

A report on

CROSS COUNTRY VISIT TO CAMBODIA



Compiled by: Anuja Shrestha & Suman S. Manandhar, LI-BIRD



Cross-Country visit summary:

- Country visited: Cambodia
- Dates of visit: 7th Sept to 14th Sept, 2008
- Number of Participants: Eight (8)
- Background of visitors:

S.N	<i>Name of the Participants</i>	<i>Concerned Organization</i>
1	Mr. Suman Shekhar Manandhar	CSO, PROLINNOVA Nepal Programme
2	Ms. Anuja Shrestha	LI-BIRD, Pokhara
3	Dr. Dharma Raj Dangol	Institute of Agricultural And Animal Science (IAAS), Rampur
4	Mr. Shesh Mani Bhattarai	District Agricultural Development Office, Mustang
5	Mr. Sharad Rai	Practical Action Nepal, Kathmandu
6	Mr. Rishi Ram Adhikari	Ecological Service Centre, Chitwan
7	Mr. Madhav Paudel	TUKI Sunkoshi, Sindhupalchowk
8	Mr. Roman Neupane	Local Innovator, Chitwan

Background:

PROLINNOVA is an NGO-initiated programme to build a global learning network to promote local innovation in ecologically-oriented agriculture and NRM. The focus is on recognizing the dynamic of indigenous knowledge (IK) and enhancing capacities of farmers (including forest dwellers, pastoralists and fisher folk) to adjust to change – to develop their own site-appropriate systems and institutions of resource management so as to gain food security, sustain their livelihoods and safeguard the environment. The essence of sustainability lies in the capacity to adapt.

The programme builds on and scales up farmer-led approaches to development that start with finding out how farmers do informal experiments to develop and test new ideas for better use of natural resources. Understanding the rationale behind local innovation transforms how research and extension agents view local people. This experience stimulates interest on both sides to enter into joint action. Local ideas are further developed in a participatory process that integrates IK and scientific knowledge. Joint action and analysis lead to joint learning and further action.

Objectives/Main aims of Visit

The main objectives of the cross-country visit were to promote exchange of knowledge and experiences on local innovation processes and LISF from PROLINNOVA Cambodia. The specific objectives of the visit were:

- 1) to learn from successful experiences and good practices of Cambodia.
- 2) to share experiences and learning from PROLINNOVA Nepal Programme into Cambodia CP;
- 3) To provide peer review of Cambodia CP and promote a joint learning process.

Implementation of the Visit:

- Activities during visit

Meeting with Cambodian Centre for Study & Development in Agriculture (CEDAC) office staff and project staff members

The PROLINNOVA Nepal team visited CEDAC office and met with the Coordinator of the PROLINNOVA Cambodia Programme Mr. Sam Vituo, who briefed the team on the objectives and activities of the organization. CEDAC, a research and consultancy NGO established in the year 1997, works with 20 partner member organizations/institutes that includes 11 provincial government departments of agriculture and land under PROLINNOVA programme. PROLINNOVA Cambodia also has 3 educational institutes and 1 farmer federation as partners. It works in 20 Provinces covering 160 districts and 18,000 villages. The Local Innovation Support Fund (LISF) is being implemented in 6 villages.



The team in its field visit to Takeyo and Kampong provinces also met with Project staff from different projects who briefed on the activities of the Project. One of the projects “Improving Livelihoods of Small Farmers in Tramkok” is funded by JICA and the other project “Poverty Reduction among subsistence rice farmers through the promotion of sustainable livelihood” is funded by EU.



Visit to Provincial Department of Agriculture Extension, Takeyo Province

Mr. Nhep Sron, Deputy Director of the department briefed the team on the overall agriculture scenario of the province including the extension activities of the department. The department is directly involved in supporting PROLINNOVA activities by channeling innovation funds to local farmer innovators and providing extension support in innovative areas of fish and chicken raising. The department has been supporting farmers by providing materials for experimentation and technical advice.

Visit to Field sites and interaction with farmers and innovators' group members

The team from Nepal visited several field sites to observe different innovative activities and interacted with individual farmers, entrepreneurs and group members who were supported by PROLINNOVA programme. Among the activities observed were improved fish pond and feeds, chicken raising (experimentation), multi-purpose farm, organic rice production and marketing, System of Rice Intensification (SRI) technique, including a community shop.

Improved Fish pond and feed:

This activity was observed in Trang District, Prey Cheurteal Village, and Prambeyum Commune in Takeo Province. There we met a farmer group (10 members in that group). Son Han, the group leader briefed us about the method of raising fish in the pond. They were using plastics on the fish pond of size 3 x 2 x 0.8 cu meter. They briefed us the steps that they were practicing in the pond as follows:

1. Dig the pit of the size of 3 x 2 x 0.8 cu meter.
2. Cover the pond with plastic sheet.
3. Then covers the bottom of the pond by loam soil to 20 cm (Soil filling is done).
4. Cow dung (5 kg), chicken (2.5 kg) and pig (2.5 kg) mixtures are dried into small pieces and are then spread over the pit.
5. Then, fill half of the pit with water and leave for about a week.
6. After one week, fill the pond completely and spread water hyacinth to cover 1/3rd of the pond surface area for 10 days. They used water hyacinth for more oxygen production due to photosynthesis and also for shelter.
7. After 10 days, 40 fingerlings are put into the pond.
8. There will be no feeding of the fingerlings for the first one whole day.
9. The variety of fish left in the pond is "Kragh"
10. Water replacement is to be carried out in every 10 days.
11. Feeding materials for the fishes in the pond are earthworm raised in cow dung (vermi-compost), red ant larvae, lemna (*jhyau*) and rice bran and *Ipomoea aquatica* (*Karmi Saag*).
12. Timing for feeding : 2 times per day (0.1 kg per day for first month)
13. Every month, the feeding is increased by 0.1 kg.
14. Harvesting of the pond starts after sixth months.
15. Average weight of the fish is 300gm.
16. Cost of 100 finger lings : 1 US \$.
17. Expected price of fish for sale: 3.5 to 4 US \$ per kg



Chicken raising (experimentation)

Interesting observations related to innovations included the experiment on chicken being carried out at Ms. Noun Moe of Toul Cha village, Som Rong District, Takeyo province who was raising two batches of chicken separately. She aimed to look into



the benefits by feeding one batch of chicken with organic feed and the other batch with more common commercial feeds. Results showed that while organically fed chicken had slower growth rate, they fetched better market price by considering the fact that commercial feeds were expensive. The quality/taste of organic chicken also seemed preferred into the market.

Community Shop

The other innovative initiative of interest was that of a group of local farmers who had opened a small community shop to improve access of market to the villagers, which otherwise was at a far distance. This community shop was in Kok Thom Village, Moharussey Commune, Kong Pisi district, Kompong Speu Province. Initially four members initiated the idea to run a community shop. This shop was established on 27th January 2008 with 22 members.



Currently there were members. Initially no rent had to be paid for the shop, but after the members had to pay rent @ US \$7.5 per month. Till now, two months of rent had already been paid. The shop was opened mainly for the purpose of improving access to market for villagers. The total capital in community shop was 1862 US \$ including products. In every monthly meeting, benefits were distributed to members such that 30% went to the seller; 10% to the committee; 3% support fund to the group and 57% to the members. Transparency and accountability were maintained as a result of which members were growing in size. Share members received 4.5-8% of the net profit per share (1 share=10000 Riels/2.5 US\$). Approximately 56 items were kept in the shop most of which were food and beverage items; items brought from *Tramkhnar* market 9 kms away. The community shop sold at cheaper price than other shops in the village. Most of the members were literate. We didn't find any chicken eggs sold in the shop as people didn't prefer to eat eggs there. They had future plan to expand the shop.



A Multi-purpose farm

The multi-purpose farm managed by a single farmer, Mr. Ouk Phoeun, Srei Chei village, Beong Tragn Khang Tbong Commune, Samrong district, Takeo province, signified an innovative approach to using simple but improved ideas and techniques for optimum resource utilization. Various farm produces were produced using simple manual techniques. The



total land used for this multi purpose farm was 0.7 hectares. In his garden, we found layering done in papaya plant which was totally new for Nepal. Also, surprisingly we saw a stone hanged on



the Jackfruit tree. Upon our queries, the farmer replied that the reason behind hanging the stone was for early fruiting. Also mulching was done in papaya plant with coconut shells for moisture control and for prevention from fowls from digging out the top soil layer. Another interesting observation was seed bed prepared in water pond for protection from pests, rodents and insects.

Organic rice production and marketing

We met organic rice producer group (Mr. Nep Orng, Mr. Som Saroeun, Mr. Val Han, Mr. In Orm, Mr. Phem Sophai) in Tropang Chhouck village, Tropangthom Khangtbound commune and Tramkok district. This rice producer group association started in 2005 that had four village members: (35 including 11 women). Member fee per household was 5000 Riels. The farmer association had 13 farmer groups. Each group had one internal controller to inspect/ verify the organic rice production. In a Farmer Association, there was one internal controller. The internal controller knew about the organic rice purity by observing the following points:

1. Quantity of fertilizer at each member's household whether the amount of fertilizer was enough for the members' field.
2. Color of the water. If it was green it meant it was not organic. And also the smell (fragrance) of the rice field had to be good.



Internal controller of the group used to get his remuneration / salary from NAP (Natural Agriculture Products) depending upon the quantity of rice sold by the group. He could get 2.5 US \$ per ton. For internal controller of the association, he could get only 5000 riels per ton. This year in 2008, 10.5 tons of paddy was sold to NAP. The Association got premium price from NAP worth 70 US \$. In the second year, the member number reached 103 with production of 186 tons of paddy sold to NAP. Total premium price was US \$ 2500. In the third year, the number of members increased to 207 and produced 267 tons which was again sold to NAP and got premium price of \$ 6585. This year (2008), member number increased to 275 and produced 300 tons. In future, they would want to build storage, buy a truck. Total cost estimated to be 111,000 US \$ (needed to buy 300 tons of rice also).

System of Rice Intensification (SRI) technique

In the field, we also had an observation of SRI done in rice. These were the information that we observed in the field:

- Aged plant used for plantation
- Thread used for straight uniform frame
- Land was uneven with water logging
- Land preparation: Before transplanting, weeds/grasses were pulled out twice then, organic rice produced through SRI



The Principles followed for SRI:

- 1) Purity and full-sized grains as seed for sowing.
- 2) Prepare a raised-bed nursery, similar to vegetable bed and sow lower density of seed to ensure that seedlings are strong.
- 3) Select only strong seedlings for transplanting, uproot the seedlings gently and carefully to avoid plant and root damage, and transplant quickly after uprooting.
- 4) Transplant younger seedling per clump, preferably 8-12 days and less than 15 days old.
- 5) Transplant fewer seedlings per clump, preferably one seedling per clump.
- 6) Transplant carefully and with shallow rooting.
- 7) Transplant in square pattern.
- 8) Transplant with wide spacing (25-40 cm)
- 9) Avoid permanent flooding of the rice field during the vegetative stage; preferably only a minimal of water should be applied to the field.
- 10) Punctual and frequent weeding is done to improve soil aeration and to remove weed competitor (2-4 times).
- 11) The rice field should be leveled and raising small dykes around plot to guarantee a good water management.
- 12) Use natural fertilizer especially organic compost.

PROLINNOVA Cambodia and its interaction between farmers and formal researchers, extension agents and other actors in participatory innovation:

PROLINNOVA–Cambodia is working with governmental institutions, researchers, extension agents and farmers in order to build strong relationships between and among them. Currently, 20 institutions are working as a part of the platform. These include four NGOs: Centre d'Étude et de Développement Agricole Cambodgien (CEDAC), Partnership for Development of Kampuchea (PADEK), Srer Khmer and Aphiwath Strey; nine Provincial Departments of Agriculture (PDA) in Takeo, Kampong Chhnang, Kampong Thom, Prey Veng, Pursat, Battambang, Kampong Speu, Kampong Cham and Svay Rieng; the Department of Agronomy and Agricultural Land Improvement; the Department of Agricultural Extension of the Ministry of Agriculture, Forestry and Fisheries (MAFF); Royal University of Agriculture; Kampong Cham National School of Agriculture; Prek Leap National School of Agriculture; the national farmer organisation called Farmer and Nature Net (FNN); and the Commune Council of Thloak in Takeo where they can make interaction between farmers and formal researchers, extension agents and other actors in participatory innovation.

The NSC/core group functioning in Cambodia:

The steering committee was elected during the first working group meeting of PROLINNOVA Cambodia on 28 February 2007. There are five members including one woman from CEDAC, PDA-Takeo, KNSA, PNSA and department of Agriculture. The new members' meeting of National Steering Committee (NSC) was organised on 20th April, 2007 in order to review the activities as well as to set up the task for the next couple of years for the team. The second meeting was organised on 21st May, 2007 in order to approve the proposal decentralizing the funding to the farmer's experiment activities and to share responsibilities to partners for implementing such activities and

also to monitor these ones. The third meeting was organized on 28th May, 2007 to do the final screening of the proposal from its partners. The fourth meeting was organised on 23rd October 2007 in order to review the results of Monitoring and Evaluation mission by its member. The key results have been explained by the NSC team in order to find out the good point and the point need to be improving especially the discussion mainly focused on joint experimentation with farmers. All five members of NSC made some mission to do the monitoring with the partner organization including the partners of PROLINNOVA and LISF project.

LISF experiences in pilot areas of Cambodia

The LISFs were piloted in Takeo, Battambang and Kampong Thom Provinces, where livelihoods are based mainly on growing rain-fed rice in the lowlands. Only in some areas of Takeo Province farmers cultivate dry-season rice, based mainly on irrigation systems. Battambang Province is the main rice-growing area in Cambodia, and the farmers grow mainly rain fed rice, although fruit tree and animal raising are also common. In the area where the LISF was piloted, people grow oranges and vegetables and raise animals. Paddy is grown under irrigated condition in only a small part of Kampong Thom Province. Here, two types of rice cropping are widely practised: “deep-water rice” (or “floating rice”) and “rainy season” (rain fed) rice. The floating rice system has gradually decreased in area because of a rise in water level (flooding from Tonle Sap Lake). Some people have changed to dry-season rice, and built reservoirs in the flooded area to store water for irrigation. Most farmers still practise wet-season rice growing. The dry-season cropping and animal raising is done mainly in the homestead area. Farmers in all three provinces also grow vegetables and some other cash crops, especially during the early wet season. Animal husbandry is practised typically by all the families, and the most common animals are chickens.

The initial decision on pilot sites was taken by the PROLINNOVA–Cambodia NWG mainly on the basis of the working area of the agencies that wanted to carry out the pilot. The initial committee for implementing the pilot was composed of one member from each of the three implementing agencies. This committee selected 16 villages for the feasibility study: five villages in Battambang Province, six in Kampong Thom Province and five in Takeo Province.

Gender issues being addressed in recognising local innovation and facilitating Participatory Innovation Development:

Gender has been seen to be addressed in recognising local innovation. Women were found to be taking lead in participatory innovation development (PID). Women were also found to be taking lead in organising meeting and dealing with the problems at the sites where we were taken. In case of capacity building activities also, women were found to be involved in different trainings and other capacity building activities in Cambodia.

The impacts of capacity building activities of the Country Programme of Cambodia:

The main focus of this capacity building activities was to build capacity of students, lecturers, researchers and extension agents in participatory innovation development. Different trainings were organised as capacity building activities. The training of the

trainer on PID/PTD was organized by PROLINNOVA Cambodia. As result of it, the participants learnt about innovation, and approach of how to work with experimenting farmers, experimental learning and creative facilitating skills. There was an active participation for International TOT training from PROLINNOVA Cambodia and up to now five members had taken this international TOT training but during our visit we found that only one of those trainees was working in PROLINNOVA Network. To our surprise Sam Vitou, the Coordinator of PROLINNOVA Cambodia Programme hadn't taken such ToT training.

Key Observation

Lessons that we learned and ideas that should be taken back for implementation in one's own country are as follows:

- In Cambodia, we found a strong and remarkable involvement of young/youth groups in agricultural enterprises.
- Several interesting innovations and practices of Cambodian farmers that could be of use to Nepali farmers – vegetative reproduction of papaya; fish farming in backyards; coconut shells used as thermos flasks; floating seedbeds to protect seedlings from rodent/ant attacks were among those mentioned.
- Active participation of women in all activities; also being articulate in explaining what they are doing and why.
- Working with groups of farmers instead of individuals.
- Enterprise development and income-generating initiatives which are an integral part of the programme.
- Good contacts and working relationships with GOs (provincial departments of agriculture), although the NGOs seem to be still more active in the field than the GOs.
- Twenty partners that form the National Working Group (a much larger group than in Nepal which means that they are better networked and decentralized)
- The presence of an active National Steering Committee which consists of heads of the organizations of the NWG.
- Getting youth involved in agricultural activities.
- Interactions with institutes of higher learning – incorporating LI /PID aspects into the rural development curricula of three universities and into the training in ecological agriculture for high school and primary school teachers.
- Young group/ rural development trainee/ young agri-entrepreneurs training program were conducted by Cambodian Centre for Study and Development in Agriculture and its overall process was very practical.
- There was strong relation between Provincial Department of Agriculture and Cambodian Centre for study and Development in Agriculture.
- In Cambodia, NGO/INGO was working in massive scale in rural areas.
- Mobilization of natural agri-products shop by Cambodian Centre for study and development in Agriculture.
- Rain water harvesting and collecting in jar technology was used in massive scale.

- Floating seed beds (for rice seedlings) to protect them from pests, rodents and insects which was really innovative and interesting.
- Practicing of a community shop was very much effective to improve access of market to the villages at a far distance.

Key Suggestions

The main areas needing improvement and main suggestions to improve the performance are as follows:

- PROLINNOVA Cambodia has established a large network of partners. However, the concept of Innovation Development hasn't being fully institutionalized. There was a gap of understanding and rationale behind this concept and practices between partners and more importantly with the farmers. So, this gap of understanding between the farmers and partners working in innovation development should be fulfilled which help in innovation development.
- There are some very interesting cases of innovation which needs to be scientifically monitored as in the case of chicken raising. Ms. Noun Moe of Toul Cha village, Som Rong District, Takeyo province was raising two batches of chickens separately. Her aim was to look into the benefits by feeding one batch of chicken with organic feed and other with more common commercial feeds. But the result showed that while organically fed chickens shows slow rate of growth but fetch better market prices by considering the fact that commercial feeds are expensive and also the quality or taste of the organic chicken are seem to be preferable.
- Government role seems to be passive as compare to NGOs and INGOs in Cambodia.
- System of Rice Intensification (SRI) technique was applied for rice cultivation but, all the principle of SRI was not followed by the farmers practicing this technique of rice cultivation.
- Nhep Sron, Deputy Director of the PDA requested CEDAC to collaborate with PROLINNOVA Nepal to bring Roman Neupane in Cambodia with a translator for at least 15 days to train Cambodian Farmers to set water pump and make paddy thresher.

Drawbacks/ Concern

- Most of the documentation is in the Khmer language which is not accessible to outsiders.
- A lot of the joint experimentation being done seems to be initiated by the outsiders (PDA staff, NGO staff) and thus contrary to how Nepal understands PID. Although theoretically they talk about local innovation and giving farmers a decisive role in the PID process, in reality the process appears to be driven by outsiders. For example, a PDA carries out a training in fish raising, and then people from the community who wish to start such a venture are supported (with LISFs) to start up fish farming supported by PDA staff; this is then called PID; there is no adaptation whatsoever by the farmers of the technique/method, but

they do manage to get an enterprise going and generate income. This is more dissemination of an appropriate technology rather than a PID process

- The person assigned to accompany the cross visit team from CEDAC was a young woman who was very new to PROLINNOVA and was not always able to clarify issues. Her English skills were poor which made communication very difficult. A lot of attention given to the System of Rice Intensification (SRI) with farmers quoting huge yield increases. This needs verification.
- Some flaws in design of joint experiments (example: an experiment with replicates set up to compare one form of feed with another; but the number of chickens in the replicates were not equal).
- Did not get a chance to meet other NWG/NSC members and clarify issues. The Nepal team had assumed that meeting with NWG/NSC members would be an integral part of the visit and had not mentioned it as a specific point for the agenda. However, the Cambodians did not see the need for such a meeting apparently.
- Of the five people trained through the international ToTs, only one still remains within the CP. This could have a bearing on sharing the concepts of PID with those who are involved in the programme.

Annexes

Itinerary:

<i>Time</i>	<i>Topic and visited place</i>	<i>Responsible</i>
Day 1 8 Sept, 2008	Travel to Takeo Province	CEDAC, PDA-Takeo
	Meeting with PDA in Takeo Province	
	Meeting with CEDAC project (ILFARM-TK)	
	Meeting with CEDAC project (PRS)	
Day-2, 9 Sept, 2008	Field exchange visit to PDA Takeo targets	PDA-Takeo
	Field exchange visit to PDA Takeo targets	
Day 3, 10 Sept,2008	Ecological Chicken Raising (ECR)	PRS Project
	Multi-purpose farm	
	Community business	
Day 4, 11 Sept, 2008	Fish Raising	ILFARM-TK
	Farmer Association	
	Organic Rice Producer Group	
Day 5, 12 Sept , 2008	Feedback and discussion	CEDAC
Day 6, 13 Sept, 2008	Free Disposal and return to Bangkok	

List of Farmers/NGO Personnel/Government Personnel Contacted/ met during our visit were as follows:

- 1) CEDAC Head office, Phnom Penh
- 2) CEDAC Branch Office, Tramkok, Kong Pisei

3) PDA, Takeo Province

<i>S.N</i>	<i>Name</i>	<i>Post</i>	<i>Concerned Organization</i>
1	Nhep Sron	Deputy Director	PDA, Takeo Province
2	Soy han	Group leader	Prambeyum Commune Trang District Prey Cheurteal Village Takeo Province
3	Ms. Noun Moe	Innovative farmer	Toul Cha Village
4	Ms. Mok Chenda	Project Officer	CEDAC, Tramkok
5	Nhep Mengcheang	<u>Field Trainer</u>	<u>CEDAC, Tramkok</u>
6	Ms. Koet Moe	Leader-Farmer Association	Tropang Srokee Village Ang Tasom Commune Tramkok district Takeo province
7	Mr. Ben Kim	Member-FA	
8	Ms. Tob Yim	Member-FA	
9	Mr. Som Hak	Innovative farmer	Village: Troupeng District: Tramkak
10	Ms. Po Srey Net	Field Staff	CEDAC
11	Mr. Nep Orng Mr. Som Saroeun Mr. Val Han Mr. In Orm Mr. Phem Sophai	Village: Tropang Chhouck Commune: Tropangthom Khangtboung District: Tramkok	
12	Pol. Sam Ath	District Coordinator	CEDAC office Kong Pisei district Kompong Speu Province
13	Mr. Ouk Phoeun	Innovative farmer	Srei Chei village Beong Tragn KhangTbong Commune Samrong district Takeo Province
14	Mr. Chil Thorn	Community Shop operator	Kok Thom Village, Moharussey Commune Kong Pisi district Kompong Speu Province
15	Sam Vitou	Programme Coordinator, PROLINNOVA Cambodia	CILD, Phnom Penh