



FAIR PROJECT

The Cambodian experience in piloting Local Innovation Support Funds

Action research Phase 1
2006–2007

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ACRONYMS AND ABBREVIATIONS

CEDAC	Centre d'Étude et de Développement Agricole Cambodgien
CF	Commune Fund
DANIDA	Danish International Development Agency
FAIR	Farmer Access to Innovation Resources
FNN	Farmer and Nature Net
IFAD	International Fund for Agricultural Development
LISF	Local Innovation Support Fund
MAFF	Ministry of Agriculture, Forestry and Fisheries
M&E	Monitoring and Evaluation
NRM	Natural Resource Management
NSC	National Steering Committee
NWG	National Working Group
PDA	Provincial Department of Agriculture
PROLINNOVA	Promoting Local Innovation in ecologically oriented agriculture and NRM
SRI	Systems of Rice Intensification
STF	Seila Task Force
UNDP	United National Development Programme



INTRODUCTION

Rationale for LISF

Local innovation is a key resource and capacity, as the great variability in agro-ecological conditions in many parts of Africa and Asia does not allow the generation of fixed technologies applicable over large areas. PROLINNOVA–Cambodia believes that farmers need to play a major role in solving their technical and social problems, because they know their problems and their situation very well. Farmers’ ability to carry out experimentation is very important to contribute to achieving the overall goal of the PROLINNOVA programme: to develop and institutionalise partnerships and methodologies that promote processes of local innovation for environmentally sound use of natural resources. We believe that farmers can become more practised in innovation partnerships if they have access to a Local Innovation Support Fund (LISF).

PROLINNOVA–Cambodia is committed to work with governmental institutions, researchers, extensionists and farmers in order to build strong relationships between and among them. Currently, 20 institutions are 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.

Although donors have been funding research in agriculture and natural resource management (NRM) for many years, in only very few developing countries did this diminish hunger and poverty. From the researcher’s perspective, the cause lay in the non-adoption of technologies, whereas these were regarded by farmers and other stakeholders to be unsuited to the needs of small-scale farmers.

The feasibility study for the Farmer Access to Innovation Resources (FAIR) project in Cambodia found that several institutions had already tried to introduce agricultural technologies such as Systems of Rice Intensification (SRI) and home gardening into the communities. However, farm families continue to face numerous problems such as drought, flood, free-roaming animals that could be destroy their crops, lack of capital for investment in agriculture, and human health problems leading to incapacity to raise animals.

The feasibility study also found that farmers regarded the idea of doing their own experimentation and dissemination of innovations to be very interesting. Farmers believed that, if they did experimentation by themselves, they could increase their skills and knowledge about how to do this. Other farmers in the village could easily follow their example, because they will observe and see exactly what has been done in their village. Farmers also mentioned that the different technology packages that had been introduced could not help them improve their livelihood, because the packages require external inputs that are not accessible to farmers, especially those in poor households.

The LISF could fill in a gap found by the feasibility study, by providing farmers the opportunity of strengthening their experimentation process.

General setting

Main partners in the endeavour

During initial discussions in late 2005 about piloting of LISFs, several partners in PROLINNOVA–Cambodia expressed interest in being involved. They included government agencies, PDAs, educational institutions, NGOs, farmer associations, and donor agencies working in that area. The existing PROLINNOVA–Cambodia National Steering Committee (NSC) and National Working Group (NWG) were to be actively and fully involved in the project. The lead agency would be CEDAC.

However, in early 2006, when the NWG starting earnest discussions about involvement in the project, most members had mixed feelings about this new activity. Some of the agencies that had initially agreed to become involved faced problems of staff resignation and other internal issues. In the end, PDA–Takeo, Aphiwath Strey and CEDAC showed real interest in implementing the pilot. These three agencies had at least some experience in facilitating farmer experimentation, although the ways they collaborated with farmer groups or associations differed. At the end of the discussions, the NWG assigned CEDAC staff involved in coordinating the activities to be the LISF Secretary.

Period of implementing the pilot

In September 2005, the international PROLINNOVA programme (through the Farmer Support Group, in South Africa) had signed a contract with DURAS (Promotion of Sustainable Development in Agricultural Research Systems) for implementing the FAIR project. In March 2006, PROLINNOVA–Cambodia contacted the UNDP/GEF Secretariat in Cambodia to request an endorsement letter for a GEF proposal that was also being developed by international PROLINNOVA partners for piloting LISFs. We received the endorsement letter in May 2006, but the GEF proposal did not go through. At that time, the PROLINNOVA–Cambodia NWG discussed and identified the partners for implementing the pilot.

The feasibility study started in June 2006, and already in July 2006 one partner (PDA–Takeo) introduced the idea to farmers in their working area and started to help the farmers develop their proposals to be sent to the LISF Secretariat at CEDAC. The Secretariat received the first proposal in August 2006. In January 2007, the Secretariat started to discuss the proposal with the farmer groups and it took yet another month to approve the proposal. The first funds were released in March 2007 to two farmer groups in Takeo Province. The LISF Secretariat and the farmer association in Kampong Thom Province decided to release funds to four farmer associations in April and May 2007 and another two groups were granted funds in September and October 2007, respectively. In Battambang Province, funds for experimentation were released to two farmer associations in August 2007.

Country specificity in designing the LISF piloting

The Cambodian agriculture sector is characterised by a sharp decline in availability of natural resources, including forest and fish stock, and by low and erratic growth of paddy rice because of ineffective irrigation, lack of public extension service and lack of appropriate innovation development. On account of the very low productivity, income generated through agricultural cannot support rural livelihoods. A recent report by the MAFF shows that about 12% of the cultivated areas have been totally depleted and large parts of the remaining land have been partly affected by lack of water. Livestock production was very low in 2004 because of bird flu and strong import competition from neighbouring countries.

About 75% of Cambodia's land is technically under state management, including virtually all forested areas, much of the marine and fresh water resources, cultural heritage sites and large-scale agricultural properties. The government's primary mechanism for NRM has been to outsource the management of large areas to Cambodian and foreign investors. These concessions were usually granted through seemingly *ad hoc* and non-transparent processes. Designation of resources was not based on feasibility assessment; investors were not adequately screened to ensure their technical and financial capacity to fulfil contractual obligations; and government institutions were unable to enforce the provisions of the contracts. The direct revenue from concessions has been far below expectations, while the contribution of these concessions to growth and employment has been rather modest. The environmental consequences have been extremely negative¹.

¹ Sok Hach, 2005. *Economic review 2005*, Economic Institute of Cambodia

THE LISF EXPERIENCE IN PILOT AREAS OF CAMBODIA

The LISFs were piloted in Takeo, Battambang and Kampong Thom Provinces, where livelihoods are based mainly on growing rainfed rice in the lowlands. Only in some areas of Takeo Province do 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 rainfed 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. Rice is grown under irrigation 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” (rainfed) 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.

Feasibility study

The feasibility study looked at previous experiences in Cambodia with decentralised funding mechanisms and reviewed the specific institutional, legal and financial structures needed for the functioning of such mechanisms. The impact of decentralised fund mechanisms was also supposed to be tackled. The study was aimed to:

- help operationalise the LISF mechanism within the local context;
- identify the appropriate institutional set-up and mobilise commitment of relevant institutions; and
- assess the longer-term feasibility of the LISF, including future sources of funding.

For this study, 90 households were selected for interviews, 30 in each province. All the selected villages are “target” villages of CEDAC in Kampong Thom Province, of the PDA of Takeo Province and of Aphiwath Strey in Battambang Province. The study team also conducted interviews with other stakeholders, such as in the PDA, the Provincial Department of Land Management, Urban Planning and Construction, the Seila Programme to support the Commune Councils, and some NGOs working on agriculture and rural development.

In each of the target areas of these three agencies, several local workshops were organised to obtain the needed information on local experimentation and local strategies for sustainable utilisation of locally available funds.

TABLE 1: SITES AND SOURCES OF INFORMATION

Interviewees	Villages	Households
Kampong Thom Province	6	30
1. GTZ (Germany Technical Cooperation)		
2. Seila Programme		
3. PDA		
4. CWS (Church World Service)		
5. CEDAC		
Takeo Province	6	30
1. PDA		
2. FAO (Food and Agricultural Organisation)		
3. PRASAC Microfinance Institution		
4. PDAO (Peace and Development Aid Organisation)		
5. DLMUPC (Department of Land Management, Urban Planning and Construction)		
6. RACHANA (local NGO)		
7. SEDOC (Socio-Economic Development Organisation of Cambodia)		
8. Samraoun Commune		
Battambang Province	6	30
1. Krom Aphiwath Phum		
2. Vision Fund		
3. Saboras Organisation (local NGO)		
4. DLMUPC		
5. PRDP (Participatory Rural Development Project)		
6. Human Rights Vigilance of Cambodia		
7. VSG (Village Support Group)		
8. Peam Ek and Or Mal Communes		
Total	18	90

Previous participatory experimentation experiences in the area

In each of the three provinces, there are several NGOs working in agriculture, rural development, environment, law and credit. Most of the NGOs working in the agriculture sector are building the capacity of farmers in various techniques related to aquaculture, rice growing, vegetable growing, raising chickens and pigs etc.

The interviews revealed that only CEDAC and all partners of PROLINNOVA–Cambodia are working in the agricultural sector through participatory experimentation with farmers. The topics of experimentation include rice growing, fish raising, chicken raising and vegetable growing. The process used by CEDAC can be described as follows:

- A research team is assigned to conduct needs assessment with regard to the topics on which farmers want to do experimentation;
- Together with farmers, the researcher identifies issues to be tackled through experimentation; these are normally related to increasing local production;
- The researcher and farmers jointly design the experimentation protocol and divide tasks between them;
- Farmers record the data in sheets designed during experimentation design;
- The researcher visits the farmers for monitoring in order to obtain their feedback on the experimentation;
- A participatory workshop (farmer field-day) is organised in order to analyse the data and document the process of experimentation;
- After repeating the experiment two or three times, a booklet is published with contributions and editing by farmer experimenters.

Fund allocation to farming communities

The NGOs and other institutions working in the three provinces have allocated their budgets to development work rather than supporting experimentation. If farmers want to carry out experiments, they need to use their own money for this purpose.

According to the government policy reform, donors allocate funds to the Commune Council (community government) through the Seila Programme² with the aim of reducing poverty through improved local governance. The Commune Chiefs are responsible for administering these funds. The Commune Fund (CF) established under the new law is much like the Local Development Fund that was already being piloted by Seila. The CF Board is composed of the Provincial Governor, Treasurer etc. The CF can be used for many purposes but, according to experience thus far, the Commune Chiefs use it mainly use for infrastructure improvement or construction. PROLINNOVA–Cambodia considers the Commune Fund as a possible source to be drawn on for the future Local Innovation Support Fund.

The CF is controlled by the Commune Council. The commune chief must organise an open forum to present the budget plan to the villagers before the plan can be adopted. It then has to submit the plan to the Provincial Governor before 5 November of each year in accordance to what the commune council decided. If the Governor disagrees, s/he should inform the Commune Chief with suggestions for revising the plan. The Chief has 15 days to react. If the Governor does not react before 1 January, the Commune Chief can advance the money, as it means that the Governor has accepted the plan.

The funds are transferred directly by the United National Development Programme (UNDP) upon request of the Fund Board (composed of the Provincial Governor, Treasurer etc) and the Seila Task Force (STF) to the Special Treasury Account with the appropriate Resource Code for the Partnership for Local Governance funds. Based on the allocation decision made by the Fund Board, a first round of funds is transferred into individual commune accounts maintained in the corresponding Provincial Treasuries. The funds are sent to the communes upon the Department of Local Administration's certification of Commune Councils' compliance with the conditions of access to the Fund and as requested by the Fund Board and the STF.

There is also a mechanism that allows for fund transfer through the Commune Council to support local development of the commune, but this money can be used only for infrastructure rehabilitation and construction. However, we believe it will be possible for the LISF in the future to integrate the planning of their experimentation processes with the Commune Council planning, after the farmer groups have shown good results and shared their experiences with other farmers.

The piloting process itself

Deciding on the modalities for allocating funds

The LISF Secretariat organised a workshop to share the results of the feasibility study and to discuss with partners about implementing the pilot. The process of the workshop included: presentation of the results of the study; presentation of ideas for implementing the pilot; and comments and other feedback from the partners.

During the presentation of ideas to implement the pilot, the LISF Committee suggested four possibilities:

1. **Grant funds directly to farmer experimenters:** Funds would be given to individual farmers wanting to conduct experiments. The partners in each province would inform

² The Seila Programme is run by the Royal Government of Cambodia with support from UNDP, IFAD, World Bank and DANIDA.

interested farmers about fund availability. The selection process would be based on the agreed project criteria, and the project partners would be responsible for selecting proposals. The funds would be transferred from the project coordinator to the project partner and then to the farmer experimenter. Under this system, farmer experimenters would not be obliged to pay back the money or interest, as it would not be a loan. The workshop participants felt that, under this system, the farmers would not take on any responsibility and that the process would therefore not be sustainable. They therefore decided not to follow this idea.

2. **Allocate funds through farmer association or group to use as revolving fund:** Funds would be provided to the farmer association or farmer group based on the proposals of individual farmers sent to the association. The farmer association's committee would need to integrate the farmers' proposals into a single proposal and send this to the partner institution. Each association would also need to define internal regulations for proper management of the funds. The farmers would pay the money back to the association, thus creating a revolving fund within the association. The internal fund regulations would define the interest rate to be paid by the farmer experimenters and stipulate that the interest paid would be used to keep the LISF running. Under this system, the farmer experimenters would not receive the money directly from the partner institution, because this would make the process complicated as well as difficult to manage.
3. **Allocate funds through the farmer association parallel to group savings:** This would allow combination of the external resources (the LISF) and internal resources (money saved by the association members). This system would work much like the previous one, but the amount allocated to the association by the project would be matched by the amount saved by the association members. For example, if a member had the equivalent of 25 USD in the savings account, s/he would receive an additional 25 USD through the LISF. The LISF Committee felt this would be difficult to start, because only CEDAC and none of the other partners had experience with savings groups. The workshop participants rejected this idea.
4. **Obtain funds through the Commune Council:** This idea was primarily a suggestion to explore the possibility of tapping on the Commune Fund to support the LISF. The PDA staff believes that, if this could be done, the possibility of integrating the LISF with planning for use of the Commune Fund should be seriously considered. Before trying this, the LISF Committee wanted to wait and see how the process of collaboration between the PDA and the Commune Council went.

At the end of the workshop, all the implementing agencies and the LISF Secretariat decided to go for the second option (fund allocation to farmer association/group to use as a revolving fund). Currently in Cambodia, farmer associations/groups play a very important role in the distribution and management of funds, with regard to both disbursements to farmers and repayments to the association/group.

Institutional set-up

The institutional set-up involves two levels: i) at the national level, an "LISF Committee" that includes the PROLINNOVA-Cambodia coordinator and staff from the three implementing agencies; because the LISF is a pilot, all the staff members responsible for their respective target areas are now involved in this committee; and ii) at the local level, a Farmer Association Committee.

The partner agencies are jointly responsible for implementing the pilot. The coordinator of PROLINNOVA-Cambodia (a CEDAC staff member) does the overall management and provides strategic direction. The coordinator of the LISF Committee and a representative of the farmer association are responsible for deciding on approval of proposals submitted by farmers. Staff members from the implementing agencies work directly with the farmer associations/groups and individual farmers to help them formulate their proposals and to help the Farmer Association Committee combine the individual proposals to send to the LISF Committee.

In each farmer association/group, a committee was elected by the members to draw up internal regulations and manage fund utilisation³. If the association already had a committee that could handle this, it decided how to draw up the internal regulations.

Box 1: Example of association regulations in Ampil Village (Kampong Thom Province)

1. The fund received from the LISF is to be used mainly for experimentation on topics such as animal rearing, rice growing, vegetable growing, aquaculture etc.
2. All members of the association can have access to this fund, provided they have a clear idea on how to do experimentation.
3. The fund will be paid entirely back to the association with the addition of an interest rate.
4. The interest rate for the association will be 2%; in case the experiment fails, the farmer can request to pay back only the amount of the loan, without the interest.
5. The interest that the association receives from their members will be used to increase the budget for local experimentation (50%), administration and communication (20%) and incentive for the committee members (30%).
6. The loan that is paid back by the farmer experimenter goes back to the fund of the association
7. The period of experimentation depends on crop or animal, and is not pre-determined

The association has the following responsibilities:

- Inform all members about the availability of funding support;
- Help the members of association in writing proposals;
- Combine all proposals to make one overall proposal and send it to the partner institution;
- Participate in implementing, monitoring and evaluating the pilot; the Farmer Association Committee members also help monitor utilisation of the money;
- The Committee drafts the association regulations regarding the LISF and sends it to the members for their decision. The regulations need to mention the interest rate, period of the credit, criteria to select farmer experimenters, ways to manage and decide on use of the money etc.

Roles of partner organisations

PDA-Takeo

For piloting the LISF, PDA-Takeo decided to work in the same area where it works in the overall PROLINNOVA-Cambodia programme. It wanted to ask farmers who have been involved in experimentation under this programme to join the LISF piloting. However, these farmers were not organised. The PDA staff discussed with them about the possibility of forming a farmer association or group. It was not easy for PDA-Takeo to help the farmers organise themselves for this purpose, because PDA staff had previously worked with individual farmers. CEDAC's experience is that it takes at least a year until a farmer organisation is established. Therefore, to be able to pilot the LISF, PDA-Takeo decided to bring together an interim group of farmers with whom it was working and to ask the group members to select a Farmer Association Committee. With support from the PDA, this committee then developed internal regulations for the LISF, coordinates the piloting on the ground and serves as the local partner for the PDA.

Aphiwath Strey and CEDAC

Both of these NGOs had already supported local communities in setting up multipurpose farmer associations, which play a very important role in their community, acting as trainers

³ In the case of the LISF pilot in Cambodia, the funds paid to the farmer associations are to be used as revolving funds within the association. They are not meant to cover the costs of the agencies that do the training and follow-up of activities in their respective target areas, for which PROLINNOVA-Cambodia set apart a separate part of the budget for piloting LISFs.

and as facilitators in savings groups, women groups and other groups in the community. They are also involved in social and environmental activities, such as constructing village roads and conserving natural resources.

The tasks and responsibilities of the LISF Committee

The implementing agencies (CEDAC, PDA–Takeo and Aphiwath Strey) have played important roles in providing overall support and guidance for the LISF pilot. They took on the responsibilities of:

- Making sure that information on the LISF was spread to farmers and their associations/groups;
- Helping farmer associations/groups formulate regulations for fund management and in overall management of the funds;
- Formally training farmers and association/group members in proposal writing;
- Helping farmer associations/groups edit proposals to send to the LISF Secretariat;
- Working with the farmer associations and Secretariat in deciding on approval (or rejection) of the proposals;
- Building capacity of individual farmers to carry out the proposed experiments;
- Working with farmer associations/groups and the Secretariat in monitoring;
- Assisting farmer associations/groups in recording data for the LISF register;
- Writing the activities and financial report to the PROLINNOVA–Cambodia coordinator.

Criteria for selecting proposals for funding

In order to receive funding support through the LISF, project partners and farmer association members needed to respect the following criteria:

- The topic of the experimentation should focus on food/ agriculture/ natural resource management and use;
- Technical feasibility;
- Idea owned/driven by farmer(s);
- Idea is replicable amongst poor and vulnerable;
- Value addition achievable through LISF support;
- Willingness for results to be shared;
- The fund will be used in a revolving form within the association;
- Individual applications will be not accepted; all applications need to be sent through a farmer association;
- Each association should have internal regulations in place to assure sustainable management of the fund within the organisation;
- 10% of costs as own contribution for intangibles (farmer to contribute especially with their labour and some materials);
- Proposed activities are environmentally sustainable.

Process from application to experimentation

Several steps were involved in piloting the LISF in Cambodia:

1. National LISF Committee discussion and decision: the LISF Committee, composed of the PROLINNOVA–Cambodia coordinator and staff from the implementing agencies, discussed how to implement the pilot (see above).
2. In each province, staff from the implementing agency went to the field to meet with the farmer association/group members, announce the availability of funding for experimentation and explain how to apply for the funds.
3. The farmer association developed its regulations for fund management. After all points in the regulations had been addressed, it asked members to develop proposals for experimentation.
4. Individual farmers developed ideas for experimentation, wrote proposals and sent them to the farmer association.

5. The farmer association combined the farmers' proposals into one document (to provide an overall picture for the PROLINNOVA–Cambodia coordinator to calculate the amount of budget requested by the association), and sent this document to the implementing agency.
6. The LISF Secretariat, implementing agency and Farmer Association Committee screened the individual proposals within the overall document, made comments of them and sometimes sent them back to the farmers for improvement or adjustment.
7. After all the individual proposals that qualified had been approved, the LISF Secretariat allocated funds through the implementing agency to the Farmer Association Committee which, in turn, allocated funds to the farmer experimenters. The implementing agencies made follow-up visits to the individual farmers.
8. After the farmer paid back the loan with interest, the money was kept by the Farmer Association Committee, to be used for the purposes defined in the regulations.

Box 2: Format of the proposal from individual farmers

1. Name of the applicant, name of spouse, sex, age
2. Address of applicant: village, commune, district, province
3. Objective of the experimentation
4. Process of the experimentation
5. Period of the experimentation
6. Breakdown budget

What was funded through the LISF

Of the 81 applications from individual farmers received by the end of November 2007, 58 were approved by the Farmer Association Committee, implementing agencies and LISF Secretariat. The main reasons for non-approval were that the proposals were not clear or that the objective of the experimentation was not related to local "innovation". In some cases, the funds requested were much higher than actually required.

The approved amounts ranged from 36,000 riels (about 9 USD) to 420,000 riels (about 105 USD), with an average of 157,384 riels (about 39 USD). The individual applications were combined for submission as ten group-proposals. The average age of applicant was 46 years, and 30% of the applicants were women.

The budget approved was spent mainly on experimentation. All farmers involved in the pilot could also access cross-visits, training events and learning materials organised or provided by the implementing agencies. The cross-visits were of two kinds: internal and external. The former were usually done as part of the training and the latter upon request by the farmer associations/groups to the implementing agencies.

The implementing agencies were not directly involved in the experimentation, although they gave some technical support, such as training in specific techniques, when requested through the Farmer Association Committee. The LISF funds that were allocated directly to the farmers did not cover any costs of these agencies, but a separate part of the LISF was allocated directly to the agencies for doing the training and follow-up of activities in their respective target areas.

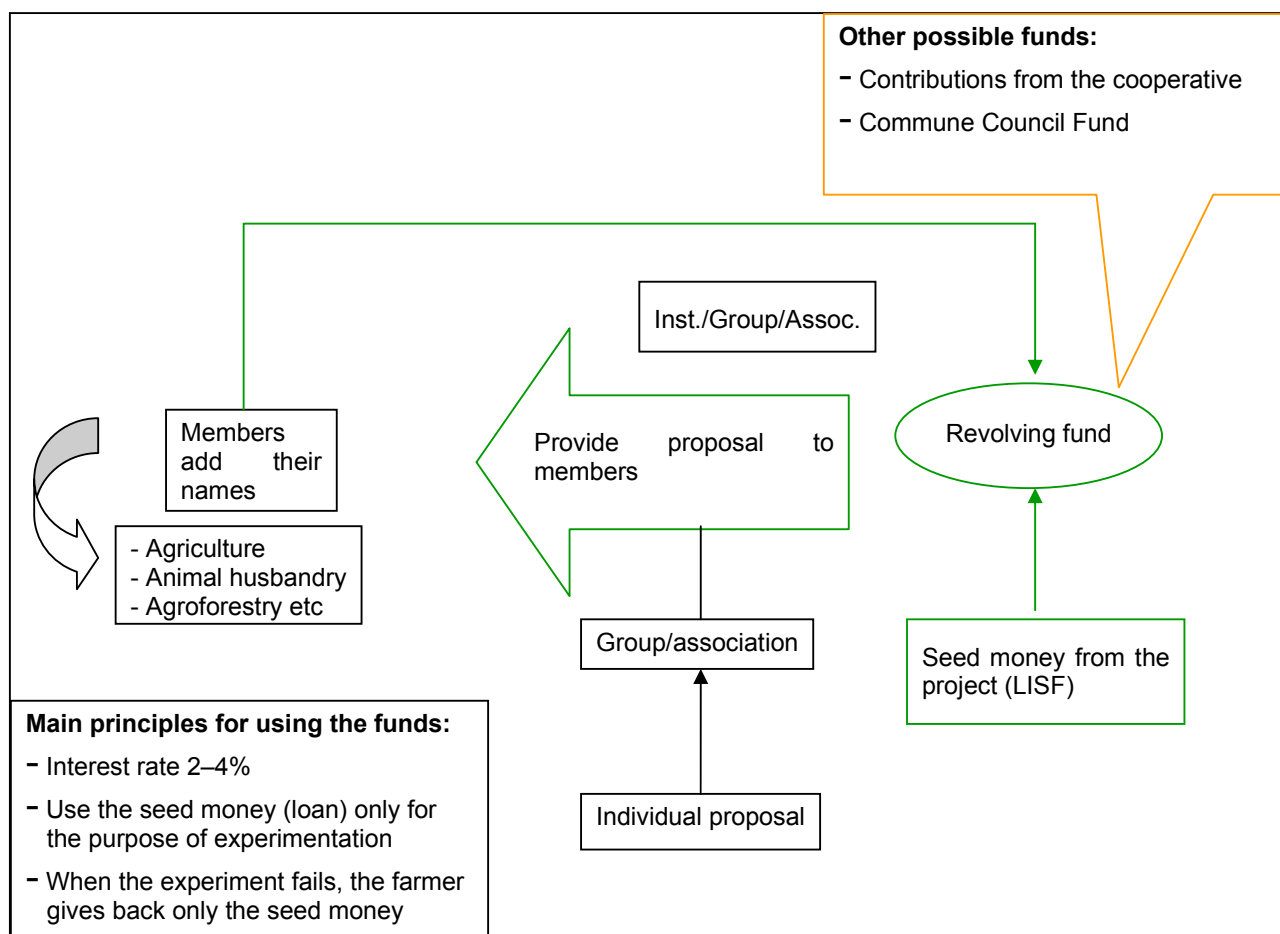


Figure 1: The process of the LISF pilot

Box 3: Cases of proposals approved for lowest amount of funding

1. Mrs. Kreum Teum

Mrs Kreum Teum lives in Chong Doung Village, Chong Doung Commune, Baray District, Kampong Thom Province. The topic of her experiment was the use of soybean to improve soil fertility. She applied for 36,000 riel (9 USD) to be able to compare using soybean as fertiliser and the conventional practice. With the money, she bought about 35 kg of soybeans. At that time, the price of soybean (third quality) was very high compared to the normal price of about 500–700 riel/kg. After the experiment had been completed, members of the Farmer Association observed that the rice field in which the farmer used soybeans as green fertiliser was doing as well as the rice field in which she used chemical fertiliser.

2. Mr Doung Thai

Mr Doung Thai Chong lives in Doung Village, Chong Doung Commune, Baray District, Kampong Thom Province. He also experimented with soybean as fertiliser and also applied for 36,000 riels. His experiment aimed to compare the results of using soybeans as opposed to compost as fertiliser. He observed that the rice grew better in the field where he used soybean. The rice was growing 13–16 tillers per clump (farmer observation, 02.09.07).

Box 4: Case of proposal approved for highest amount of funding

Mr Lek Heam

Mr Lek Heam lives in Prey Veng Village, Trail Commune, Baray District, Kampong Thom Province. His experiment involved comparing duck raising inside and outside a pen. Both groups of birds were given the same feed (bought from the market). His comparison was aimed at finding the difference in bird growth between the two methods of duck raising. He requested a budget of 420,000 riels (105 USD). He used the money mainly for buying the materials to make the pen, ducklings and some feed. The amount he requested could not cover all of the expenses made during the experimentation but, because he was already a duck raiser, he could contribute to some expenses such as for feed and ducklings.

Topics of experimentation

All the approved proposals focused on animal husbandry, crop management and soil fertility. Two proposals concerning palm-sugar production were not approved because they were not cases of experimentation but rather proposals to improve a business. Table 2 shows how the proposals were subdivided along thematic lines.

Table 2: Topics of proposals and status of screening

Topic	Status		Reasons for non-approval
	Approved	Not approved	
Animal husbandry (pigs, chickens, ducks, fish)	35	20	<ul style="list-style-type: none">- Proposal was not clear- Requested higher amount than actually required- Aimed at expanding own business- Copied proposal from other farmers- Not appropriate season
Crop management	16	1	
Soil improvement	7	0	
Other (palm sugar)	0	2	
Total	58	23	

CASE STUDIES

Growing watermelon: experimentation blended with social innovation

Kim Ten and Ses Yang are both male farmers about 50 years old. They have grown many things in their lives, but never watermelon. No farmer in their village (Trapang Tamong) **had** ever grown watermelon. When they saw watermelon in the market, they both wondered how they could grow it on their own land. In 2005, they thought of experimenting with growing watermelon, but did not have enough confidence to do so because they lacked experience in growing it. They shared their idea with other farmers who they thought might also be interested to grow watermelon. This led to formation of a group of 15 interested farmers. They held monthly discussions to sharpen ideas. This help to generate confidence to go for the experimentation. The group mobilised savings to create scope for the members to address the need for capital support. Altogether, these factors inspired Kim Ten and Ses Yang to try growing watermelon.

In March 2006, they started working with CEDAC and the PDA. Both organisations are active partners in PROLINNOVA–Cambodia. Kim Ten and Ses Yang shared with the PDA and CEDAC staff their dream of growing watermelon. Both organisations encouraged them to move ahead with their ideas. So it was then time for the two farmers to go to the field and take action on the ground. In that same month, Kim Ten began preparing a 30x40 m plot and Ses Yang a 40x60 m plot. It took them two months to prepare the land and, on an auspicious day in May 2006, they sowed seeds of watermelon in their plots.

The two farmers cultivated watermelon for a period of 65 days, during which they made a comparative experiment. While one farmer ploughed the whole plot of land, the other planting on plant beds (zero tillage). In the ploughed plot, the farmer grew the watermelon seed with closer spacing than in the zero-tillage plot. Organic fertiliser was applied to both plots.

Table 3: The experimentation methodology applied

Land utilisation			Spacing			Fruit keeping			Fertiliser usage
	Traditional ploughing of entire plot	Zero tillage	3 seeds per hole with low spacing	3 seeds per hole with medium spacing	3 seeds per hole with high spacing	One per plant	Two per plant	All per plant	Organic
Farmer 1: Kim Tem	√	√	√	X	√	X	X	X	√
Farmer 2: Ses Yong	√	X	X	√	X	√	√	√	√

The experiment brought great hope for the two farmers. The plants germinated and grew, but fortune did not favour Kim Ten when a period of drought hit the village, followed by heavy rainfall that caused flooding and clogged the land. Ses Yang was luckier, as his plot was higher. Therefore, although the drought still affected it, water did not clog his land. He was finally able to harvest a total of 500 watermelons worth riel 400,000 (about 100 USD).

The cost of growing watermelon was about 800,000 riel (about 200 USD). Thus, the farmers did not benefit in economic terms. But both farmers stated that it is not yet the time to conclude whether or not growing watermelon is economically viable, because the drought

followed by the heavy rainfall reduced the yield. Despite the natural calamity, they thought that zero tillage plus retaining one fruit per plant would be the best method. They are confident that, if they use this method in the next season, they would be able to manage the risk disaster.

Sar Kimsun's experiment with feeding chickens

Mr Sar Kimsun experimented with different ways of keeping and feeding chickens. He bought 30 chicks and divided them into two groups. He put the first group into a chicken pen and fed them with commercial feed bought from the market. He kept the other group outside the pen and fed them organic feeds consisting of *ipil-ipil* (leucaena) leaves, *kangkong* (water spinach), rice bran and some broken rice grains. When the chickens were big enough, he also gave them additional feed such as unmilled rice soaked in water for 24 hours before feeding.



Experiment of Mr Sar Kimsun with two ways of keeping and feeding chickens. Those inside the pen are fed with feed bought from the market while those outside are fed with natural feeds.

The chickens kept outside the pen proved to be stronger and had full feathers because of their free movement and the more natural feeds. The penned chickens had limited movement, and were fighting amongst them. Three sheltered chickens died.

When the trader would come to buy chickens, he would only want to buy those with full feathers. The chickens fed with the commercial feed grew bigger but did not have full feathers. The skin colour was also different. The chickens fed with the commercial feed were pale, while those fed with natural feed had red skin. Based on the results of his experiment, Sar Kimsun decided to adapt the way he rears chickens by keeping them not too long under shelter and giving them natural feedstuffs. He plans also to feed dried pounded fish to his chickens.

Phin Norn's experiment with feeding chickens

Mr Phin Yorn bought 25 chicks. He kept 13 inside a cage and 12 outside it. He fed the chicks inside the cage with commercial feed and those outside with home-made feed. However, the chickens outside the cage were afflicted with disease, which affected also the chickens inside the cage. After two months, only two chickens were left. All the rest both outside and inside the cage died from the disease. He also observed that the chickens had difficulty adapting to the hot weather. Those that died one by one were just thrown away and the dogs ate them. This hastened the spread of the disease.

The result of the experiment seems to have discouraged Mr. Phin Yorn, who is quite old. He now wants to give up rearing animals and go to the Pagoda instead to volunteer for growing vegetables, as is the Cambodian tradition for older people.

MONITORING AND EVALUATION (M&E) AND ANALYSIS

General functioning of the LISF: challenges and how they were overcome

In general, the LISF has functioned very well, with many farmers being supported to develop their innovations through farmer-led experimentation. In all cases, farmers received support from the implementing agencies through technical training, facilitation of exchange visits and follow-up visits to the individual farmers. Initially, however, there was some delay in issuing calls for proposals, because the implementing agencies did not give clear explanations to the farmers and farmer associations/groups.

There were two main challenges in implementing the pilot LISFs:

- The main challenge was kicking off the pilot. The LISF is a new idea. At the outset, we were not sure how to start up, on what exactly to focus the fund, etc. This made us hesitant to dive into the real content of the LISF. The process of communication between international and national-level partners was not very smooth. This led to lack of clarity about what was expected from the feasibility study, which led to delays in finalising it.
- The other challenge was the complicated design of the pilot LISF in Cambodia. It was necessary to have an existing body that could play the main role in managing the fund at the local level. In order to obtain funding support from the LISF Secretariat, all farmer associations/groups needed to fulfil all the criteria set by the national LISF Committee. This posed a potential problem in places where farmers were not yet ready to set up a group or an association.

Answers to central questions in the M&E framework (see Annex 1 below)

1) Adequate awareness among farmers

In response to each call for proposals, the number of applications received ranged between 5 and 20. Of these, 69% passed the first screening according to the LISF criteria. Among the 58 proposals that were finally approved, 30% of the applicants were women.

2) Effective mechanisms to process applications

The time that elapsed from receipt of a proposal from an individual farmer until the proposal was compiled with others by the farmer association/group, screened, approved or rejected by the LISF Secretariat and the results were communicated to the farmer association/group and then to the individual farmers were, on average, around one month. The transactions related to the value of the amounts allocated to each farmer experimenter were done through the Farmer Association Committees.

3) Effective disbursement mechanisms

In the case of all (100%) of the approved proposals, funds were disbursed within one week after approval. Farmers were satisfied with the fund transfer, because they received the funds on time. This was possible because the funds were transferred in cash instead of through the inadequate banking system.

4) Utilisation of funds

All the expenditures were in line with the proposals submitted by the farmer experimenters. The LISF coordinator made field checks in order to make sure that the farmers were using the funds in a good manner.

5) M&E of LISF system in place

The implementing agencies did not submit the narrative reports on time. The reports on use of the funds were not made by the farmer experimenters themselves, because most of them

were not able to write reports. The implementing agencies therefore gave their support in doing this.

6) LISF has strong, farmer co-managed, sustainable institutional framework

Strengthening of the farmer association/groups could play a very important role, especially in monitoring the utilisation of the funds, following up on the implementation of experimentation by the farmers etc.

Lessons and experiences on functioning of multi-stakeholder partnership

From its experience in piloting LISFs, PROLINNOVA–Cambodia has learnt the following lessons:

Working with development partners

- In working with different partners, we need to have a different approach, especially for the interaction between the government agency and the NGOs; the PDA works mainly with individual farmers, while the NGOs work mainly with farmer groups.
- Most of the partners asked for guidelines for writing proposals.
- One main lesson is that we need to take time to explain to our partners thoroughly and precisely about the documents needed and to provide more guidance related to utilisation of the LISFs.

Working with farmers

- Because they did not receive precise explanations about the LISF, farmers were always confusing the fund for farmer-led experimentation with a fund for expanding their business.
- It is difficult to work with some farmers who have no clear idea about their problems and therefore have few ideas for experimentation.
- In some cases, because they had been spoiled by donations made to the villages, farmers hesitated to take part in the pilot activity.

Impact on agricultural research and development in Cambodia

There have not been many efforts taken yet towards institutionalisation of LISFs, e.g. through dialogue with the Government. However, members of the PROLINNOVA–Cambodia NWG found the experience very interesting. This was especially the case with those members who were exposed to the LISF pilots during field visits.

If one looks at the LISF as part of the overall PROLINNOVA programme, the impact on the way agricultural research and development is done in Cambodia has been relatively high. For instance, during the national workshop on SRI, the Minister of Agriculture recommended to have at least one experimental plot of SRI in each commune. That is a starting point for PROLINNOVA/LISF to become part of the national policy on SRI within the “Rectangular Strategy” (an integrated structure of interlocking rectangles) of the Royal Government of Cambodia. The first rectangle is “Enhancement of Agricultural Sector”, which covers improved productivity and diversification of agriculture, land reform and clearing of mines, fisheries reform and forestry reform.

In addition, Commune Councils have been supported by the UNDP (through the Seila fund) as an element on the efforts towards decentralisation. This makes funds available for the Commune Council, and would be a potential source of funding for continuing the LISF. There are discussions underway with the PDA suggesting that they should consider this possibility and integrate the LISF within the planning by the Commune Council. The PROLINNOVA–

Cambodia team has supported the idea in principle, but has decided to wait for initial results emerging from the collaboration between the PDA and the Commune Councils. This is definitely worth pursuing.

M&E of implementation in the field and M&E at project level

Implementation of the pilot in the field was monitored and evaluated in two ways: by the Farmer Association Committee and by the implementing agencies. The NSC of PROLINNOVA-Cambodia was involved in monitoring and evaluating the activities of all LISF partners as part of its M&E of the overall PROLINNOVA programme.

In general, the Farmer Association Committees did the monitoring frequently, as they were geographically close to the experimenting farmers and therefore could afford the time to do it. Most of the committees met monthly and, as part of their main agenda, discussed the farmers' experiments as well as the utilisation of the money, especially after farmers has completed their experiments.

Box 5: An example of monitoring done by a Farmer Association Committee

Field visit form	
Date of field visit	Main observations
17 June 2007	The compost start to decompose at the bottom of the pit
30 June 2007	The owner turned the pit two times already
1 July 2007	50% of the compost was decomposed
6 August 2007	Farmer used the compost in rice field
11 September 2007	The rice is growing in good condition (19-22 tillers per clump)

OVERALL LESSONS LEARNT

The LISF can play a role of catalyst in developing farmers' ideas into experimentation. After two years of implementation, we come to the conclusion that there are two sets of lessons learned: one relates to the process of implementation (methodology and method), and the other to technical issues (innovations in themselves). These are described below.

Methodology

The farmer associations/groups are keen to carry on managing the LISFs. However, they need some support in formulating the financial reports. Moreover, the format for financial recording and other documents for financial management need to be improved so that the farmers could handle this when supporting agencies are not available.

The involvement of the development partners did not work as we had expected. Most of the PROLINNOVA–Cambodia partners agreed initially to become involved, but did not do so. This made other stakeholders hesitant to become involved in implementing the pilot. However, all partners have agreed to join in the second phase of piloting LISFs for two reasons: i) they have solved their internal problems related to lack of human resources; and ii) some agencies have already started working with LISFs, so there is experience available for others to follow.

The lack of conceptual clarity on key terms/expressions used at the international level (such as "*local innovation*" and "*methodology*" for the implementation of the pilot) led to delay in implementation, as all the partners had to spend time in discussing and clarifying these. On the other hand, these discussions contributed to internalisation of understanding of these terms.

There is a need to develop formats for monitoring and following up the activities done at field level, so that the coordination is more frequently informed about how the experimentation is going, when exactly it finishes and what have been the results.

Innovation

The innovation to be explored needs to be realistic from the beginning. Staff of implementing agencies needs to discuss with the farmer associations/groups what they want to do experimentation on. The development of proposals to the LISF should be based on ideas that could improve their current practice.

The idea (innovation) should start from and build on what farmers have and what they are already doing. Innovation aims at improving farmers' livelihoods. Experimentation with support of the LISF should not be done just to obtain results in a scientific manner but, rather, should help farmers and their development partners in reflecting on what they have done together as "joint experimentation" or "farmer-led experimentation".

The innovation resulting from such experimentation should be disseminated only if it is technologically and economically feasible for smallholder farmers.

Increasing access to local resources, such as land, could lead to greater stimulation of farmers to innovate and to improve their innovation in joint experimentation.

In general, it is vital to implement the pilot with a farmer association or farmer group in order to ensure the success of the LISF initiative. It was much easier to deal with Farmer Association Committees compared to dealing with individual farmers, which makes the work much more costly.

OPERATIONAL PLAN FOR CONTINUING THE LISF

Prolinova–Cambodia’s vision for the LISF in the future

The vision of PROLINNOVA–Cambodia for the LISF in the future is to ensure that: i) it will be replicable and sustainable at community level, with farmers having the capacity to manage and replenish funds in order to ensure maximum benefits to other farmers; and ii) the piloting will create a platform for the researchers, extension workers and other stakeholders in rural development to discuss the LISF concept and adapt it to their own development strategies.

What needs to be done to be able to achieve this vision is the following:

At national level

- Generation of adequate financial resources to replenish the LISFs regularly. There needs to be a focus on policy dialogue involving different stakeholder in order to mobilise commitment within the country to support LISFs.
- A longer-term vision and plan need to be prepared for how the LISF will continue to function.

At community level

- Strengthening capacity of farmers to become professionals in fund management and fund raising. They could seek funds from different sources, e.g. from community businesses, local government funds etc.
- Local management of funds from the two first years of the pilot is a key point for guaranteeing LISF sustainability.

Some components of an enabling environment for achieving this vision already exist:

- There is a farmer organisation at the national level (FNN), which was registered with the Ministry of Interior in 2006 as an independent organisation and is a member of PROLINNOVA–Cambodia; this body could help formalise LISFs at community level.
- In each of the associations, there are existing systems of savings and credit, some other forms of organisation and even some business activities that could facilitate the spreading of the LISF concept.

The concrete steps to be taken by PROLINNOVA–Cambodia are:

- Capitalising on the lessons learnt in implementing the pilots
- Organising a workshop on LISFs in order to share experiences with LISF piloting among the farmers, research and development partners and policymakers
- Review by the supporting agencies and the PROLINNOVA–Cambodia NWG of the strategies for implementing the LISFs
- Mobilising resources to finance the above-mentioned activities and to replenish the LISFs until they become self-sustaining.

CONCLUSIONS

LISFs act as catalysts to stimulate farmers to voice their ideas and then develop them further through experimentation. As the result, these funds should contribute to increasing the output of demand-led and locally developed technologies that, in the end, improve the livelihoods of farm families.

From the experience made in piloting LISFs, we can conclude that, in general, the implementation is going along the right track, now that it has taken up momentum after the initial delay because of unclear strategies at the national and community level.

The farmer-led experiments supported through the LISFs are related to crop management, soil improvement and animal husbandry. Most of the ideas came out of the intention of farmers to improve their production through appropriate economically, environmentally and socially applicable technology.

During the piloting, farmers have had interactions with each other as well as with “outsiders”, not only on aspects related to innovation and experimentation, but also on fund management. The capacity of farmers is increasing in two dimensions: their skills and knowledge in i) engaging in participatory research and ii) managing local funds.

ANNEX 1: DETAILED M&E INDICATORS FOR THE LISF PILOTS

Criteria/ Performance area	Possible indicators	Relevant M&E tools / methods
1. Adequate awareness among farmers (and other resource users) and support agencies on LISF opportunities and access mechanisms	1. No. of applications received per round of calls for proposals	5-30 applications
	2. Percentage of applications which passed first screening on LISF criteria	69%
	3. Percentage of proposals reviewed meeting selection criteria	31%
	4. Percentage of proposals from women	30%
2. Effective mechanisms to process applications	5. No. of proposals processed after screening and finally approved	58
	6. Time period between receipt of application, screening, processing and communicating final results of selection process	1 month
	7. Time taken to improve proposals (remedial)	around 1 month
	8. Transaction costs relative to grant value (staff time involved and other resources used)	<ul style="list-style-type: none"> • Small inputs in terms of time because all transactions were done through the Farmer Association Committee • Financial reporting done by staff of implementing agencies and accountant from LISF secretariat (time inputs not recorded)
3. Effective disbursement mechanisms	9. Number of approved vs. number of disbursed grants	<ul style="list-style-type: none"> • 58/58
	10. Timeliness of disbursement in relation to fund needs (e.g. seasonal imperatives)	<ul style="list-style-type: none"> • Normally, funds were disbursed within one week • Farmers were satisfied with fund transfer, especially because they received money on time
	11. Banking and other costs incurred in disbursement, at both country and international level	<ul style="list-style-type: none"> • Funds were paid in cash because of inadequate banking system
4. Utilisation of the funds	12. Expenditure in line with agreed terms for use	<ul style="list-style-type: none"> • All expenditures in line • Field check done by LISF coordinator and staff of implementing agencies to make sure that farmers were using the funds in a good manner • No complaints from farmers about fund disbursement

Criteria/ Performance area	Possible indicators	Relevant M&E tools / methods
	13. Necessary changes/adaptations in initial plans quickly and effectively implemented	<ul style="list-style-type: none"> No changes made in LISF utilisation Inspection of experiments done by Farmer Association Committee and national LISF Committee Feedback from farmer experimenters and other stakeholders through internal evaluation
5. M&E of LISF grant system is in place (existence and functioning)	14. Financial and narrative grant reports received on set deadlines	<ul style="list-style-type: none"> Narrative reports not received on time from implementing partners
	15. Quality of grant reports received (clarity and completeness of information) undertaken (by whom, when, costs); lessons learned; analyses of stakeholders participation)	<ul style="list-style-type: none"> Adequate quality of reports from implementing partners Reports not usually done by farmer experimenters because most not able to write reports
	16. Implementation of annual assessment meeting	<ul style="list-style-type: none"> On 10 December 2008, PDA–Takeo organised workshop with all farmer experimenters and other officials in province to present results of experiments and to draw up recommendations for next steps in implementing LISFs Other agencies not yet involved in a workshop on this; they agreed to organise one later
	17. Information from grant reports processed and used in LISF planning and implementation	<ul style="list-style-type: none"> Minutes of LISF Committee Minutes of international meeting on FAIR (checking that action points were followed up) Report of annual assessment meeting
	18. Dissemination of findings from M&E	<ul style="list-style-type: none"> M&E system still weak because criteria for M&E were set late
6. LISF has a strong, farmer co-managed, sustainable institutional framework	19. Relevant stakeholders, including small farmers/ natural resource users (men, women), endorse and support institutional setting.	<ul style="list-style-type: none"> Strong farmer association/groups could play very important role, especially in monitoring fund utilisation and following up implementation of farmer-led experimentation
	20. Institutional setting of LISF is clarified and formalised	<ul style="list-style-type: none"> Terms of reference between LISF Secretariat and implementing agencies clear enough for implementation (in terms of fund management and disbursement)

Criteria/ Performance area	Possible indicators	Relevant M&E tools / methods
	<p>21. Strong involvement of farmers/natural resource users in LISF management (at least “x” farmers participating in the LISF committee, critical incidents)</p>	<ul style="list-style-type: none"> • At national level, only PROLINNOVA –Cambodia coordinator and staff of implementing agencies but no farmers involved • At community level in each farmer association, three members of community (farmers) were selected by its members to play role as community management
	<p>22. Adequate resource mobilisation to replenish pilot capital expenditure, both at local (community) and country levels. Amount (and percentage) of resources mobilised for replenishing the LISF, e.g. own contributions, amount of revolving funds mobilised from selling produce, contribution from other donors/stakeholders with significant long-term research funding stream co-driving project etc</p>	<ul style="list-style-type: none"> • Funds were divided into two parts: one used by implementing agencies to do training, organise field visit for farmers etc; and one to support direct experimentation by farmers • For the long run, even is there is no external support for running the LISF, at the community level they could use the existing funds - which the members pay back - to continue their experimentation.

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