Situation review and stakeholder mapping on agroecology in Cambodia

Agroecology Learning Alliance in South East Asia (ALiSEA)
National Stakeholder Workshop

By Proyuth Ly & Sar Sanphirom

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Background & objectives of the study

- Part of the project inception phase “Toward Agroecology Transition in the Mekong Region” & can a baseline for the project

- Overall objective: further mapping agro-ecological initiatives at local and national level and provide a more detailed and accurate account of ongoing initiatives promoting agroecology across the region

- Specific objectives:

  - To review the overall agriculture development policy framework

  - To scope allies and champions for the promotion of agroecology across the Mekong Region, as well as existing networks

  - To feed the national and regional database that will be hosted by an upcoming Mekong Region Agro Ecology Web portal through the elaboration of factsheets in order to provide broader visibility to each initiative

Research methodology

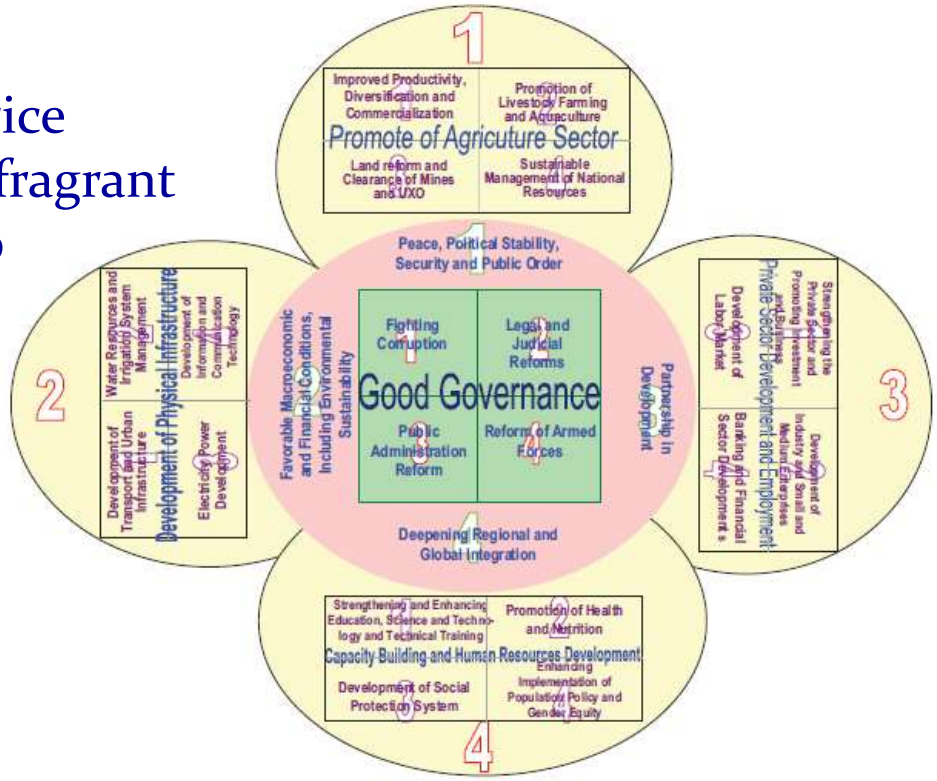
- Inception workshop in Vientiane, Lao PDR, gathering the four consultants (from Cambodia, Lao, Vietnam and Myanmar) and the ALiSEA team
- Desk reviews of relevant policy frameworks, technical reports, books, articles…
- Meeting with 21 stakeholders (government institutions, international and local NGOs, farmer networks, research centers and private sector)
- Field visits to outstanding sites in four provinces: Kandal, Kampong Speu, Takeo and Siem Reap.

Review of policy and regulatory framework

- Several conducive policy and regulatory frameworks for agroecology, sustainable development, poverty reduction, food security

- Agriculture: one of the four priority areas for sustainable development, economic growth, food security & poverty alleviation

- Enhancing value added of milled rice production and export, especially fragrant and **organic rice** is among the top priorities in RS III



Review of policy and regulatory framework

- NSDP 2014-2018: Enhancement of soil fertility management, promotion of integrated crop management, of GAP, and research on CA

- Agricultural Strategic Development Plan 2014-2018:

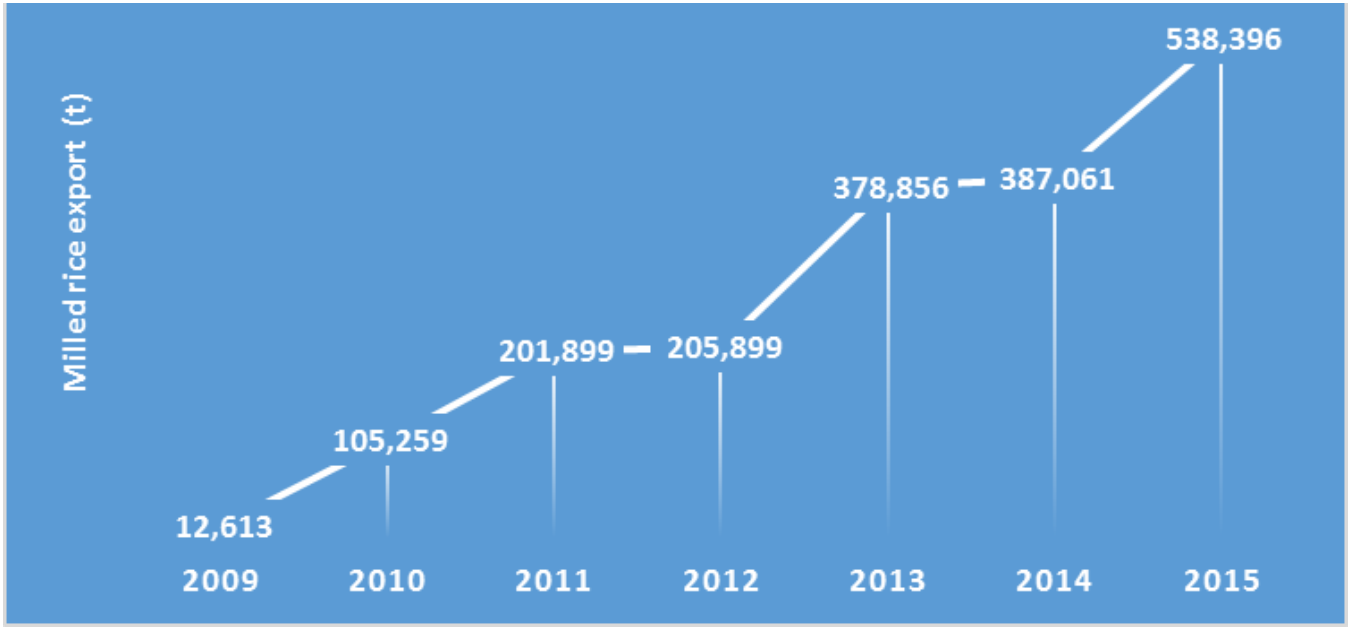
  - Encouraged use of organic fertilizer and proper use of chemical fertilizer following the technical standard

  - Agroforestry, research on CA and promotion of GAP

Review of policy and regulatory framework

- Rice Policy in 2010: => a remarkable increase in formal export of milled rice and also boosted **organic rice production**

- AMRU and AgroAngkor rice millers have contracted with 13 agricultural cooperatives, with 1691 members, in Preah Vihear province to **produce organic rice on about 2,700 ha**



Review of policy and regulatory framework

- NSFSN 2014-2018: improved seed varieties, SRI, use of locally available organic inputs (manure, compost), and integrated pest management are low input strategies, which could help enhance productivity of small holder farms in a sustainable way

- Law on Geographical Indications of Goods "GI Law" promulgated in Jan 2014

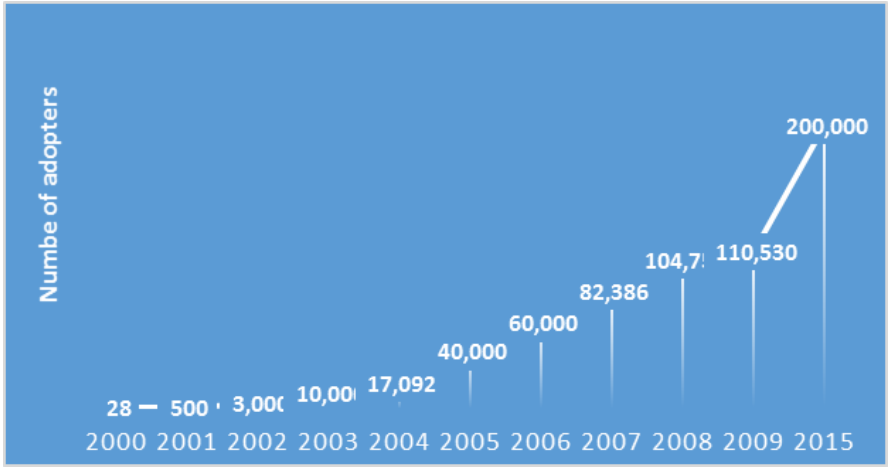
- National GAP standard was developed and approved through MAFF's Prakas 009 dated 10 March 2010, aiming to implement rules on GAP for the production of fresh fruits and vegetables.

Review of policy and regulatory framework

- Agricultural Extension Policy in Cambodia
- Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries (CCPAP) 2014-2018
- GDA's Plan of Action for Disaster Risk Reduction in Agriculture 2014-2018
- National Adaptation Program of Action to Climate Change (NAPA)
- Green Growth Roadmap, Green Growth Policy, and National Strategic Plan on Green Growth 2013-2030

Current status of AE practices: SRI

- Introduced to Cambodia in 2000, with significant increase in adopters
- No official record of adopters since 2010
- Strong political and technical supports from government, NGOs and development partners
- Included in various policy documents



- 40 to 60% increase in rice yield, reduction of seed use by 50% & of chemical fertilisers by 50-70%

BUT

- Labour shortage and irregular rainfall pattern limits the adoption of SRI
- SRI (full package) is likely relevant for the production of rice seed

Current status of AE practices: Organic Agriculture

- Relatively new to Cambodia
- Introduced firstly in rice cultivation for small-scale farmers
- Three exporters of certified organic rice: CEDAC, AMRU, AgroAngkor
- In 2009, CEDAC made its first shipment of certified organic rice to the US market.
- In 2014, CEDAC exported 540 t fragrant organic rice to EU, US and Hong Kong markets
- AMRU was planning to export 1,500 t in 2015 and increase to 2,500 t in 2016, then 4000 t in 2017
- No policy for organic agriculture in Cambodia

Current status of AE practices: Integrated Farming

- Since early 2000s, CEDAC has supported farmers to convert their rice fields into multi-purpose farm (MPF)
- Rice production, multi-purpose trees, vegetables integrated with animals and fish
- MPF is especially suitable for small-holder farmers with paddy fields of 0.2 to 0.6 ha (Lim, 2007)
- No official data and study on the extent to which this MPF is adapted and adopted countrywide.

Model of IF by AVSF

Current status of AE practices: Integrated Farming

MPF of a farmer in Takeo province

Current status of AE practices: IPM

- Initiated in 1993, and officially declared by MAFF in 1998 as one of the country's key crop production strategies
- An integrated crop management programme, the National IPM Programme (NIPMP) established in 2002 to facilitate the coordination of all IPM activities in Cambodia

Indicators	Data
FFS implemented	> 7,500 FFS
Trainers receiving trainings on IPM (by the end of 2013)	918 (346 female)
Farmer trainers receiving trainings on IPM (by the end of 2013)	2797 (997 female)
Farmers receiving trainings on IPM (by the end of 2013)	198,895 (92,554 female)
Increase in rice yield	15-35%
Increase in profits in rice production	41-55%
Increase in vegetable yields	37- 44%
Increase in profits in vegetable production	15%
Reduction in pesticide application	43%
Reduction in the volume of pesticide use	64%

Source: Khun Kimkhuy and Ngin Chhay (2014)

Current status of AE practices: CA

- Introduced to Cambodia in 2004 by CIRAD as part of rubber development project
- On farm research and development on crop diversification and the direct sowing mulch cropping system (DMC)
- Conservation Agriculture Service Center (CASC) under GDA was established.
- CASC has a research station in Chamcar Leur, Kampong Cham, with land size of 14.5 ha for research on CA.
- CASC supports 90 households in BB to grow hybrid maize on 300 ha
- Future focus: cassava for technical itinerary and equipment for mechanization.

Pictures: CIRAD

Current status of AE practices: Agroforestry

- No research/study describing the agroforestry system in Cambodia.
- Based on the major agroforestry practices identified by Nair (1993), several of them can be found in Cambodian landscape
- E.g. Homegardens consisting of an assemblage of trees, shrubs, and vines and herbaceous plants that are managed around the home compound by the household, and the products of which are used primarily for family consumption=> Agroforestry.

Mapping of agro-ecology initiatives

Stakeholders & their current account of AE practices/initiatives

Empowered lives.
Resilient nations.

Food and Agriculture Organization of the United Nations

Conservation Agriculture Service Center (CASC)

SRI Secretariat

Center for Organic Development (COD)

Stakeholders & their current account of AE practices/initiatives

SRI Secretariat:

- Established in 2005, hosted at the Department of Rice Crop (DRC), GDA
- Oxfam America has worked with DRC to strengthen & reshape SRI Secretariat and develop a plan for the SRI Secretariat to deliver its mandates effectively
- Organization structure & ToR of SRI Secretariat have been prepared but approval from MAFF is pending
- DRC is playing roles as SRI Secretariat
- Implementing partner for an EU-funded SRI regional project: SEMIL-SRI LMB
- Establish 36 FFSs with 1,032 participating farmers from 72 villages, 36 communes, 9 districts and three provinces of Kampot, Kampong Speu and Takeo.

Stakeholders & their current account of AE practices/initiatives

National IPM Program (NIPMP):

- Operated since 1993. In 2002, "integrated crop (not pest) management programme" established
- By the end of 2013, trained 918 IPM trainers (38% female), 2,797 farmer trainers (37% female) and 198,895 farmers (47% female) in rice growing, vegetable gardening and crop planting.
- Currently, the NIPMP are implementing three projects:
  - Pesticide risk reduction as part of FAO Asian Regional IPM/Pesticide Risk Reduction Programme
  - SRI Regional Project-SEMIL-SRI LMB
  - Integrated Farming System as part of Government Program "Project for Agriculture Development and Economic Empowerment (PADEE)".

Stakeholders & their current account of AE practices/initiatives

COrAA:

- Promoting the standards for organic and chemical free crop production, consistent with the Asia Regional Organic Standard (AROS)
- Facilitating inspection and providing the certification based on its own standards
- In the process of learning and mainstreaming Participatory Guarantee System (PGS)
- Building awareness on organic agriculture and increase demand for products that carry the COrAA certification marks
- SNEC's SCCRP project: Supporting 8 ACs in Preah Vihear to produce organic rice on contract farming scheme with AMARU Rice Miller

Stakeholders & their current account of AE practices/initiatives

Family Agriculture Enterprise in Cambodia (FAEC):

- Representing 25 Agricultural Cooperatives and 26 farmer associations from eight provinces with 4,105 members
- Strengthen FO to effectively develop and implement their strategic, business plan, accounting system and internal control system
- Build technical capacity of FO members on environmental friendly agri practices
- Link farmers to market and advocate for policy supporting smallholder farmers.

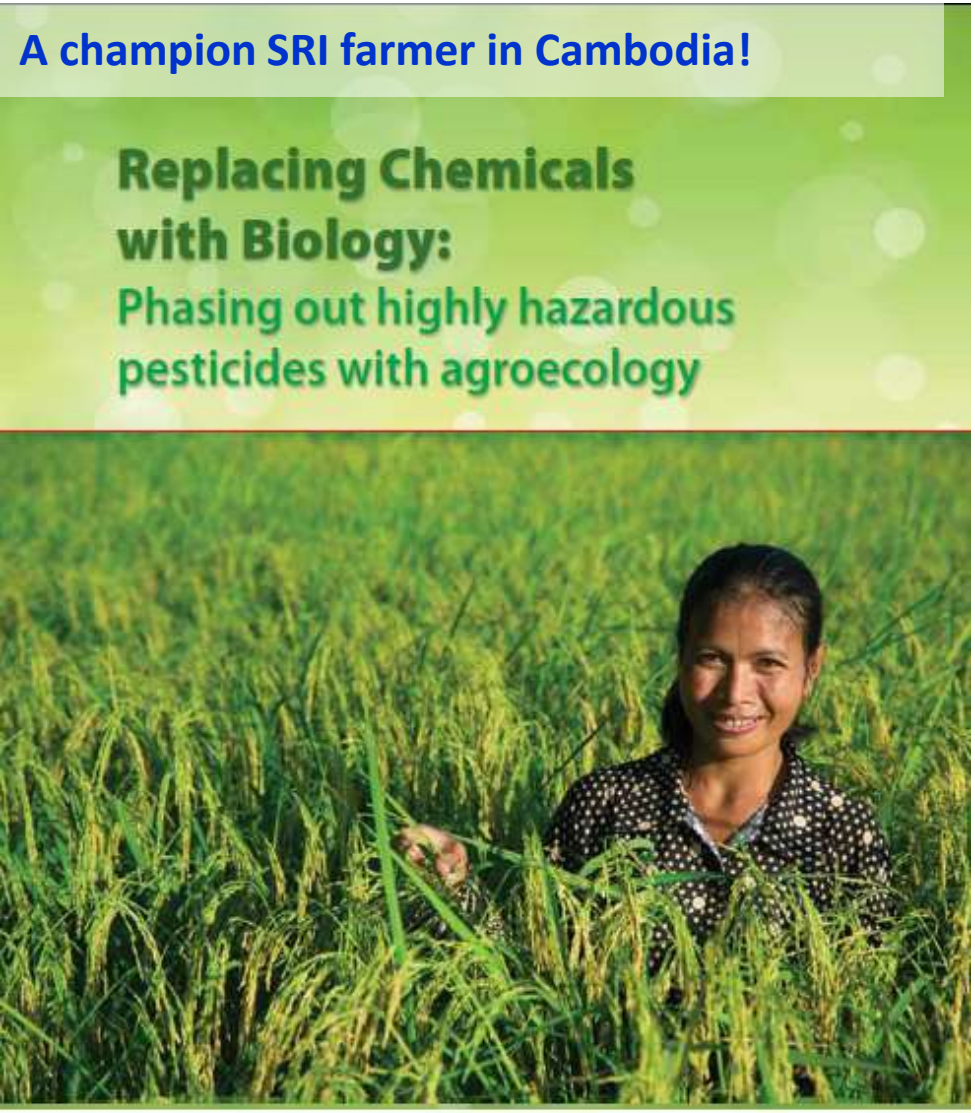
Selected stories from fields

A champion SRI farmer in Cambodia: 1st & 3rd award from CEDAC in 2013 & 2014!

- Land 1.5 ha, 8 cattle, 800 m² homegarden, 100 chickens, a biogas
- SRI on 3000 m², two rice crops/year + veggie (early wet season-wet season rice-vegetable), yield 6.66 t/ha EWS & 7.5 t/ha WSR
- Gross revenue from 3000m² (about 2200$ for rice, 550$ for vegetable), no major expenses, electricity cost for watering
- No use of chemical inputs
- Homegarden of 800m²: very diversified veggie, year round supply to CEDAC. Gross revenue 200-300$/month, no major expenses except electrictiy cost, & seeds for few crops
- Investing 8,500$ for digging a pond of 3000m² in rice field: soil used to raise bed for vegetable growing

Selected stories from fields

A champion SRI farmer in Cambodia!



Selected stories from fields

A model farmer for agro-ecology: Multip-Purpose Farm, Organic Agriculture, Agroforestry, IPM SRI & Climate Resilient Agriculture

Selected stories from fields

Net house helps a vegetable producer stop using chemical pesticide

- Land size: 1200 m^{-2}, Four net houses, supplies year-round vegetables (Brassica) to Natural Agriculture Village Shop in PP
- Grown vegetables since 2001, intensively used pesticide to control pests.
- In 2013, selected by USAID Horticulture Innovation Lab funded project to test nethouse for safe vegetable production. In 2014, supported by Natural Agriculture Village Shop for a net of 239 m^{-2}, and a loan to build a big nethouse (12mx40m).
- On average, he supplies about 500kg of vegetables to shop every month, and the monthly net profit is about 470USD.
- Net house advantages: reduction in production cost, not harmed by chemical pesticide use, vegetables sold at a higher price

Selected stories from fields

Peri-Urban Agriculture Cooperative (PUAC): a supplier of chemical free & high value vegetables

- Established in July 2001, with the supports from ADG in partnership with CWPD, registered as AC in 2009
- Ensure farmers' access to technical knowledge and know-how on production of chemical-free and high value vegetables mainly lettuce, and to link producers to markets.
- 70 vegetable producers of Kampong Speu
- Contract with Japan Farm Products to supply about 200-300kg of vegetable three times a week.
- Turnover of 2,000 USD a month, but in December, January and December, it is up to 3,000 USD
- Members of PUAC are very experienced in agrocological farming practices. No use of chemical inputs
- Despite concrete benefits provided to its members, PUAC is in financial struggle to operate as its members could not produce sufficient amount of vegetables to allow the cooperative to generate enough revenue for the operations.
- Total sale of about 1 t/week for financial viability

Selected stories from fields

Organic production: diversified vegetables & SRI

- Rice field (5500m^2), homegarden 600 m^2, 3 cows
- Tested SRI in 2006, divided a plot of 2500 m^2 into two parts, one part for SRI by himself & one part for conventional practices by his wife (she was skeptical on SRI)
- SRI techniques gave much better yield
- Current yield on that plot of 2500m^2: 1850kg (7.4t/ha)
- Growing a number of European lettuce, cucumber, bitter gourd, tomato, egg plant, yard long bean
- Year-round supply to CEDAC's Natural Agri-Product Shop, Natural Garden, with guaranteed and better price
- Use only compost & botanical pesticide
- Leader of a saving group consisting of 8 members to ensure the short cash flow
- Plan to grow the cash crop like asparagus and lime when he get older

Thank you very much for your kind attention

Proyuth Ly, Consultant

Tel: 012 877 407, Email: proyuth.ly@gmail.com

Sar Sanphirom, Consultant

Tel: 012 995 856, Email: sanphirom.sar@gmail.com