Kaushik Barua (IFAD)*	

	12:45 – 14:00	**Lunch**	
Parallel sessions afternoon	**1st Parallel sessions (14:00 - 15:30) – Theme 2**		
	PS8 - Examples of participatory process to accompany an agroecological transition *Moderator: Dr Patrick d'Aquino (CIRAD) and Ms Doan Thu Thuy (CISDOMA, Vietnam)* *Speakers: Mr Nanntha Oung (AVSF) and Dr Nicolas Faysse (CIRAD), Mr Suos Vuthy (DALRM/CASC), Ms Doan Thu Thuy (CISDOMA), Dr Mélanie Blanchard (CIRAD), Mr Michael Victor (TABI)*		**Malis 1 ground floor**
	PS9 - Building the new generation of agroecology farmers and promoters (Education, training and Agroecology) *Moderator: Dr Wayne Nelles (Chulalongkorn University/APAARI) and Mr Lay Heng (ITC)* *Speakers: Mr Lay Heng (ITC Cambodia), Mr Lay Vichet (RUA), Mr Guillaume Jumel (Vivre de sa Terre), Mr Germain Priour (Mediaseeds), Dr Florent Tivet (CASC - CIRAD), Ms. Hong Suong Truong (Y-Farm Network)*		**Malis 2 ground floor**
	PS10 - Soil management, climate change adaptation and mitigation - Mapping, monitoring, assessing soil ecosystem services and practices to maintain, enhance SOC ***Translation in Khmer available*** *Moderators: Dr Koy Ra (GDA-DALRM) and Dr Seng Vang, Deputy Director (CARDI)* *Speakers: Dr Pheap Sambo (RUA), Dr Koy Ra and Mr Nimol Keo (GDA - DALRM), Dr Laetitia Hermann, Dr. Stéphane Bellafiore (IRD) and Dr. Lionel Moulin (IRD), Dr Pao Srean (UBB), Dr Vang Seng (CARDI)*		**Kravann ground floor**
	PS11 - Bringing agroecological products to the markets - Food safety and quality, certification/recognition of agroecology products, role of consumers *Moderators: Mr Christopher May (IFOAM) and Dr Kean Sophea (GDA)* *Speakers: Dr. Estelle Bienabe (CIRAD), Ms Som Chanchhorvy (GRET), Ms Sieng Bun (NAV), Dr Thai Thi Minh (Rikolto), Dr. Neang Malyne (RUA), Mr Derek Smith (Saffron Coffee)*		**Champey 1st floor**
	15:30 – 16:00	**Coffee Break**	**Exhibition Area**
	16:00 - 17:30	**Innovation Fair and Photo contest**	**Exhibition Area**
Evening (19:00 – 21:00): Networking event & dinner			**Sunset Terrace**

Day 3 – Thursday 8th of November

Session	Time	Presentation	Meeting Room
Successive sessions Morning	08:00 - 08:30	**Registration**	**Majestic Ballroom** **Ground floor**
	8:30 – 13:00 – Successive Sessions – Theme 3 – closed sessions		
	PS12 - Closed session for drafting an informal university network addressing Agroecology *Moderator: Dr Wayne Nelles (Chulalongkorn University/APAARI)*		
	PS13 - Closed session for ALiSEA members to address the future of the network: What priorities to focus on, with which governance modalities? *Moderator: Mr Pierre Ferrand (ALiSEA/ GRET)*		
	PS14 - Key topics of R4D for an Agroecological Transition *Moderator: Dr Florent Tivet (CIRAD) and Dr. Catherine Marquié (CIRAD)*		
	13:00 – 14:00	**Lunch**	
	14:00 – 15:00	Poster session *Group 1: Agroecology in practices* *Group 2: Social and economic dimensions of agroecology – agroecology and biodiversity*	**Group 1 Majestic Ballroom** **Group 2 Kravann**
	15:00 – 16:00	Seed Swap	**Majestic Ballroom**
	16:00 – 16:15	**Coffee Break**	**Exhibition area**
	16:15 – 17:00	Closing session by the General Directorate of Agriculture Dr. Ngin Chhay	**Majestic Ballroom**

ANNEX 2: List of participants

List of participants				
Mr.	Saran	Som	Rachana	Cambodia
Mr.	Sothet	Chhay	ADG	Cambodia
Mr.	Jean-Christophe	Diepart	MRLG	Cambodia
Mr.	Bunheng	KAT	MIPAD	Cambodia
Mr.	Guillaume	Jumel	Vivre de sa Terre	Cambodia
Ms.	Sieng	Bun	Natural Agriculture Village	Cambodia
Mr.	Tithya	Kang	Svay Rieng University	Cambodia
Mr.	Kosal	Huon	Caritas Cambodia	Cambodia
Mr.	Kimsansereywathana	Bun	Ockenden	Cambodia
Ms.	Sunnary	Cheav	CIRD	Cambodia
Mr.	Sony	Pen	FAEC	Cambodia
Mr.	Vitou	Sam	CEDAC	Cambodia
Mr.	Try	Yorn	Mean Chey University	Cambodia
Mrs.	Lucie	Reynaud	GRET	Cambodia
Mr.	Veata	Mey	ALiSEA	Cambodia
Mr.	Sopheap	Pan	Farmer and Nature Net (FNN)	Cambodia
Mr.	Rany	Seu	Farmer and Nature Net (FNN)	Cambodia
Mrs.	Rom	Roeurn	Farmer and Water Net	Cambodia
Mr.	Savoeun	Thor	Ockenden	Cambodia
Mr.	Axel	Mourgue	GRET	Cambodia
Mr.	Sopheap	Sek	Oxfam	Cambodia
Mrs.	Leakhena	Saroeurn	Mekong Youth Farm Network	Cambodia
Mr.	Mardy	Serey	Svay Rieng University	Cambodia
Mrs.	Sonnthida	Sambath	ACIAR	Cambodia
Mr.	Aung Zaw	Myint	Genius Coffee	Cambodia

Dr.	Chou	Cheythyrith	MAFF-IPM	Cambodia
Mr.	Rotnkak	Khy	GDA	Cambodia
Ms.	Phanidet	Tong	GDA	Cambodia
Dr.	Lay	Heng	Institute of Technology of Cambodia, Cyber University	Cambodia
Dr.	Lyda	Hok	Royal University of Agriculture, CESAIN	Cambodia
Dr.	Srean	Pao	University of Battambang	Cambodia
Dr.	Malyne	Neang	Royal University of Agriculture	Cambodia
Mr.	Florent	Tivet	CIRAD	Cambodia
Dr.	Koy	Ra	GDA	Cambodia
Mr.	Nimol	Keo	GDA	Cambodia
Mr.	Sokleap	Se	GDA	Cambodia
Mrs.	Sokkheng	Tuy	GDA	Cambodia
Mrs.	Mai Phuong	Nguyen	ICRAF	Cambodia
Ms.	Sokha	Khom	GDA	Cambodia
Mr.	Veasna	Chaya	GDA	Cambodia
Mrs.	Mara	Mann	GDA	Cambodia
Mrs.	Ravy	Duong	GDA	Cambodia
Mr.	Chea	Sok	GDA	Cambodia
Mr.	Vira	Leng	GDA	Cambodia
Mr.	Vuthy	Suos	Rattanak Mondul, BTB	Cambodia
Mr.	Sovanda	Son	Rattanak Mondul, BTB	Cambodia
Mr.	Sophary	Khin	University of Battambang	Cambodia
Mr.	Mao	Manel	RUA, CESAIN	Cambodia
Mr.	Sambo	Pheap	RUA, Faculty of Agronomy	Cambodia
Mr.	Vichet	Lay	RUA, Computer Center	Cambodia
Dr.	Buyung	Hadi	IRRI	Cambodia
	Vuthy	Va	UNCCD/CCCA	Cambodia
Mr.	Sokhom	Srun	GDA, WAT4CAM	Cambodia
Dr.	Pyseth	Meas	PI ASPIRE MAFF	Cambodia
Mr.	Channa	Bou	LSM Administrator, ITC	Cambodia

Dr.	Vang	Seng	CARDI	Cambodia
Dr.	Sophea	Kean	GDA, Department of horticulture	Cambodia
Ms.	Sreypich	Sinh	Ecoland	Cambodia
Mr.	Lin	Edo	CAVAC	Cambodia
Ms.	Sothearath	Sok	RUA	Cambodia
Ms.	Sokhary	Thou	RUA	Cambodia
Mr.	Pengly	Koun	RUA	Cambodia
Mr.	Ouddom	Houn	RUA	Cambodia
Mrs.	Somonea	Ly	GDA	Cambodia
Ms.	Sreylis	Muth	GDA	Cambodia
Mr.	Lytour	Lor	Royal University of Agriculture, Faculty of Agricultural Engineering	Cambodia
Dr.	Theng	Dyna	Royal University of Agriculture, Faculty of Agricultural Engineering	Cambodia
Mr.	Kong	Rada	DALRM/CASC	Cambodia
HE. Dr.	Sakhon	Veng	Ministry of Agriculture	Cambodia
HE.	Amnat	Mam	Ministry of Agriculture	Cambodia
HE.	Hoklim	Ing	Ministry of Agriculture	Cambodia
HE. Dr.	Phaloeun	Chan	Ministry of Agriculture	Cambodia
HE.	Leng	Siek	Ministry of Agriculture	Cambodia
Mr.	Sovanno	Pech	Ministry of Agriculture	Cambodia
Dr.	Somony	Prum	Ministry of Agriculture	Cambodia
Mrs.	Sotheary	Kong	Ministry of Agriculture	Cambodia
	Delegate		Ministry of Agriculture	Cambodia
Mr.	Jean-Marie	Brun	IRAM	Cambodia
Dr.	Amaury	Peeters	Louvain Cooperation	Cambodia
Mrs.	Sileng	Sang	RUA	Cambodia
Ms.	Sovann Pisey	Thlang	Eco-Agri Center	Cambodia
Mr.	Vengse	Srun	Eco-Agri Center	Cambodia
Mr.	Chanthy	Sok	Eco-Agri Center	Cambodia
Mr.	Tona	Ouk	GDA	Cambodia
Dr.	Saruth	Chan	GDA	Cambodia

Mrs.	Nanntha	Oung	AVSF	Cambodia
Mr.	Sokharith	Touch	GRET	Cambodia
Mr.	Visal	Soth	GRET	Cambodia
Mr.	Sothea	Sok	GRET	Cambodia
Mrs.	Chanchorvy	Som	GRET	Cambodia
Ms.	Celia	Del Campo Aragones	DCA	Cambodia
Mr.	Timothy	Bergman	Fauna & Flora International	Cambodia
Mr.	Manuel	Reyes	SIIL Coordinator Center of Excellence on Sustainable Agricultural Intensification and Nutrition	Cambodia
Mr.	Timothy	Rendall	CIMMYT	Cambodia
Mrs.	Chansopheak	Ann	FAO PGS	Cambodia
Ms	Margot	Roux	Les vergers du Mekong	Cambodia
Mr	Vireak	Than	Les vergers du Mekong	Cambodia
Mr	Jacques	Poulain	Les vergers du Mekong	Cambodia
Mr	Jean-Luc	Voisin	Les vergers du Mekong	Cambodia
Ms.	Julie	Poulain	Nakupenda Farm	Cambodia
Ms.	Beth	Steinbrenner	Ibis rice	Cambodia
Mr.	Sambo	Chhoeng	Ibis rice	Cambodia
Mr	Eric	Guerin	Svay Check Organic Farm	Cambodia
Ms	Sachiko	Kojima	Svay Check Organic Farm	Cambodia
Mr	Ton	Vin	Svay Check Organic Farm	Cambodia
Mr.	David	Russel Ader	Smith Center for International Sustainable Agriculture Institute of Agriculture	Cambodia
Mr.	Kol	Kraucht	Samatoa	Cambodia
?	Mouk	Mao	Life With Dignity	Cambodia
MR	Heng	Sareth	FAO, Life & Nature	Cambodia
Ms.	Tianlin	Gao	FAO, Life & Nature	Cambodia

Mrs.	Cheu	Ponleu	CAVAC	Cambodia
Mr.	Soeung	Phousana	CAVAC	Cambodia
Mr.	Chankakada	Chooeum	Action Aid	Cambodia
Ms.	Sophary	LONG	FAO	Cambodia
Mr.	Pheareak	CHINH	Agrisud	Cambodia
Mr.	Ratana	OEURN	Green Shoots Foundation	Cambodia
Mr.	Edward	Dale-Harris	Green Shoots Foundation	Cambodia
Mr.	Leanghak	KHUN	SOFDEC	Cambodia
Mr.	Tum	NOUN	Khmer Organic Cooperative	Cambodia
Mr.	Vengse	SRUN	Khmer Organic Cooperative	Cambodia
Mr.	Menghoin	HOK	NGO Forum	Cambodia
Mr.	Tim	Bergman	FFI	Cambodia
Ms.	Heloise	Buckland	Husk Venture	Cambodia
Mr.	Koem	NITH	Husk Venture	Cambodia
Mr.	Picheth	Seng	Agrisud	Cambodia
Ms	Sothy	Im	ADG	Cambodia
Mr	Soyana	NOV	ADG	Cambodia
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Mr.	Samol	SAVUN	Word Vision	Cambodia
Mr.	Monysetha	MEY	Word Vision	Cambodia
Mrs.	Chantha	Soem	Organic Jasmine Farm	Cambodia
Mr.	Olivier	Colineau	Organic Khmer Farm	Cambodia
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Mrs.	Marie	Grovel	Freelance	Cambodia
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Mr.	Sijun	Zheng	YAAS	China
Mr.	Stephane	Boulakia	CIRAD	France
Mr.	Dominique	Violas	GRET	France
Mr.	Laurent	Levard	GRET	France
Mr.	Stephane	Bellafiore	IRD	France
Mr.	Pascal	Lienhard	CIRAD	France
Mrs.	Mathilde	Sester	CIRAD	France
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Mrs.	Sylvie	Larriere	CFI	France
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Mr.	Stephane	Fayon	Freelance	India
Mr.	Stephane	Fayon	Freelance	India
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Mr.	Thongdam	Phongphichith	SEADA	Laos
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Ms.	Mayu	Ino	Seed to Table	Vietnam
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Mr.	Stuart	Brown	Word Vegetable Center	Cambodia
Mrs.	Sarah	Moyret	AVSF	Cambodia

ANNEX 3: Summary of parallel session

Parallel session 1: Agroecology, commodities and agroecosystems transformation – discussing the impacts of main crops on agrarian systems: rice, maize and cassava

Should agroecology address these commodities productions (monoculture of cash crops/cassava, maize…)? If so, which production techniques, marketing innovations, should be used for commodities and cash crops production?

There are a number of benefits for producers to get involved in sustainable production. But these benefits may not be enough to balance obstacles. It is therefore important to work on the drivers that will help farmers to adopt sustainable practices such as premium prices, among others.

PGS is a good approach to link local market, consumers and producers.

It is not always very easy to know the limits to the definition of commodity. Can organic rice be somehow considered as a commodity when it is produced at large scale?

Ideas – tools – research topics to support sustainable intensification include innovation in simulation games for farmers to improve their decision making, research on assessing the resilience of multiple crops farming systems to extreme weather events, appropriate scale mechanization by collaborating with different stakeholders to design appropriate tools (farmers, private sector,…), model to identify and prevent diseases occurrence… Communication toward consumers and support of policy makers to develop locally adapted and agroecological farming systems are therefore keys and challenges.

Parallel session 2: Innovative intervention mechanisms and tools in support to the agroecology transition

Participative methodologies applied with farmers, engagement with private sector to shift from R&D to service provider's approaches, and diversifications are keys in the innovation process. How to build trust with farmers and create the conditions for discussions and farmers exchanges? A long-term support to farmers and coherence between public policies is needed to agroecology transition.

Example of good practices:

- A participatory land use planning in Lao pilot villages to negotiate more desirable landscapes (Project EFICAS)
- A participatory mapping drawn by farmers in Nord West Vietnam showed five land use farm typologies where the cattle mobility play a role can in sustainable intensification pathway (Project TAG)
- Exchanges between farmers, combining with traditional networks and knowledge and promotion of the role of technicians in the innovation process (CALAO study: 3 case studies in Africa).

Using the SAFA methodology developed by FAO (Sustainable Assessment of Food in agricultural system) it has been identified only 12 over 112 core indicators (environmental, economic, social, integrity, resilience, wellbeing) showing significate differences in sustainable agricultural practices in Kampong Thom in Cambodia. Research needs to dig into the causality of the significant difference in order to better understand the innovation processes.

Parallel session 3: Status of agrochemical use in ASEAN and challenges for an AE transition

How to bring new practices in communities? Minor changes can lead to significant improvements.

Above the 49 highly hazardous pesticides (HHP) used in the region, 10 are extremely hazardous to children. Lao PDR has become the higher sprayer in the region (very intensive farming of vegetables near Vientiane).

Information, including the social media source and education are key actions to change the practices.

Currently, much information flow comes from agro-input dealers who are the dominant source of information. Only extension officers do not push pesticide solutions.

Observation of farmer's practices is a good way to identify knowledge gaps and provide crop management data which are often missing. Empowering farmers to reduce pesticide risks (FAO, 2016) is another way with Farmers field school for example.

At the policy level, dialogue between environmental and agricultural policy makers is crucial to get a better policy and communication coherence.

Parallel session 4: Crop biodiversity, a foundational component of agroecological farming systems

Plant diversity is driving soil-crop interactions and enhances ecosystem services for benefits to the entire agro-ecosystem. Agriculture landscapes with rich and diversified fauna and flora are the most resilient, improving nutritional status of rural communities but also the most aesthetic ones.

A few examples of biodiversity diversification have been given: Cover crops (50 species of cover crops could be applied in the cropping system to enhance soil fertility), inter-cropping with Veggies, spices and mulching crops, rotating farming and crops diversity of high-nutritional crops and mulching, and mixing high valued local timber species integrated with fruit trees in terraces.

Currently we are not able to evaluate the real market value of products from diversified system to sale to the end of consumers.

The discussion between the collectors, processors, wholesalers or retailers and farmers is very important for connecting the product to the market (example of the mung bean value-chain). Finding the traders or small business that need the product to link with the farmers who produce the interested product is the main key to solve the market problem.

Parallel session 5: Appropriate-scale machinery, agroecology and sustainable intensification

The engagement of stakeholders: Project Appropriate Scale Mechanization Consortium (ASMC) for Sustainable Intensification for rice farming and diversification with fodder species in Cambodia.

Many technologies are introduced: Seeders for 2 and 4-wheel tractors, Bucket Scrapper for Laser Land Leveling, Rice Broadcaster, and No-Till Seeder, Farming Systems for Conservation Agriculture, Conservation Agriculture for Vegetable.

The process of stakeholder engagement is following successive steps: Survey, Participatory game, Study tour/field day/demonstration, training/workshop, consultative workshop, hub advisory committee, social network (Facebook and YouTube to promote project activities to stakeholders, Facebook messenger for Hub Advisory Committee), framework for Technology Assessment, publication of Strategic Plan for Agricultural Engineering in Cambodia 2016-2020.

The engagement strategies for ASMC: Presentation of the Appropriate Scale Mechanization Consortium (ASMC) by University of Illinois at Urbana-Champaign, under the supervision of Sustainable Intensification Innovation Lab (Kansas State University). A holistic approach enabling environment to support the private sector and entrepreneurship: creation of Innovation Hub that locates in different institutions and university and having field hubs in the fields with farmers to acquire valuable feedback back.

The Private sector engagement: the number of thresher, tractor and harvester is increasing from year to year, but the agriculture mechanization ratio is till as low as 40% (Source: GDA). This makes up a total potential investment opportunity in this market at an estimate of $2.0 billion. Then why is the private sector not tapping this potential? To answer this question, it is necessary to look at the "Valley of Death" between research and commercialization of technologies. Every new technology that is adding to the context needed to overcome the "Valley of Death". There are three ways to overcome this:

- Increase market readiness of the technology
- Draw analysis to overcome systemic constraints: need to be aware of the constraint in the market and how to overcome them
- Draw investment into the system

To involve the private sector it is necessary to create a business model that benefits all market actors, to know the characteristic of your customers and to develop know how to reach and attract your customers.

The mechanization is crucial for sustainable and climate resilient agriculture.

How steel scrap can contribute to agroecological transition? Examples from banana sector in the French West Indies were given.

Mechanization, a need but which one…? It is important to take into account the perception of plowing by farmers to elaborate strategies in 2 times: plowing then strip tillage then direct seeding, starting from practices to alleviate direct constrains.

Parallel session 6: Climate Change & Indigenous Knowledge & Agroecology

Examples given by the following projects:

Promotion of Indigenous Knowledge Based Climate Change Resilient and Organic Farming Practices in Vietnam : 1) Consolidated the indigenous knowledge based climate change resilient and organic farming practices, (2) Documented farming practices for sharing (guideline, reports, handbook) (3) Organized a sharing experience study tour for key farmers, CSOs, local government officials, (4) Training workshop on scaling up the IK based agroecological practices, and (5) Supported NorthNet members, local governments to scale up the practices. Using local crops and traditional farming practices

Bridging Agriculture to Ecology Conservation Among Indigenous people Communities in Mondulkiri Province (Eco-agriculture): to introduce high value crops such as strawberry for permaculture system inside community forestry for indigenous people community.

Why Eco-Agriculture for indigenous people? (1) They are living in the forest, often hot-spot of biodiversity, (2) They depend almost totally on forest resources (3) But in this modern integrated economy, forest resources cannot meet all economic needs, so there is a need for new viable

initiatives to produce more food and commercial products and eco-agriculture seems a very viable option for indigenous people.

Pha Khao Lao "Reconnecting Lao people back to the food they produce, process and consume" has the missions to highlight the importance of agrobiodiversity for sustainable development in Lao PDA as well as to provide practical resources for students, academics, policy marker, development professionals and the private sector.

Local tree knowledge on coffee agroforestry system mountainous area of Vietnam: The online tree advice and participative tool has been used: htto://www.shadetreeadvice.org/

Farmers have deep knowledge of the benefits of trees to coffee in coffee agroforestry systems (2) Farmers still have limited experience/knowledge on impact of shade trees to coffee quality and coffee yield. (3) The selection of tree species in coffee agroforestry systems is influences by proximity of farms to road/market. (4) No significant findings between gender and ethnicity (5) This study and the tool (shadeadvice.org) help local extension institutions and farmers in the selection of the right tree species according to the local context together with householders' needs and constraints towards more sustainable and climate-smart coffee systems.

Conservation of the Floating Rice Based Agroecology Farming Systems in the Mekong Delta: Promoting niche market for floating rice to improve income and livelihood for farmers to conserve floating rice. What are the values of floating rice-bases agro-ecological farming system? How was the values communication? To whom?

Best Practice Farmer to Farmer Learning for Agroforestry: Definition of Green Extension strategy

Coffee results: Existing coffee gardens have been improved: pruning, soil fertility, shade management etc.

Parallel session 7: Practical examples for improving soil fertility

How to increase the soil fertility?

- Using Natural Fertilizer (Bokashi) commercialized by Farmer Organizations or Agricultural cooperatives. Farmer organization is important to improve interaction under a sustainable territory approach.
- by recycling rice plant residue for compost
- By Diversifying Livestock Systems and Improving Management Practices: In mixed agriculture and livestock farming systems, using of biomass from crop production for cattle forage.
- By developing alternative to shifting cultivation : slash and mulch instead of slash and burn in mountainous agriculture system in South East Asia

In the intercropping system, the nitrogen fixed by the legume crop is important for the associated crops. Efficiency of nitrogen fixed is dependent on the specific strain of nodulation bacteria used. Moreover the associated crop should be planted together with the legume crop (in intercropping system) or grown soon after the incorporation of green manure into the soil because nitrogen fixed in the soil can easily and quickly be lost from the system (LEGINCROP project).

In many upland areas of South East Asia, there are soils which are in acidic condition. Therefore, correcting the pH for nutrient availability to crops is as important as the organic amendment by manure application (STOCK project).

Parallel session 8: Example of participatory process to accompany an agroecological transition

The cooperation between stakeholders is at the heart of agroecology. The collective design of agroecology strategies is at the heart of sustainable agroecology models. This session presented examples of participatory processes to design and implement agroecology initiatives in a collaborative way.

Simulation games are a great tool to support farmers' analytical and decision making capacity. In Vietnam, CISDOMA developed a game that helps farmers to set up objectives, to identify constrains, to map farmers' difficulties and to develop collective actions. Farmers can improve their negotiation skills as well as analyzing and decision skills. The game was used for example to identify a selection of climate adaptive livelihoods of the farmers.

In Cambodia, CIRAD and GDA/DALRM developed a gaming approach to understand farmer's decision making on land uses and Conservation Agriculture adoption. The objective of this game was to understand the farmer's decision related to historical land uses and CA adoption and to explore development pathways and draw lessons for intervention. Another simulation game was also supported by ACTAE for the diversification of rice-based farming systems in Tonle Sap Lake Region, Cambodia (AVSF, GDA/DALRM, CIRAD).

During the parallel session, a participatory process to design farming models developed by CIRAD, ISTOM and NIAS was presented. This project allowed farmers to co-design scenarios for livestock intensification and agroecology. The scenarios were modelled, tested and classified by farmers.

TABI and NAFRI in Laos work to develop a participatory forest and agriculture land use planning for building upon local knowledge and biodiversity. Participatory mapping of land use, participatory negotiation with villages to develop zoning and rules and regulations and participatory monitoring and evaluation were used. "Villagers like that their knowledge is respected and trusted and future plans show a level of detail that people can take action on"

Parallel session 9: Building the new generation of agroecology farmers and promoters (education, training and agroecology)

Examples of organization promoting education, training and agroecology with a focus on young generations were given.

The e-learning center for Cambodia, Laos, Myanmar and Vietnam, launched by ITC in 2011 with the support of the Ministry of Education

The e-learning platform of RUA (Cambodia) emerged from the project "Innovative pedagogical Resources in Agroecology and Conservation Agriculture in South-East Asia (IPERCA)" launched in 2015.

Vivre de sa Terre has developed a 2 years vocational training program on agroecology dedicated specifically to build new generations of Agroecology young farmers and specifically dedicated to rural youth from small holder families.

Mediaseeds, created by Germain Priour, promotes smart and sustainable farming job through agroecology. Farmers can improve and share knowledge by using communication support as videos through smartphones.

The regional training center on Conservation Agriculture located on 15ha at Bos Khnor, Kampong Cham province, Cambodia, and established since 2004 by GDA in partnership with CIRAD. This Center is dedicated to different activities: experiments, seed preservation and training.

The Mekong Youth Farm Network created by a group of determined youth, as part of the Warm Hold Association, is active in Vietnam, Cambodia, Myanmar, Laos, and Thailand. The network aims at helping young farmers and customers who are adopting sustainable practices on their farm, in their purchases and in their communities.

Number of people who are studying agriculture is declining – may be because it is not so much attractive – what are the key factors that can attract new people to learn on agriculture?

- By sharing positive stories and new on agroecology with young people. This can be done by videos – by filmmakers and farmers
- Agriculture and environmental teaching should take place very early at school to bring ideas and enthusiasm for agriculture step by step. It is important also to share the message that agriculture is larger than farming and has important economic and social dimensions.
- Master student in AE: lack of access of student to information in agroecology – don't know about possibility of e-learning. This should be improved.
- What about supporting young people when they start their activity, especially at policy level?
- Giving realistic and technical recommendations because practices have to be replicable.

Parallel session 10: Soil management, climate change adaptation and mitigation – mapping, monitoring, assessing soil ecosystem services and practices to maintain, enhance SOC.

"Multi-functional assessment of soil quality under Conservation Agriculture on an Oxisol in Cambodia" located at Battambang, Kampong Cham and Kampong Thom provinces:

- Increasing soil fertility by using minimum or no soil tillage, Permanent soil cover, species diversity and arrangement of crops.
- Strengthen a scientific community working on resilient cropping systems, and ecosystem services assessment.
- Academic capacity building, engaging Msc students to assess soil ecosystem services, to produce knowledge.
- Raise awareness amongst smallholder and policy-makers about the negative impacts of conventional plough-based cropping systems and the needs for alternatives.
- Provide strategic elements to national policy makers.

How to Produce Soil Organic Carbon Map?

- Collect and prepare data as csv files to work in R Studio: More than 500 sampling points, mostly from Tonle Sap Great Lake and other lowland areas (Takeo, Svay Rieng, Prey Veng…).
- Build the model to predict the map: Linear Regression Kriging was built as Model and Environmental Covariates as Predictors
- Used R Studio as tools to predict a Soil Organic Carbon Map.

"Impact of agro ecological management practices on soil microbial communities associated to legumes in Cambodia". This demonstration was located at Bos Khnor research station Kampong Cham Province, Cambodia. Assessment of 4 cropping system:

- Conventional: monoculture of soybean with tillage
- Cover crops: monoculture of soybean with cover crops
- Rotation: Soybean and maize in biennial rotation
- Vigna umbellata (rice bean) replaced soybean in 2017

In the result, no effect of the cropping system on the fungal richness but significant effect on the diversity and it was surprised that the tillage plots show the highest diversities.

"Enhancing Soil Functional diversity of Rice fields": Soil nematode communities, root plant parasitic nematode, soil and root microbial communities.

The JEAI Healthy Rice project:

- Agricultural practices for rice cultivars in each targeted agroecosystem, allowing high yield in low chemical-inputs systems.
- Better plant health (decrease in disease severity and presence of parasites) in several combinations of inter cropping systems
- Better seed quality in terms of pesticides residues in low input systems
- Correlation between plant health and soil and plant microbiomes diversity
- Correlations between soil ecology and plant health (soil biodiversity assessment, correlations between soil quality and soil ecosystem services, and pest management).

"Soil ecosystem services assessment under vegetable production". Comparison between conservation agriculture (CA) and convention tillage: CA improves resilience to climate change by increasing soil biodiversity richness and soil health and uses less chemical if compare to traditional tillage.

"Soil Research for Sustainable Development". Improve soil management with the aims to increase yields and returns for diverse crop options in upland farming systems of Cambodia.

- Introduce new methodologies for soil survey and land suitability assessment and identify main soil types and landscape patterns in upland regions.
- Characterize the soil and land constraints to crop production and identify management technologies
- Provide tools and information that enable stakeholders to identify the main soil types, and their constraints to crop production, and
- Develop knowledge of soil resources and capability for soil resource management.

Parallel session 11: Bringing agroecological products to the markets – Food safety and quality, certification/recognition of agroecology products, role of consumers

Two examples of participatory guarantee system application in Cambodia and in Vietnam for non-organic standard were presented.

PGS can be used as a mechanism to improve access to market; PGS is a quality assurance system to build transparency and trustful relationship with consumers. As VietGAP certification process is rather weak, PGS offers a good alternative to certify "safe products".

It is crucial to understand and analyze the dynamic of the different markets (supermarkets, organic shop, wet market) and to match with their quality requirements.

Does PGS approach help farmers to get a higher price for their production? PGS approach allows farmers to gather products, to sell collectively and to empower farmers to negotiate better price.

Who decide/ set up the price within PGS system? : As PGS is a collective action, all farmers should be involved in setting up the price with others stakeholders. A good way to agree on the price is to set up contract farming between producers and buyers.

How to engage with women and youth within PGS system? In most of the case, women and youth are already engaged in PGS system because organizations have encouraged them to participate and women/youth are often more open to innovation and motivate to join collective actions.

How consumers are involved and at which stages? Most of the time consumers are invited to visit the farms of the producers; they need to see to believe. Consumers can be involved trough out the different steps of the production cycle.

How to guarantee access to safe food for poor people? There are several actions that need to be implemented like (i) to sell in priority to local/domestic markets; (ii) policies can play a key to provide incentive in supporting access to safe food for poor people, (iii) to support a combination of quality public standard and good infrastructures.

Does the PGS fee (0.0007$/kg) allows to cover the expenses of the PGS certification? Yes, the PGS fees were enough to cover the expenses after two to three years.

How to manage PGS approach with consumers of supermarkets with the difficulty to have several standards and the challenge of low regularity of production? It is very important to bring farmers to meet consumers in order to facilitate direct dialogue, to design and produce communication materials like leaflet to provide information to consumers and also to work with local Medias. When a close relationship between producers and consumers is built, then it becomes easier to explain the different standards and to negotiate the price.

Parallel session 12: Closed session for drafting an informal university network addressing agroecology

This session aimed at gathering stakeholders from Universities across South East Asia to present initiatives on agroecology from different universities and discusses the possibilities of an informal university network for addressing agroecology.

The session started with a presentation from Dr. Wayne Nelles which gave an overview of the situation of universities and agroecology in South East asia and presented current initiatives to foster the teaching, research and extension services on agroecology by Universities.

There is today a dominance of global modern agriculture in the research and education curricula from universities, including in South East Asia. Such conventional agriculture is heavily reliant on agro-chemicals and mono-crop intensive systems and causes severe environmental degradation.

Numerous universities (curricula and research funding) and public extension services have supported an agriculture development based on agrochemical dependency in South East Asia. The example of Thai Universities can illustrate the issue: Thai universities do not view sustainable agriculture (SA) as a priority, much less Organic Agriculture teaching, research or extension and even less Agroecology which is an even lesser understood concept or practice.

However, in this context, two universities are especially active to develop initiatives to support sustainable agriculture teaching and research in Thailand: MAEJO University and Chulalongkorn University.

The ASEAN Education Work-Plan Partnerships, 2015-2017, an initiative of Chulalongkorn University, ASEAN University Network and UNESCO, supported the adoption of the PROJECT 47 (on "Social and Sustainability Sciences" in ASEAN Work Plan on Education, 2016-2020).

The work-plan allows reporting on State of Social and Sustainability Sciences in ASEAN and facilitated the emergence of an ASEAN Scholars Network on Social and Sustainability Sciences.

In this framework, the Chulalongkorn University is also getting involved in projects to foster the role of Universities on Agroecology. For example, with the project "Mapping and Assessing University-based Farmer Extension Services through an Agro-ecological/Organic Lens"

FAO also developed the Scaling-up Agroecology Initiative for Transforming Food and Agricultural systems in Support of the SDGS. Within this initiative, FAO recommends to integrate agroecology in the curricula of both formal and nonformal primary and higher education institution, to build a regional framework of agroecology researchers, and to recognize, support and document producers' knowledge.

The presentation from Dr Wayne Nelles was then followed by two presentations from Kasetsart and MAEJO universities on their initiatives related to agroecology.
Kasetsart presented its MS and PhD programs on "sustainable land use and natural resource management (SLUSE) program".
MAEJO introduced its Go-Eco strategy. MJU aims to be a university that connects with people, communities and countries in everyday life. It is involved in sustainaible development in its functioning as well as in the University curricula and research works. The Green University Strategies (2018-2023) adopted by the university guarantees the engagement of MJU for sustainable agriculture.

Parallel session 13: Closed session for ALiSEA members to address the future of the network: What priorities to focus on, with which governance modalities?

Taskforce meeting & ALiSEA

Organization of participatory construction workshops for the future of the network, country by country.

Cambodia: definition of a charter for members, use small grants to improve the involvement of members in the network and promote exchanges between members.

Vietnam: expansion to other members (for training etc.) with support by ALISEA, provide studies with 2 or 3 members to work together, with regular meetings between members and exchange of studies and results of each member.

Myanmar: provision of technical support to members, definition of AE in local language, support for learning and impacts, use of shared approaches for other donors, + setting up governance bodies.

"ALiSEA a platform for and by its members" with different tools: website (16 000 visits/ month), Quarterly newsletters/publication with subscribers (1700), Facebook page.

Parallel session 14: Key topics of Research for Development (R4D) for an Agroecological Transition?

Session in 3 times: 1) an introductive presentation, (2) questions, (3) a brainstorming exercise (4 groups)

R4D has to address 2 mains agroecosystems:

- Irrigated and lowland areas (water pesticide issues)
- Rainfed upland areas (land degradation, land tenure, lost of biodiversity issues)

And 2 cross cutting issues:

- fair value chains for healthy products
- territorial and policy issues for upscaling

On local practices local knowledge (vision, perspectives ...): customary rights, local way for collective interactions (organisation, transferring innovations …),

On organisation & coordination at the farmers' levels: landscape, territory (villages), farmer's organisation,

On local stakeholders understanding of market complexity: cost-benefit, business plan / standards & qualities (PGS, consumers),

On link with policy: which efficient policy supports to AE value chain scaling up? / Which efficient policy incentives to best practices and support the intersectorial coordination supporting the AE transition?

Main questions from the floor:

How does R4D plan to harmonize the work made in the different agroecosystems at policy level? Agroecosystems are interconnected (lowland and uplands, upstream and downstream, even Mekong watershed level).

How much approaches will incorporate social dimension? Agroecology is a social system.

The integration/aggregation of technical and social issues and approaches could be possible through M&E systems and the combination of social, economic, and technical indicators.

How to better motivate farmers to take agroecology? In Vietnam, sustainable vegetable promoted by authorities based on promises that there will be market opportunities and better prices for organic vegetable (partial failure). Focus should be on farming efficiency improvement rather than uncertain market opportunities

How to limit the increase in hybrid seeds spreading? Farmer's access to open-pollinated seeds should appear as a cross-cutting issue.

Rice-Fish-Duck is a good example of AE system + fair value chain + healthy products in China/Yunnan. Decrease of intercropping systems in China in line with increased labor scarcity but increased use of cover crops as green manure for soil fertility management. All these systems should be studied.

Pesticide uses: why consider lowland and not as a cross-cutting issue; same question for biodiversity

Coming from Mekong delta, farmers are increasingly using pesticides with issues related to water resources (water quality, water use efficiency).

What are the factors in Agro ecological systems to design innovative intervention mechanisms?

Why farmers are not enough represented? What is the concept to talk with farmers about agroecology? How the policies will support the families involved in agroecology?

Capacity building is crucial, not only with youths.

Main R4D questions and topics identified by the 4 brainstorming groups: See Figures 1 to 4 below

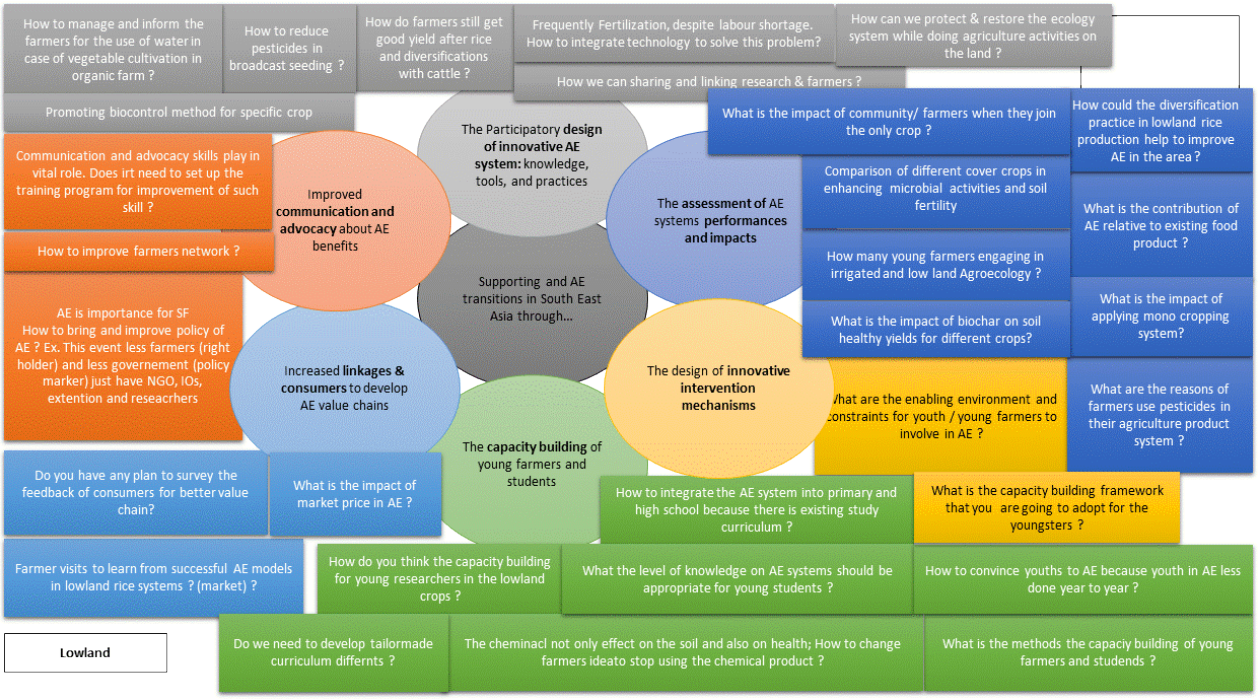

Figure 1: In the Lowland, what would be the prior R4D questions to address?

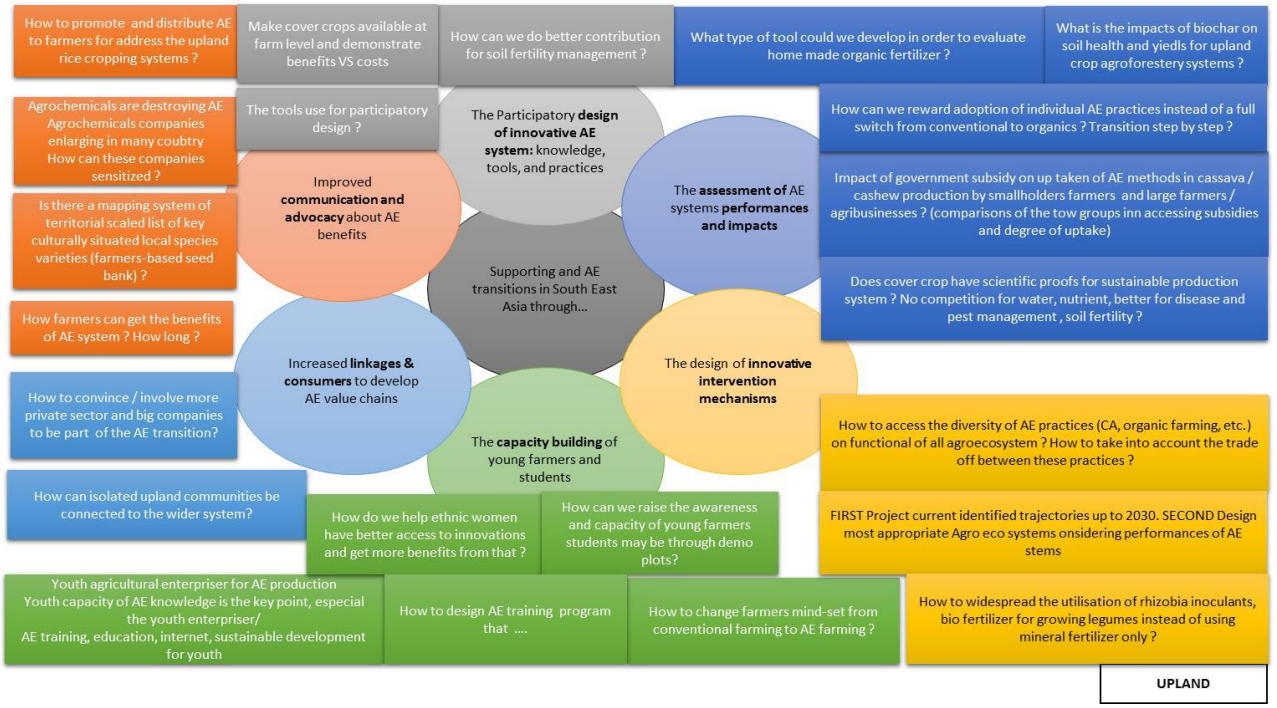

Figure 2: In the Upland, what would be the prior R4D questions to address?

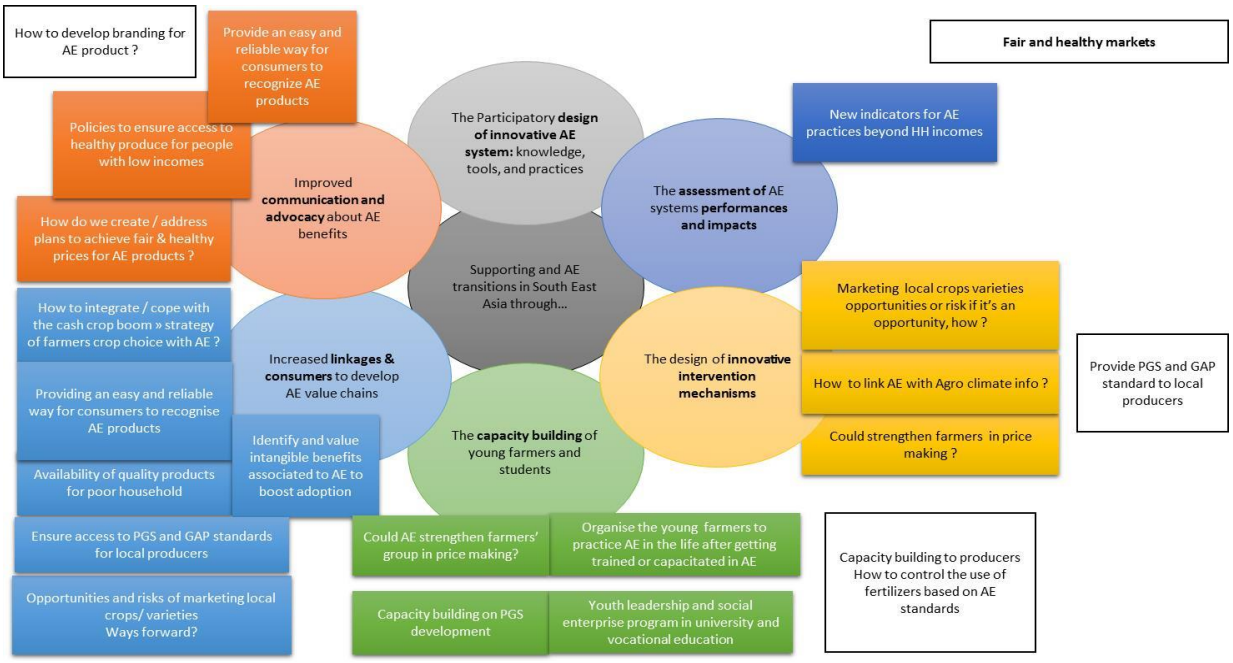

Figure 3: What would be the prior R4D questions to develop fair and healthy markets for agroecological products?

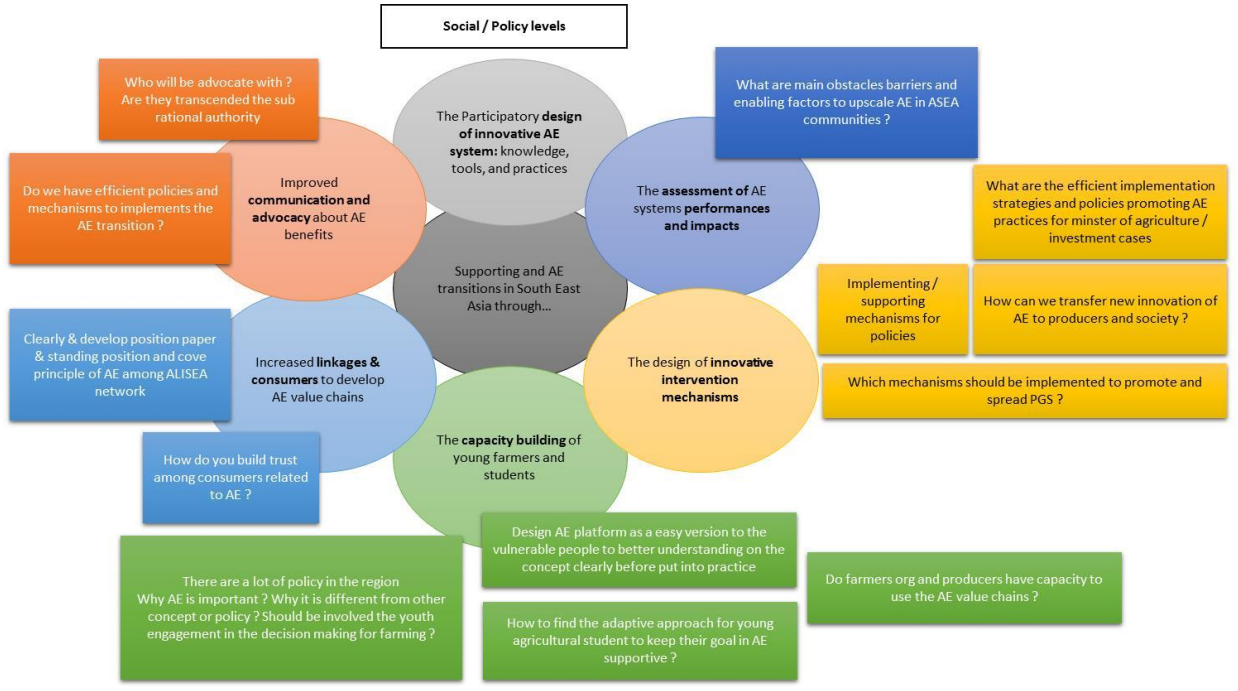

Figure 4: What would be the social and political R4D questions to support the agroecological transition in South East Asia?

Annex 4: Press release

Press release

Agroecology Futures, a regional momentum to foster Networking, Research for Development and Knowledge Dissemination about Agroecology

Siem Reap, 9th of November 2018. The General Directorate of Agriculture (GDA) in Cambodia, with the support from CIRAD and GRET, organized an unprecedent regional event addressing Agroecology.

H.E Dr Veng Sakhon, Minister of Ministry of Agriculture, Forest and Fisheries during the welcoming remarks (© Germain Priour / Mediaseed, 2018)

Under the high patronage of the Ministry of Agriculture, Forestry and Fishery (MAFF) of Cambodia, the *Agroecology Futures* Regional Forum gathered over 250 participants from 21 nationalities on 6-8 November in Siem Reap. This event was the biggest of its kind since the Regional Symposium organized by the UN Food and Agriculture Organization (FAO) in November 2015, in Bangkok, Thailand.

In their welcoming remarks, H.E Dr Veng Sakhon, Minister of MAFF, stressed that "*through an agroecological transition, more opportunities should be given to smallholder farmers and especially to youth*". Ms Naomi Noel, from the French Agency for Development (AFD) emphasized that "*The French government has renewed its commitment for a long-term support to an agroecological transition in the Mekong Region*".

With a fast-growing population, an increased pressure on its natural resources and climate change impacts everyday more present, the Mekong Region is at a crossroads regarding its agriculture development, calling for an important shift towards an agroecological transition.

Over 3 days, the participants could learn, share and network through 74 presentations in plenary and parallel sessions, an innovation & knowledge fair, a poster session and a seed swap (60 different species).

A panel discussion bringing together representatives from AFD, the UN Food and Agriculture Organization (FAO), the Livelihood Trust Fund (LIFT), the International Fund for Agriculture Development (IFAD) and the French Embassy highlighted the existing different initiatives for supporting an agroecological transition.

3 main take home messages emerged from all the discussions:

- The importance to invest in Soil Health and Farmer Empowerment,
- The necessity to seek convergence between Land Tenure & Agroecology and co-produce a credible narrative for a smallholder pathway towards agricultural development
- The challenge posed by commodities-based production systems to an agroecological transition

On behalf of CIRAD and GRET, Dr Philippe Girard in his concluding remarks reminded all the participants that *Agroecology in all its diversity is not an option, it's our common future.*