

NARRATIVE REPORT

Local Innovation and Experimentation: an entry point to Climate-
Change adaptation for sustainable livelihoods in Asia



REPORTING PERIOD : JANUARY TO DECEMBER 2012



CEDAC (Cambodia)



LI-BIRD (Nepal)



INHERE (India)

NARRATIVE REPORT OF FOR THE PERIOD JANUARY TO DECEMBER 2012 – PROJECT NUMBER 300-900-1270 ZG (LINEX ASIA)

1. Formal details

1.1 **Name of partner organization** : CEDAC (Cambodia), LI-BIRD (Nepal) & INHERE (India)

1.2 **Project title and number**: Local innovation and experimentation: an entry point to climate-change adaptation for sustainable livelihoods in Asia; 300-900-1270 ZG (LINEX ASIA)

1.3 **Reporting period**: January to December 2012

1.4 **Brief description of how the report was prepared**:

The report is based on the activities carried out during the first year of the project by all the partner organizations in their respective countries. The coordinators of the project in each country made use of the information from various sources such as baseline studies, focus group discussions, orientation & stakeholder workshops, participatory innovation development & climate change adaptation training, field monitoring sheets and reports of field visits etc. . The reports of the three countries were then compiled into one report by Puspa Tiwari and Suman Manandhar in Nepal.

2. Changes in the project setting

2.1 Important changes in the project setting

There were no major changes in the project setting that affected implementation in Cambodia and India. In Nepal, however, there were political disturbances owing to the dissolution of the constitution assembly. Road closure / strikes were frequent which caused difficulty in mobility to the field sites. It took longer than anticipated to identify the project villages due to the long process of consultation that took place in identifying the village in Ramechhap district where the local stakeholders wanted to have control and ownership over the process.

2.2 Important changes within the partner organization

In CEDAC, Mr. Hong Bunna was the project coordinator for the period from January to July 2012 who resigned from CEDAC in July 2012 and was replaced by Mr. Vann Saran who took over the position in August 2012. Since the handover was done smoothly, there was no negative effect on implementation. Changes in project personnel occurred in India too but transitions were smooth and did not affect project implementation. No institutional changes occurred in Nepal.

3. Implementing the project and achieving its objectives

3.1 Achievement of the project objective/s

Objective 1: Selected rural communities, in particular women, in 2 districts each of Nepal and India as well as in 3 provinces of Cambodia, develop a total of 15 locally adapted innovative technologies to respond to climate change and become more food- secure.

NEPAL

It took more time than anticipated due to delays in identification of the two village development committees (VDCs) within the two selected districts i.e. Ramechhap and Siraha districts. The climate change vulnerability assessment report of the government of Nepal (NAPA) was used to identify these two among the 15 most vulnerable districts for implementation of the project. Siraha district consists of 106 VDCs and two municipalities of which Asanpur VDC was chosen. This VDC is prone to both floods and droughts. Ramechhap district consists of 55 VDCs of which Rampur VDC was selected. Rampur is a VDC that is facing severe and increasing droughts.

Development stakeholders in the respective districts were involved in selection of the VDCs. This process was long-winded in the case of Ramechhap as secretaries of possible VDCs (14 VDCs were shortlisted based on the Vulnerability Assessment Report of Nepal Government) were competing to get the project. Finally Rampur VDC was unanimously selected for the project implementation in partnership with Agriculture, Forestry and Environmental Committee (AFEC) which is the lowest level government body in charge of local development under the Ministry of Local Development and is accountable to the District Development Committee. Very few development interventions have been undertaken in this district which explains the competition between the VDCs to have the project implemented in their area.

The baseline study in the two VDCs has been completed. The study included 256 households (of the 1015) in Siraha and 264 households (of approx. 850) in Rampur VDCs that were selected randomly. The baseline study included a questionnaire-based household survey and several focus group discussions in each VDC. Five OJT (On the Job Training) students of a vocational training school were engaged in the baseline survey as part of their internship led by LI-BIRD's staffs. The draft report is ready and is being finalized. Initial training in Local Innovation (LI), PID and climate change adaptation has been done in both VDCs for the farmers as well as the local stakeholders. This training took place in the first week of December 2012.

In Siraha district, training was conducted from 3-5 December for rural farmers (47 farmers including 7 female participated, Annex Nep 1) with the following objectives:

- to provide a brief overview of local innovation and the PROLINNOVA Nepal Programme
- to make farmers aware on climate change issues and impacts
- to make farmers understand why local innovation promotion was important in the context of climate change.

In Ramechhap, a similar training programme was organized at the end of the year for local farmers and members of Agriculture, Forestry & Environmental Committee (AFEC) members to orient them on PID and climate change adaptation. A total of 55 participants (28 females) joined the training programme.(Annex Nep3)

During the baseline study and the training programmes, local innovations and current practices to adapt to climate change were identified.

Siraha District:

Farmers from Siraha district were observing ways in which people in the district were trying to cope with the climate change impacts (lack of timely rainfall, erratic rainfall; thick mist after the rain; summer temperatures becoming hotter and winter temperatures becoming cooler; drying up of wells) by installing pumps to lift ground water; changing crop types (for instance from finger millet that used to be the main crop in the rainy season to vegetables and local

paddy); fruit production in the north of the district (mango, jack fruit); sugar cane cultivation; livestock raising (mainly by women as men migrate to work elsewhere); private dairies (where several people get together and set up a collection point mainly for buffalo milk). Most of the farmers from this area have small holdings and depend on rain for cultivation. The rivers are rain-fed and dry up as soon as the rains cease. There are some traditional ponds that collect rain water but the farmers say that the water in these ponds are highly polluted now and are not even suitable for watering their animals. Those people in the community who have some resources seem to use it for digging tube wells, and as the water table drops, the wells get deeper. Rainwater harvesting is not a common practice. One of the major hazards in terms of water/air pollution and human and animal health are considered the small-scale brick factories (about 25 in number).

Rainwater harvesting and reforestation as ways of dealing with the climate-change induced drought were not being pursued by local people which could be entry points for experimentation. They were using cow dung as a fuel due to the scarcity of firewood. They felt that GHGs could be reduced if people would start using biogas.

In Siraha, the farmers have less idea of local innovations to adapt to climate change impact. However, they feel that moving towards more ecological forms of agriculture would help them to deal with the issue of drought (healthier soils hold water better and are more fertile). They are though interested in finding ways of harvesting rain water and finding crops that would do better in drought conditions. The community's interest was in getting the brick factories to become more eco-friendly. They want to pursue this idea as a policy innovation to reduce GHG emissions and water and air pollution.

Ramechhap District:

The main issue in terms of climate change in Rampur is the increasing drought. Fifteen years ago, the dry season would be approximately six months. However, with the delay of the onset of the monsoon and the erratic rainfall, the dry period has extended to around nine months (from October to May-June of the next year). Uneven rainfall especially the heavy downpours which are being experienced cause erosion and landslides. Until five years ago, people could grow crops in June and July as there was sufficient water but now this cannot be done as the water is only sufficient to wet two inches of the top soil. The natural springs are drying up and even big old trees are withering away.

Unlike Siraha, the community of Rampur VDC of Ramechhap is highly motivated to find ways of dealing with the situation as they feel strongly connected to their land. They are aware about climate change impacts they have been facing and have been practicing local innovations to cope up with. The village has a very active Agriculture, Forestry & Environmental Committee (AFEC), the lowest government unit. They have been making several changes to their cropping patterns in order to cope with the drought. They have given up on legumes (pulses or rice bean) and pearl millet and are now growing maize and fruit crops such as citrus. The staples have become rice and maize and pulse is used only as a side dish. The community has done a major reforestation initiative by growing perennial grasses in the watershed but feel that it was too late to actually make a big difference. However, they continue to give attention to forest conservation with several active forestry resource groups. Unfortunately, they are seeing more trees dying of the drought. The community has tried several ways of harvesting rainwater but could not hold the water for more than two to three months. There has been decrease in livestock within communities and they have moved from larger to smaller livestock mainly due to lack of nutritious fodder as a result of drought. As many farmers have given up keeping animals due to lack of water and fodder, there is a lack of farmyard manure to keep the soil healthy.

Change of temperature at altitudes of 1200m and above causing changes to flowering patterns and loss of crops. There is microclimatic variation within the area which calls for location specific solutions giving attention to women who do most of the agricultural tasks in the area as men out-migrate for work.

The following are few examples of innovations being practiced by the farmers of the community:

1. A farmer was found to grow several mango plants harvesting 15 kg per tree in three years (he is now raising seedlings and is trying out other fruit species)
2. Another farmer who has successfully grown Amriso (Broom) grass both for fodder and for use in brooms (he sells the grass to buy his staple rice)
3. Another farmer used a plastic pipe instead of a GI pipe to move his biogas to three locations instead of one.

CAMBODIA

The following three provinces were selected as the operational area for the LINEX project: Kampong Speu, Takeo and Kampong Chhnang. The main crops grown in all of these provinces are rice and vegetables. Rice is the main staple crop and vegetables are the main cash crop. In each province, 10 villages were selected for implementation (Annex Cam1).

The first activity was the baseline study in order to find out the perceptions of the communities in regards to climate change and what they were doing to cope with the changes. This study has been completed. The main findings are as follows:

In each village, the project staff conducted a general meeting to explain the objectives of the project and to identify farmers interested in conducting experiments on innovative practices that could adapt to the climate-related changes taking place. These meetings were organised in consultation with the village chief, who also participated in the general meetings. Farmers who were interested were invited to an initial farmer training workshop on climate change adaptation and participatory joint experimentation. 114 half-day workshops were conducted to cover the 30 villages. There were 279 participants to participate in the training workshop those were 108 men and 171 women. The main content of these workshops were to discuss in detail about climate change and to introduce the basics of experimentation. A monitoring format to be used by farmers to keep track of their experiments were also introduced and discussed.

After the workshops, the farmers were given time to think of ideas that they wished to experiment with. These ideas were then given to the LINEX field site coordinators in each province. On receipt of these ideas from farmers, the field-site coordinators followed up with each farmer individually and set up the experiments together with the monitoring system using the format supplied by CEDAC.

In total, 208 farmers started experiments in 2012. Some of them were not successful and gave up. Finally, 83 completed their experiments and drew conclusions on them.

See Annex Cam 2 for the overview of successful experiments conducted by farmers in the rainy season of 2012.

The main innovations that were tried out and successful are:

- Adaptations for SRI (system of rice intensification) such as use of bio slurry to retain moisture, planting of single rice seedling in rows as opposed to multiple seedlings, transplanting small seedlings versus tall seedlings, ploughing-in the stubble after

- harvest to retain soil moisture and to increase organic matter in the soil, growing green manure crops in the rice field.
- Growing vegetables using bio-char (burned rice husk), bio-slurry, liquid compost, bio extracts, botanical pesticides. The main objective of these experiments was to find ways of retaining moisture to combat the sudden dry periods (in the rainy season) and to combat increases in pests related to climate change.

INDIA

Thirty villages were surveyed for selection in Chamoli and Almora district of Garhwal and Kumaun region. Ten villages in Chamoli and 12 in Almora district were finally selected for the project. The criteria followed for selection of villages were:

- Representative rainfed mountain villages where agriculture is still mainstay of livelihood.
- A mix of valley and ridge villages with altitudinal variation (900 mtr. to 1600 mtr.)
- Accessibility of approach and coordination of the villages.
- Availability of experienced and senior citizen farmers was also taken into account.

Initial familiarisation with representative project villages and field assessment of communities perspectives was carried out in four areas of two districts from February 22 to March 31. The preliminary findings were presented at the Steering Committee meeting on April 2, 2012. On the basis of feedback received changes have been made in the process of information gathering and documentation.

Information gathering for baseline data as well as assessment of community perspectives on climate change and efforts at adaptation was carried out. For baseline data both primary and secondary sources were utilised. The agreed on formats were filled with data obtained through direct interaction with communities using PRA methods comprising community meetings and discussions, focus group discussions with women and men, individual interactions and transect walks. Data on population and land use was obtained from the relevant government offices in Tehsil and Block headquarters.

The baseline survey was completed in August. Data was compiled and analysed in September –October with gaps detected being filled. The baseline format was shared by INHERE in October with the CLIC-SR project being initiated in Africa. In November, the data compilation format was also shared. Field assessment of communities' perspectives on climate change has been completed and compiled in Hindi with power point presentation slides in English and Hindi.

INHERE identified and documented four local innovations which were found to be novel and interesting. These pertained to growing of Tarud, a lesser known root vegetable found in the wild, use of waste cloth from a tailoring shop to shape a trellis for growing creeper vegetables, innovation for better adaptation of SRI method to the farming practices of mountain farmers, growing of marigold for keeping away pests and cultivation of large cardamom as a new crop. Use of akarkara, a medicinal plant, for keeping away white grub (a menace for the mountain farmer) was also found and the farmer with experience on this interviewed. The draft documentation covered innovation by two women, three men and one women group.

On deeper probing in village meetings and interactions with other villagers and stakeholders, other new ideas and experiments carried out by individual farmers came to the fore. Five of them were identified for carrying out participatory innovation development with process oriented documentation.

The five innovations identified for PID are:

1. Akarkara for white grub control

2. Small implements development for agriculture and post harvest work.
3. In situ water conservation in terraced fields.
4. Liquid manure
5. Chickpea and groundnut as drought resistant crops

Two of the PID arise out of innovations by women will be taken forward by them while two will be of men and one in a mixed group. The setting up of PID groups and trials is in progress.

Three trainings were organised for community groups in joint experimentation for climate change adaptation.

On August 27, 2012 participating group of farmers met for review of results obtained from joint experimentation in the summer crop and planning for the winter planting season in a participatory training process. Mr Girish Pant facilitated as a resource person.

In September 2012 training of farmers for joint experimentation was held. Twenty six farmers participate of which 8 were women and 18 were men.

On 15 October, 2012 a training programme for farmers participating in the field trials of potentially climate resistant crops was held. Besides 42 farmers and INHERE as facilitating agency, two scientists from VPKAS Dr Lakshmi Kant, Principal Scientist and Dr B D Pande, Technical Expert were present.

Objective 2: CSOs and local government effectively support innovative adaptive communities.

NEPAL

In Siraha district, 16 participants (4 female) from NGOs/ CBOs and government representatives were trained on PID and Climate Change from 6th to 8th December, 2012 (Annex Nep2). In Manthali, Ramechhap by the end of the year training programme was organized to NGOs/ CBOs and government representatives with an aim to create awareness and develop their capacity to effectively respond to climate change for sustainable development. A total of 27 (5 females) participants participated in the training. Out of them 11 were from government offices and rest were from I/NGOs (Annex Nep 4). The schedule of the training is given in Annex Nep 5.

CAMBODIA

The project is being implemented through partners of PROLINNOVA Cambodia which include the provincial departments of agriculture, national schools of agriculture and several NGOs (PDA of Kampot, Takeo, Kampong Speu, Kandal, Prey Veng, Svay Rieng, Kampong Chhnang, Pursat, Battambang, Kampong Cham, and Kampong Cham National school of Agriculture, Prek Leap National School of Agriculture, Royal University of Agriculture, and organization of Akphitwat Satrey, Srer Khmer, Padek and CEDAC). An initial meeting to discuss the project and to plan activities was organised and conducted by CEDAC in March 6th, 2012. 21 numbers of participants (8 women and 13 men) joined this meeting. A training workshop for the partner staff involved in LINEX-CCA Cambodia was conducted in July 18th-20th, 2012. The objective of training course was to enable the participants to:

- Understand concepts of climate change and climate-smart agriculture
- Conduct an analysis of vulnerability/capacity of the agricultural production to climate change
- Identify appropriate climate-smart innovations in the target areas of the project

The three days training covered many topics such as introduction of climate change & causes behind it, effects of climate change, climate smart agriculture, important innovation towards climate smart agriculture, step-by-step guide on how to conduct the vulnerability/capacity analysis.

As a result, most of the participants clearly understood the difference between climate and weather with the full meaning & causes of climate change. The impact of climate change to agriculture production, animal husbandry, fishery, coastal, biodiversity, environment and human health were also raised by the trainers. Additionally, participants gained more understand about the meaning of food security, climate smart agriculture and three pillars of climate smart agriculture: 1. Increase in Productivity and Income, 2. Resilience to Climate Change and variability, 3. Reduce Agriculture's Contribution to Climate Change. Systemic approaches of climate smart agriculture were explained deeply by trainers that has 3 sectors: Environmentally sustainable, economically efficient, Promoting Human Development.

On the other hand all participants learnt innovations of climate smart agriculture that included production and use of compost, liquid compost, cover crop / green manure, conservation tillage, system of rice intensification, crop succession, bio-intensive gardening, hedging with fast growing Nitrogen fixing trees, multi-purpose farming, rain water harvesting, bio-digester, bio-slurry, bio-gas and bio-char.

The topics focused on what was vulnerability to climate change & why a vulnerability/capacity analysis was needed. Steps of conduction of the vulnerability/capacity analysis are given as below:

1. Making preparation
2. Secondary data collection
3. Begin working with community
4. Analyze natural disaster, impact vulnerabilities and capacities
5. Selecting the appropriate of innovation

Different PROLINNOVA partners were involved in facilitating farmer experimentation (mentioned above) in their own districts. Follow-up was given by the CEDAC project coordinator who paid 1-2 day visits every month to the field sites for monitoring and mentoring.

INDIA

An orientation and training meeting for joint experimentation and linking up with other stakeholders in ARD for NGOs took place in July 2012. Local NGOs and CSOs are less familiar with the CCA challenges and what these mean in terms of supporting local initiatives and farmer/community groups. Some CSOs working actively in CCA are less aware of the concept and importance of PID but are in need of an approach that scales up the community initiatives integrated with science and development interventions. Training with the support of Prolinnova PID trainers from Nepal is planned.

Exchange of experiences between partners within and outside their Country Platforms

A joint meeting of representatives of CEDAC, INHERE, LI-BIRD and ETC was held in Bamako, Mali on March 15-16 on the sidelines of the PROLINNOVA International Partner Workshop. At this meeting agreement between partners, baseline survey format, budget utilisation and grant disbursement process were discussed and followed up by email for finalisation.

NEPAL

This backstopping visit from ETC Foundation was initially planned for November 2012. However, it was postponed due to the interim government calling for a general election in the same month. December was not suitable for LI-BIRD due to several staff events planned. Eventually, the trip was scheduled for January 2013. As decided during the PROLINNOVA International Partner Workshop (IPW) in Mali in 2012, International Farmer Innovation Day was observed on 29th November, 2012 in partnership with PROLINNOVA Nepal partners. All the partners were invited to Pokhara where LI-BIRD is situated. A half day ceremony was organized at the premises of Regional Agriculture Development Directorate (government office). A farmer from Chitwan Mr. Tej Bahadur Lama and a farmer group from Sindhupalchowk, Karthali Women's Welfare Fund, were awarded prizes during the occasion.

INDIA

The exchange of experiences between partners took place through sharing of its 6 month progress report by INHERE (Jan-July 2012), sharing of baseline format and data format developed by INHERE with LINEX-CCA partners and with PROLINNOVA country platforms initiating a similar project in Africa. The celebration of International Farmer Innovation Day, Nov 29, by farmers of the project villages and other stakeholders was shared with the PROLINNOVA country platforms and IST members directly and post in the PROLINNOVA website.

The Field Site Facilitators participated in a Youth Meeting on Climate Change between 10-12th of April 2012 which was co organised by IRDWSI and International Network on Ethics in Climate Change (INECC). The meeting was held in Semliguda, Orissa. Besides internal discussions with input sessions a field trip was also undertaken to understand climate change and adaptation. A two member team from INECC also visited the INHERE project area to document climate change and adaptation by the community.

The backstopping visit by Ms Chesha Wettasinha, ETC Foundation, from Nov 14-27 provided an opportunity for exchange of experiences and also sharing of experiences with one national (VPKAS) and three international organisations.(Ford Foundation, ICCO and APAARI). APAARI (the Asia Pacific Association of Agriculture Research Institute) has been positive towards the project and its extension. It has offered possibility of support to participation in international meets for exchange of experience and learning.

The project also made efforts itself and through ETC to link up with the CGIAR Research project on Climate Change and Food Security (CCAFS). Link has been made and it is expected that this would in the future lead to collaboration with the LINEX-CCA project.

Objective 3: Local initiatives and capacities to adapt to climate change are explicitly recognised and integrated in national and international agricultural and climate change adaptation policies

NEPAL

As the selected sites are quite far away from head quarter of LI-BIRD, the lowest government local body viz. Agriculture, Forestry & Environmental Committee (AFEC) has been chosen as implementing partner for Rampur VDC of Ramechhap district. The PROLINNOVA Nepal partners (mainly Ecoscentre and Tuki Sunkhoshi) are being consulted for technical backstopping. Their staffs are hired by the project as resource persons for the PID and Climate Change Adaptation training for the farmers and CSO/ NGO level. LI-BIRD disseminates it project learning and message through its weekly radio programme called “LI-BIRD Ko Chautari” which is one of the entry points for awareness raising and policy lobbying. In this context information about the concept of the LINEX-CCA has been broadcast through the radio programme and listeners are made aware about the climate change and use of local innovations as intervention approaches to adapt to such climate change impacts.

CAMBODIA

Currently, four NGOs are involved in the implementation of the project. The Provincial Departments of Agriculture in all three provinces are also involved in the project. Staff of these organizations was trained in climate-smart agriculture (as mentioned above).

INDIA

A Steering Committee to take the process forward in India was constituted for the project in March 2012. The Steering Committee met on April 2, 2012 to understand, discuss and guide project implementation. The Steering Committee was chaired by the Director of the Vivekananda Institute of Himalayan Agriculture Research which is the Institute mandated by the Indian Council of Agriculture Research, the apex agriculture research body constituted by the Government of India, for agriculture research in the mountain areas in the Himalayan region where the project is located.

The effort to influence national and international policies towards the recognition of local capacities and initiatives in addressing the consequences of climate change was done through link with CCAFS at the second Global Conference on Agriculture Research and Development (GCARD 2) and follow up by INHERE. ETC Foundation also linked up with CCAFS for their interest in Prolinnova country platforms in Africa and also made efforts to draw attention for linkage in Asia. INHERE supported this effort with the required information support.

INHERE participated in the India Budget Meet session held on Dec 6, 2012 in New Delhi which included the aspect of Climate Change.

Presentation of the LINEX- CCA Project was made on International Mountain Day on Dec 11 at a meeting organised by FAO and the Mountain People Forum at the UNDP Conference Room in New Delhi.

ETC FOUNDATION. NETHERLANDS

ETC participated in the following international events – both for sharing about the LINEX-CCA project and to learn about what others were doing in the area of climate change adaptation related to agriculture and natural resource management.

- Workshop on People-led Climate Change Adaptation organized by Misereor, Germany, for its staff and those of several other German NGOs and donor organisations, 25 January 2012: ETC was invited to present the PID-LI approach for strengthening community resilience to CC.
- Workshop on communication and social learning organised by Climate Change Agriculture and Food Security (CCAFS) at the International Livestock Research Centre (ILRI) in Addis Ababa, Ethiopia, 10–12 May 2012: ETC was invited to this meeting to share ProInnova's experience thus far in CCA and PID, especially in terms of how we are learning and sharing experiences within and beyond the network
- A four-page paper and poster on PID and climate change adaptation was presented at the "Tropentag" in Germany in September 2012.
- In addition, an article titled, "Strengthening local adaptive capacity – the key to sustainability in the face of climate change" was published on the GFAR website under the rubric "Voices of Change" in May 2012. The purpose of the article was to draw attention to PID as an approach to strengthening adaptive capacity amongst local farming communities enabling them to deal with the challenges posed by climate change.

Implemented activities

NEPAL

- Co-ordination and management at regional level (regular activities)
- Selection of field sites (districts & VDCs)
- Baseline Study
- field assessment of communities' perspectives on climate change
- Training community groups in joint experimentation for climate-change adaptation
- Training CBOs, NGOs and GOs on PID and CCA

CAMBODIA

- Conduction of baseline study and assessment of people's perceptions on climate change
- Identification of farmers interested in conducting experiments
- Training of farmers in climate change adaptation and experimentation
- Establishing experiments, monitoring and end-season evaluation of experiments
- Sharing of findings with other farmers through farmer association meetings, experimenter group meetings etc.
- Project planning meeting with partner organizations
- Training of partner organization staff in climate-smart agriculture

INDIA

- Selection of Villages
- Joint Coordination and Agreements Meeting
- Steering Committee Meeting
- Field assessment of communities' perspectives on climate change
- Baseline Survey and FGDs.
- Implementation and documentation of local innovation and ongoing joint experimentation
- Training community groups in joint experimentation for climate-change adaptation
- Exchange of experiences between partners within and outside their Country Platforms
- Certain activities were delayed due to the delay in getting the second instalment from CEDAC.

3.3 Additional effects and risks

There are no effects to be reported on.

3.4 Evaluation

Too early for evaluation of the project (applicable to all the countries)

4. Conclusions

NEPAL

It has taken longer than anticipated to identify the project villages due to the long process of consultation that took place in identifying the village in Ramechhap district where the local stakeholders took over the process. Finally, these hurdles were overcome and the baseline study has been completed in both sites and the report is nearly ready. The stakeholders as well as the farming communities have been given initial training in LI/PID/CCA. This means that the project is now set to catch up on lost time and make progress with experimentation. However, it should be noted that the conditions in the two districts chosen for the project are very tough and will call for focused work to see results. However, the motivation among the local stakeholders and the farmers in Rampur are high and can be an asset in comparison with Siraha which shows a sense of apathy.

CAMBODIA

Most of the farmers are conducting experiments for the first time. The field site coordinators and the project coordinator needed to give close follow up to ensure that the experiments would be designed in a way that would enable comparison. This situation will get better in the next round of experiments as the farmers have gained experience through this first round. In terms of monitoring, most farmers have used the formats to record the process of their experiments but have missed out on certain important observations. This has been dealt with by the field staff and the farmers are now aware of the importance of recording these observations. All of the farmers who were involved in doing experiments are very happy about what they have learned and all of them showed interest in continuing in the next season- either doing the same experiment on a larger scale or doing something different.

- In terms of CEDAC, we would like to have more frequent meetings with all the partners and farmer innovators in order to share experiences and learn from each other. Due to budgetary restraints, we can only have such meetings once a year. CEDAC also invites participants of the EED-funded Building Resilience Project also to this meeting for sharing across the projects. It is also an interesting feature to have 1-2 farmer innovators sharing their experiences at these meetings. CEDAC and its partners will use the farmer forum that is to be hosted by Ministry of Agriculture in 2013 to showcase some of these climate-smart innovations and technologies to a wider audience.
- The project objectives as set out for 2012 have been achieved and the CEDAC staffs are positive about the progress of the project. We will continue to follow this approach and reach more farmers in 2013. We will also make sure that the successful technologies and innovations are disseminated through the farmer magazine published by CEDAC and through other channels.

INDIA

The project has brought hope and enthusiasm to smallholders struggling with uncertain weather phenomenon and often loss of produce. The multi-stakeholder platform and links with agriculture research institution of the area is fostering health appreciation of difficulties, opportunities and challenges. Joint experimentation and participatory innovation development has been an empowering process for the farmers. The regional agriculture research centre has opened up more opportunities for interaction with farmers and joint learning events.

The baseline survey has been an eye opener for the farming as well as support stakeholders. Women have been especially encouraged to share their observations and their experiences. They have also been encouraged to lead innovation development in their areas of interest.

The project progress was good but has suffered from unavailability of project funds. During the year, only one instalment adequate for only six months of planned work was received. Timely availability of project funds would enable smooth functioning and efficient as well as effective implementation of the project.

- **ANNEXES**

Annex Nep 1: Participant List: PID and CCA training to Farmers in Siraha:

S.No.	Name	Sex	Organization
1	Bijaya Kumar Shah	Male	Gyan Jyoti Krishak Samuha
2	Anit Kumar Yadav	Male	Gyan Jyoti Krishak Samuha
3	Rambabu Yadav	Male	Gyan Jyoti Krishak Samuha
4	Dayaram Yadav	Male	Gyan Jyoti Krishak Samuha
5	Rajkumar Yadav	Male	Gyan Jyoti Krishak Samuha
6	Harinarayan Yadav	Male	Gyan Jyoti Krishak Samuha
7	Rampradom Yadav	Male	Gyan Jyoti Krishak Samuha
8	Shyam Sundar Tadav	Male	Gyan Jyoti Krishak Samuha
9	Sherbahadur Yadav	Male	Gyan Jyoti Krishak Samuha
10	Gunjeshowr MagarJivanlal Lama	Male	Laliguras Krishak Samuha
11	Wachkan Mahara	Male	Laliguras Krishak Samuha
12	Anita Devi Mukhiya	Female	Laliguras Krishak Samuha
13	Ambika Bhatta	Female	Laliguras Krishak Samuha
14	Ritesh Kumar Shah	Male	Laliguras Krishak Samuha
15	Rajkumar Lama	Male	Laliguras Krishak Samuha
16	Chetbahadur Thapamagar	Male	Laliguras Krishak Samuha
17	Shibaji Ram	Male	Laliguras Krishak Samuha
18	Sonafi Shah	Female	Sagarmatha krishak Samuha
19	Uma Gautam	Female	Mahila Sasatikaran Samuha
20	Dhansher Ram	Male	Laliguras Krishak Samuha
21	Binda Devi Nayak	Female	Sagarmatha krishak Samuha
22	Ram Bilash Shah	Male	Laliguras Krishak Samuha
23	Rajdev Nayak	Male	Jaima kali Krishak Samuha
24	Bechu Yadav	Male	Laliguras Krishak Samuha

25	Agendra Kumarsingh	Male	Jaima kali Krishak Samuha
26	Laxmi Mahato	Female	Lagansil Krishak Samuha
27	Mukti Narayan Yadav	Male	Lagansil Krishak Samuha
28	Indra Thapa Magar	Male	Sagarmatha krishak Samuha
29	Ram Ekbal Singh	Male	Sagarmatha krishak Samuha
30	Purna Mandal	Male	Lagansil Krishak Samuha
31	Narayan Yadav	Male	Lagansil Krishak Samuha
32	Prameswor Nayak	Male	Laliguras Krishak Samuha
33	Shankhar Shah	Male	Laliguras Krishak Samuha
34	Doriklal Shah	Male	Jaima kali Krishak Samuha
35	Jitendra Kumar Singh	Male	Lagansil Krishak Samuha
36	Shidheshwor Mahato	Male	Lagansil Krishak Samuha
37	Hari narayan Yadav	Male	Srijana Krishak Samuha
38	Shakuntala Kamad	Male	Sarasawati Mahila Krishak Samuha
39	Kishor kumar Mahora	Male	Sagarmatha krishak Samuha
40	Chandeshwor Shah	Male	Sagarmatha krishak Samuha
41	Utim Ram	Male	Laliguras Krishak Samuha
42	Shivaji Ram	Male	Sagarmatha krishak Samuha
43	Binda kumar Mandal	Male	Jaima kali Krishak Samuha
44	Binod kumar Raya	Male	Laliguras Krishak Samuha
45	Dhuki Mukhiya	Male	Laliguras Krishak Samuha
46	Ram Charitra Raya	Male	Laliguras Krishak Samuha
47	Kusum Jha	Female	Laliguras Krishak Samuha

Annex Nep 2: Participant List: PID and CCA training to NGOs/ CBOs in Siraha:

<i>S.No.</i>	<i>Participant Name</i>	<i>Sex</i>	<i>Organization</i>	<i>Contact No.</i>
1.	Pramod Sah	Male	FORWARD Nepal, Siraha	9842985353
2.	Shovaram Devkota	Male	FORWARD Nepal, Siraha	9848155052
3.	Ram Ishwor Yadav	Male	Agriculture Service Centre, Gol Bazaar, Siraha	9844032606
4.	Sushil Lal Karna	Male	District Soil Conservation Office, Lahan	9817773934
5.	Laxmi Narayan Gupta	Male	District Forestry Office, Lahan	9842825027
6.	Ram Bilas Mahato	Male	Sagarmatha Krishak Samuha Sangh, Dhangadhi 1, Chhaprodi, Siraha	9741123822
7.	Mintu Chaudhary	Female	Nepal Gramin Puna Nirman Sanstha, Lahan	9842914350
8.	Sarita Dahal	Female	Water & Sanitation Division Office, Lahan	9842840927
9.	Khim Shrestha	Female	Mahila Uddhar Sewa Kendra, Gol Bazaar, Siraha	9842851031
10.	Tara Shrestha	Female	Sewa Foundation, Lahan, Siraha	9805904365
11.	Govinda Sharma	Male	Sewa Foundation, Lahan, Siraha	9805933211
12.	Ram Ashish Mahato	Male	Bhawani Ekikrit Bikash Kendra, Lahan, Siraha	9842840325
13.	Ram Kumar Mahara	Male	Srijana Samudaik Bikash Kendra, Choharba, Siraha	9842839258
14.	Krishna Deo Jha	Male	LI-BIRD, Siraha	9844217580
15.	Narayan Paswan	Male	Livestock Service Centre, Lahan	9819766413
16.	Ganesh Prasad Singh	Male	Agriculture Service Centre, Lahan	9804805698
17.	Basanta Ranabhat (trainer)	Male	Ecoscentre	9855055540
18.	Resna Udas (trainer)	Female	LI-BIRD	061-535357 (Ext 214)
19.	Puspa Raj Tiwari (trainer)	Male	LI-BIRD	061-535357 (Ext 220)

**Annex Nep 3 : Participant List: PID and CCA training to Farmers in Rampur,
Ramechhap:**

S.No.	Participant Name	Ward No.	Sex	Contact No.
1.	Gori Maya Sunwar	9	Female	
2.	Krishna Bahadur B.K.	5	Male	
3.	Rana Bahadur Magar	6	Male	
4.	Shankar Sunwar	8	Male	
5.	Mana Maya Tamang	6	Female	
6.	Sangita Tamang	6	Female	
7.	Yam Kumari Tamang	6	Female	
8.	Tika Ram B.K.	9	Male	9844137613
9.	Nagindra B.K.	2	Male	
10.	Nim Maya Tamang	7	Female	9844229202
11.	Runchi Maya Tamang	8	Female	9844258916
12.	Rita Shrestha	4	Female	9741194099
13.	Tiki Maya Tamang	8	Female	
14.	Bimala Nepali	3	Female	
15.	Ganga Maya Nepali	3	Female	
16.	Srijana Shrestha	3	Female	9744031136
17.	Indrawati Shrestha	4	Female	9843229081
18.	Pun Maya Nepali	3	Female	
19.	Sharmila Shrestha	3	Female	9851211248
20.	Kamala Shrestha	3	Female	9614190865
21.	Shanti Maya Tamang	7	Female	
22.	Pan Maya Tamang	7	Female	
23.	Mangali Tamang	7	Female	
24.	Man Maya Tamang	7	Female	
25.	Narayan Shrestha	RBPW	Male	9844256974
26.	Tahal B. Tamang	7	Male	
27.	Datta Bahadur B.K.	9	Male	9844233542
28.	Tika Maya Majhi	1	Male	
29.	Dil Kumari Majhi	1	Male	
30.	Lila Bahadur Tamang	7	Male	9844145242
31.	Mithu Shrestha	3	Female	9614847200
32.	Sujal Thapa Magar	9	Male	
33.	Lok Bahadur Sunwar	8	Male	
34.	Amrit Shrestha	3	Male	
35.	Pasang Tamang	6	Female	
36.	Laxmi Shrestha	4	Female	
37.	Nani Maya Shrestha	4	Female	
38.	Sunita Majhi	1	Female	
39.	Lagani Majhi	1	Female	
40.	Mehar Man Shrestha	6	Male	
41.	Krishna Kumari Sunwar	9	Female	9843101402
42.	Bal Bahadur Shrestha	6	Male	
43.	Balram Sunwar	9	Male	9741128668
44.	Tilak B. Tamang	8	Male	9844231550
45.	Bhim B. Tamang	8	Male	9844208176
46.	Uma Subedi	Social Mobilizer	Female	9844233075
47.	Bhim Bdr. Tamang	8	Male	9844208037
48.	Indra Rana Magar	9	Male	9744046573
49.	Gehendra Bahadur Darlami	VDC Chairperson	Male	9744016032
50.	Surja Bahadur Shrestha	4	Male	9844229376

51.	Gopal Magar	2	Male	9844256943
52.	Tuku Maya Tamang	6	Male	
53.	Chhali Maya Tamang	8	Male	
54.	Lapsang Tamang	8	Female	
55.	Puspa Lal Shrestha	6	Male	

**Annex Nep 4: The list of participants from different organizations in LINEX-CCA
Training, Manthali, Ramechhap**

S.N.	Participants' Name	Office/ Organization	Designation
1.	Deepak Pd. Subedi	District Development Committee Office, Manthali	PO
2.	Narayan karki	District Development Committee Office, Manthali	Com Opt.
3.	Dr. Narayan Shrestha	District Livestock Service Office, Manthali	Livestock Dev. Officer
4.	Dr. Rakesh Prajapati	District Livestock Service Office, Manthali	Vet. officer
5.	Dr. Umesh Pradhan	District Livestock Service Office, Manthali	Vet. officer
6.	Bharat K. Shrestha	District Forest Office, Ramechhap	Ranger
7.	Phatta Bdr. Tamang	District Soil Conservation Office, Ramechhap	A DSCO
8.	Asha Devi Sunwar	District Women & Children Dev. OFF, Manthali	AWCDC
9.	Baikunth Prasad Dahal	Domestic & Small Industries promotion Off. , Manthali	Officer
10	Bishwa Ranjan Dangal	Agriculture Service Centre Ramechhap	JTA
11	Narayan Pd. Lamichhane	Livestock Service Centre Ramechhap	Vet. Offer
12	Uma Subedi	LGCDP Rampur VDC, Rampur	SM
13	Shakti Lama	Rural Health Development Project, Manthali	DPC
14	Ghanshyam C Rai	Local Infrastructure for Livelihood Improvement , Manthali	DPC
15	Rashami Pandit	Sustainable Soil Management Program, Manthali	DPO
16	Padam Pd. Poudel	Vegetable Seed Project, Manthali	DPC
17	Nabin Ale	Rural Reconstruction Nepal, Manthali	Sub Eng
18	Komal shrestha	Kopila Project, Manthali	Facilitator
19	Birendra Shrestha	NGO Federation Ramechhap, Manthali	President
20	Gambhir B.K.	Dalit Utthan MahaSang Ramechhap, Manthali	Member
21	Khagda Bdr. Ale Magar	Janjati Mahasang Ramechhap, Manthali	President
22	Ramesh Dahal	Tamakoshi Sewa Samati, Ramechhap, Manthali	Program Co.
23	Bikash Sapkota	F2 F Program Shrijanshil Yuwa Samaj, Ramechhap, Manthali	Program Co.
24	Karna Bdr Bk	Community Human Resource Dev. Program, Rampur	SM
25	Dalaki Sherpa	LIBIRD	
26	ManMaya Gurung	LIBIRD	
27	Roshan Mehta	LIBIRD	

Annex Nep5: Programme Schedule for Training CSOs and local governments in Local Innovation and Climate change Adaptation

Time	Particular
	Day I
8:00 – 8:30 hrs	Breakfast
8:30 – 9:00 hrs	Registration
9:00 – 9:30 hrs	Introduction, Expectation Collection from participants and discussion, Objectives of training, Selection of reporters and evaluator
9:30 – 10:00 hrs	Short Introduction of LI-BIRD
10:30 – 10:45 hrs	PROLINNOVA – An Introduction
10:45 – 11:00 hrs	Tea Break
11:00 – 11:45 hrs	Local Innovation and their types
11:45 – 13:00 hrs	Documentation of Local Innovation
13:00 – 14:00 hrs	Lunch Break
14:00 – 16:00 hrs	Participatory Innovation Development (PID), Farmer Experimentation, Joint Experimentation, Concept and exercises <ul style="list-style-type: none"> • Definitions <ul style="list-style-type: none"> ○ Indigenous and local technologies ○ PTD and PID ○ Partnerships • Participatory approaches • Characterization of innovations/innovators
16:00 – 16:30 hrs	PID steps and roles of stakeholders
	Day II
6:30 – 7:00 hrs	Tea
7:00 – 7:15 hrs	Recap of Day I
7:15 – 8:00 hrs	Documentation of Local Innovations
8:00 – 9:15 hrs	Session- 1: Climate change Weather/Climate, basic science /GHG and its Causes/Phenomena
9:15 – 9:45 hrs	Breakfast
9:45 – 11:00 hrs	Session 2: Impacts of Climate Change in Nepal
11:00 – 12:30 hrs	Session 3: Understanding Climate Change Adaptation minimizing their impacts
12:30 – 14:00 hrs	Session 4: Adaptation Policy Frameworks
	DAY III
6:30 – 7:00 hrs	Tea
7:00 – 7:15 hrs	Recap of Day II
7:15 – 9:00 hrs	Session 5: Vulnerability Assessment
9:00 – 9:20 hrs	Breakfast
9:20 – 12:00 hrs	Session 6: Adaptation Planning
12:00 – 12:15 hrs	Field Planning
12:15 – 13:00 hrs	Lunch
13:00 – 17:00 hrs	Field Exercise
	DAY IV
6:30 – 7:00 hrs	Tea
7:00 – 9:00 hrs	Plan for Field visit and groupwise presentation
9:00 – 9:20 hrs	Breakfast
9:20 – 11:00 hrs	Role of Local Innovation in adapting Climate Change Impact – Group Discussion
11:00 – 12:45 hrs	Organizational or Individual Action Plan and Monitoring
12:45 – 13:30 hrs	Evaluation of the training and Closing

Annex Cam 1: List of target area of Cambodia

Province	District	Commune	Village	
Kampong Speu	Phnom Srouch	Maha Siang	Pra Sat	
			Sery One	
	Samrong Tong	Thamada Or	Taing Krouch	Prey Kdey
				Kraing Speu
		Sam Rit		
		Sam Pan		
		Andong Sla		
		Ka Heng	Trapaing Ang	
			Prey Kdey	
			Prey Kampong	
Takeo	Traing	Angkeo	Prey Rompeak	
			Serey Douch	
			Trapaing Snor	
			Thnous	
			O' kralang Doul	
			O' ta Sek	
			Angkeo	
			Traing Kok	
		Prambey Mom	Roveang	
			Chher Tealphlous	
Kampong Chhnang	Roleaphier	Srey Thmey	Trok Keut	
			Trapaing Sbov	
		Prey Moul	Prey Moul	
			Tavak	
		Svay Chrum	Thnong Kambot	
		Banteay Preal	Trapaing Phkaom	
		Pong Ro	Thmor Reap	
			Srang Khpos	
	Trapaing Pou			
	Toek Phos	Krang Skea	Toul Samrong	

Annex Cam 2: List of successful farmer experimenters

No	Name	Gender	Province	District	Commune	Village	Topics	Experimentation	
1	Ses Min	F	Takeo	Triang	Prabey Mom	Chertial Phlos	SRI	Tall seedling Vs small seedling	
2	Sout Keo	F					SRI	Tall seedling Vs small seedling	
3	Ses Ney	F					SRI	Compost Vs Non compost	
4	Ses Norn	F					SRI	Compost Vs Non compost	
5	Ses Mon	F					SRI	Compost Vs Non compost	
6	Sok Mom	F					SRI	Fresh leave mixed with rice husk Vs	
7	Ses Nun	F					SRI	Tall seeding Vs small seedling	
8	Sot Bros	M				O'Kralongdul	SRI	Rice husk Vs compost	
9	Mut Eurn	M				Trapang kok	SRI	Cow dung Vs Fresh leave	
10	Seun Neun	F					SRI	Cow dung Vs Fresh leave	
11	Och Peach	F					SRI	Cow dung Vs Fresh leave	
12	Oun Chrin	M					SRI	Cow dung Vs Fresh leave	
13	Sat Nhen	F					SRI	Cow dung Vs Fresh leave	
14	Him Sahorm	M					SRI	Cow dung Vs Fresh leave	
15	Loy Krim	M					SRI	Cow dung Vs Fresh leave	
16	Sem Khim	F					SRI	Cow dung Vs Fresh leave	
17	Oun Nhet	M					SRI	Pig dung Vs Fresh leave	
18	Pov Kreun	F					SRI	growing green manure Vs non-one	
19	Bak Nun	F					SRI	Cow dung Vs Fresh leave	
20	In Som Ul	M					SRI	Cow dung Vs Fresh leave	
21	Sao Mom	F			Angkeo		Angkeo	SRI	Tall seeding Vs small seedling
22	Nem Kanin	F						SRI	Compost Vs Non compost
23	Mat Kimsou	F						SRI	Tall seedling Vs small seedling
24	Nin Ret	F						SRI	Tall seedling Vs small seedling
25	Eang Teun	F						SRI	Tall seedling Vs small seedling
26	Sot Sokha	F				SRI		Tall seedling Vs small seedling	
27	Sao Touch	F				SRI		Tall seedling Vs small seedling	
Total: 27 experimenters (20 women and 7 men)									
1	Chan Simeun	F	Kampong	Roleaphier	Svay Chrum	Thnorng Kambot	Morning glory	Using Bio-extract Vs Botanical	

2	Sam Sokim	F	Chhnang				Vegetable	Using Bio-slurry Vs Bio-char			
3	Van Seu	F					Salad	Using liquid compost Vs Botanical			
4	Dy Somaly	F					Morning glory	Using liquid compost Vs Botanical			
5	Phoung Poan	F					Mustard green	Using liquid compost Vs Botanical			
6	Leung Sophol	F					Vegetable	Transplanting in row Vs non-row			
7	Keo Loun	M					Pong Ro	Thmor Reap	Vegetable	Using Bio-char Vs Liquid compost	
8	Noung Sithat	F							Vegetable	Using Bio-slurry Vs rice husk	
9	Yim Sakim	F							Vegetable	Using botanical pesticide Vs Liquid	
10	Ouk Kunthea	F							vegetable	Using liquid compost Vs Botanical	
11	Ros Sopheap	F							Egg plant	Using liquid compost Vs Botanical	
12	Tiv Chhat	F							Salad	Using liquid compost Vs Botanical	
13	Som Channouv	F							Vegetable	Using bio-slurry Vs rice ash	
14	Saing Yen	F							Srang Khpos	String bean	Using compost Vs chicken dung
15	Kong Sangun	F								Vegetable	Using iquid compost Vs Botanical
16	Kong	M								Tomato	Using Bio-slurry Vs chicken dung
17	Phoun Phal	M					Prey Moul	Prey Moul	SRI	Transplant in row Vs Non-row	
18	Kuy	M							SRI	Transplant in row Vs Non-row	
19	Houn Heng	M							Paddy rice	SRI Vs conventional one	
20	Prom Sarun	F					Banteay Preal	Trapang Phkaom	vegetable	Using liquid compost Vs Botanical	
21	Lim Sambath	M							Mustard green	Using iquid compost Vs Botanical	
22	Chan Bou	M							Vegetable	Using the mixing of compost with	
23	Or Chenda	F					Srer Thmey	Trok Kert	SRI	Transplant in row Vs Non-row	
24	Khim Sok	M							Paddy rice	SRI Vs conventional one	
25	Chon Bunly	M							SRI	plowing covered rice stubble Vs	
26	Ou Chan	M						Trapang Sbov	String bean	using compost Vs fresh cow dung	
27	Nhai Soknouv	F					Tuek Phos	Krang Skea	Toul Samrong	Mustard green	using Bio-slurry Vs chicken dung
28	Hem Phan	F								Vegetable	Using Bio-slurry Vs chicken dung
29	Hem Hongly									Vegetable	Using mixing of compost, liquid
Total: 29 experimenters (19 women and 10 men)											
1	Nob Sophorn	M	Kampong	Samrong	Ka Heng	Trapang Ang	Paddy rice	Transplanting tall seedling Vs small			
2	Kouch Saret	F				Prey Kampoung	SRI	Using compost Vs using fresh leave			

3	Pov Chantha	M	Speu	tong			SRI	using cow dung Vs fresh leave		
4	Ly Ry	F					Paddy rice	SRI Vs conventional one		
5	Meas Eurn	F					SRI	transplanting in row Vs non-one		
6	Prak Korn	F					Prey Kdey	SRI	using compost	
7	Roth Kea	M					Thamada Or	Prey Kdey	SRI	Bio-slurry
8	Chun Chheun	M							SRI	cow dung Vs compost
9	Phon Sokchan	M			SRI	using compost before transplanting				
10	Roth Sokha	F			SRI	cow dung Vs fresh leave				
11	Chet Thy	M			SRI	water bio-slurry Vs bio-slurry				
12	Chet Veurn	M			Tang Krouch	Samban	SRI	row Vs non-row		
13	Horm Heurn	M					salad	Compost Vs Liquid compost		
14	Pen Yon	M					SRI	using bio-slurry before		
15	Vorn Chem	M				Samrith	SRI	Compost Vs cow dung		
16	Uy Say	M					SRI	Tall seedling Vs small one		
17	Chab Meun	M					SRI	row Vs non-row		
18	Sorn Seurn	M				Krang Speu	Salad	Using compost Vs liquid compost		
19	Soun Seurn	M					SRI	Growing green manual on rice field		
20	Yim Sary	M				Andong Slar	SRI	Using Bio-slurry		
21	Mei Yut	M					Garlic	Using Bio-slurry		
22	Chok Teng	M			Paddy rice		transplanting single seedling in row			
23	Soun Ren	F			Paddy rice		Young seedling (18days) Vs Old one			
24	Seak Yorn	F			Phnom Srouch	Mahasang	Serey One	SRI	single seedling Vs three seedlings	
25	Veak Kim	F						Paddy rice	Leave Vs cow dung	
26	Phath	F						SRI	Compost Vs fresh fertilizer	
27	Prom Y	M						SRI	Old seedling (60days)	
Total: 27 experimenters (09 women and 18 men)										
Grand total: 83 experimenters (48 women and 55men)										

Note: All topics are comparison on rice growing and vegetable growing, and some is trial for their first time.

- For rice growing is SRI adaptation to compare the potential of seedling, using natural fertilizer, ploughing to cover rice stubble, bio-slurry with non-one as well as some topics are comparing the SRI techniques with conventional practice.
- For vegetable growing is organic way

Annex Ind 1: Villages Surveyed and Selected for Project

S.N.	Surveyed Villages				Selected Villages			
	Chamoli		Almora		Chamoli		Almora	
	GP	RV	GP	RV	GP	RV	GP	RV
1	Hargarh	Hargarh	Sirda	Sirda	Hargarh	Hargarh	Sirda	Sirda
2		Dharapani		Gajjar				Dharapani
3	Mehalchauri	Mehalchauri		Kwerali walli				Kwerali walli
4		Thala		Kwerali Palli				Kwerali Palli
5	Mekhuli	Mekhuli		Malsakhet				Malsakhet
6	Beena	Beena	Kothu	Kothu	Beena	Beena		
7		Jogina		Bagjibala				Jogina
8	Banjani	Banjani	Khatyari	Khatyari	Banjani	Banjani	Khatyari	Khatyari
9	Rohida	Rohida	Jaintha	Jaintha	Rohida	Rohida	Jaintha	Jaintha
10		Kafalsain	Kotura	Kotura				
11	Malakot	Malakot	Naugaon	Manaliya			Naugaon	Rampur
12		Raikot		Naugaon				Naugaon
13		Gadut	Bayeesokhala	Bayeesokhala			Bayeesokhala	
14		Latugair		Bhaltwani walli				Bhaltwani walli
15		Kalimati		Bhaltwani palli				Bhaltwani palli
16	Tewakharak	Amdali						
17	Sera	Brahmdevchauri						
18		Dubiataal	Farika	Farika				
19	Naini	Naini	Dhanar	Dhanar				
20	Tetuna	Tetuna		Bhesiyagar				
21	Kolani	Kolani	Nyoni	Nyoni				
22	Dhamdev	Dhamdev	Dyoni	Dyoni				
23		Kot	Chhitar	Chhitar				
24	Chhadisain	Chhadisain		Jamrar				
25	Golegaon	Golegaon	Bagari	Bagari	Golegaon	Golegaon		
26		Bhediyana						

27	Bhediyana	Masusera						
28	Lakhedi	Lakhedi						
29	Dhargarh	Dhargarh			Dhargarh	Dhargarh		
30	Kunkhet	Kunkhet			Kunkhet	Kunkhet		
Total	18	30	14	25	7	10	7	12

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Annex Ind 2: Villages and Crops Selected for Joint Experimentation

Crops Selected for Joint Experimentation														
			Madua(Fox Millet)			Arhar (Lentil)			Dhan (Rice)			Makka(Maize)		
S.N.	GP Name	Altitude (in Mtr.)	Area Rainfed/Irrigated	Area (in Nali)	Qty. Seed(in kg.)	Area Rainfed/Irrigated	Area (in Nali)	Qty. (in kg.)	Area Rainfed/Irrigated	Area (in Nali)	Qty. (in kg.)	Area Rainfed/Irrigated	Area (in Nali)	Qty. (in kg.)
1	Khatyari	1200	Rainfed	10	2	Rainfed	10	4	Irrigated	10	10	Rainfed	5	2
2	Bhaltwani	1300	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
3	Querali	1450	Rainfed	10	2	Rainfed	10	4	Irrigated	10	10	Rainfed	5	2
4	Jaintha	1450	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
5	Malsakhet	1500	Rainfed	10	2	Rainfed	10	4	Irrigated	10	10	Rainfed	5	2
6	Rampur	1000	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
7	Naugaon	1250	Rainfed	10	2	Rainfed	10	4	Irrigated	10	10	Rainfed	5	2
8	Maikholi	1100	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
9	Dharapani	1200	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
10	Hargarh	1300	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
11	Beena	1400	Rainfed	10	2	Rainfed	10	4				Rainfed	5	2
12	Rohida	1600	Rainfed	10	2	Rainfed	10	4	Irrigated	10	10	Rainfed	5	2
				120	24		120	48		50	50		60	24

Annex Ind 3: Village-wise Farmer Participation in Joint Experimentation for Kharif (Summer Crop)

		Foxtail millet (Madua)	Lentil (Arhar)	Rice (Dhan)	Maize (Makka)
S.N.	GP Name	No. of cultivator	No. of cultivator	No. of cultivator	No. of cultivator
1	Khatyari	5	10	5	5
2	Bhaltwani	5	10		5
3	Querali	5	10	5	5
4	Brahmdevchauri	5	10		5
5	Malsakhet	5	10	5	5
6	Rampur	5	10		5
7	Naugaon	5	10	5	5
8	Maikholi	5	10		5
9	Dharapani	5	10		5
10	Hargarh	5	10		5
11	Beena	5	10		5
12	Rohida	5	10	5	5
		60	120	25	60

Annex 4: Field Trials result of Kharif crop (Paddy, Maize, Finger millets, Arhar)

Village name	farmer Name	Area (in nali)				Crop Detail	Yield (Kg/nali)				Yield of local cultivator (Kg/nali)			
		Dhan	Madua	Arhar	Makka		Dhan	Madua VL-149	Arhar VL-1	Makka QPM-9	Dhan	Madua VL-149	Arhar VL-1	Makka QPM-9
Khatyari	D. S. Bisht	1	2	2	1	VL-87	35	30	---	50	30-35	20-25	---	60-65
	Kamala devi	1	2	2	1	VL-87	32	25	---	50	30-35	20-25	---	60-65
	Hira singh	1	2	2	1	VL-85	35	25	---	45	30-35	20-25	---	60-65
	Anand singh	1	2	2	1	VL-87	32	14	---	65	30-35	20-25	---	60-65
	Puspa devi	1	2	2	1	VL-87	34	25	---	50	30-35	20-25	---	60-65
Sub Total		5	10	10	5		33.6	23.8		52	30-35	25-30		60-65
Bhaltwani	Nandan singh	0	2	2	1			15	---	50		20-25	---	60-65
	Shanti devi		2	2	1			14	---	50		20-25	---	60-65
	Champa devi		2	2	1			15	---	50		20-25	---	60-65
	Lila devi		2	2	1			16	---	45		20-25	---	60-65
	Heera singh		2	2	1			15	---	40		20-25	---	60-65
Sub Total		0	10	10	5			15		47		20-25		60-65
Querali	Diwan singh	1	1	2	1	VL-87	35	15	---	60	30-35	20-25	---	60-65
	Dev singh	1	1	2	1	VL-87	32	14	---	65	30-35	20-25	---	60-65
	Tara datt	1	2	1	1	VL-87	30	16	---	55	30-35	20-25	---	60-65
	Nandan singh	1	2	1	1	VL-87	35	18	---	60	30-35	20-25	---	60-65
	Ambuli Devi	1	2	1	1	VL-87	30	20	---	60	30-35	20-25	---	60-65
	Devaki devi		2	1	1	VL-85	35	20	---	60	30-35	20-25	---	60-65
	Bhagwat devi		2	1	1	VL-85	30	22	---	50	30-35	20-25	---	60-65
	Hema singh		2	1		VL-87	30	20	---	50	30-35	20-25	---	60-65
Sub Total		5	14	10	7		32.1	18.1		57.5	30-35	20-25		60-65
Malsakhet	Pratap singh	1	2	2	1	VL-87	20	15	---	50	30-35	20-25	---	60-65
	Mahendra singh	1	2	2	1	VL-85	35	14	---	50	30-35	20-25	---	60-65
	Syam singh	1	2	2	1	VL-87	35	16	---	50	30-35	20-25	---	60-65

	Sudan singh	1	2	2	1	VL-87	30	18	---	45	30-35	20-25	---	60-65
	Madan singh	1	1	1	1	VL-87	30	18	---	45	30-35	20-25	---	60-65
	Dev singh		1	1		VL-87	35	19	---	40	30-35	20-25	---	60-65
	Sub Total	5	10	10	5		30.8	16.7		46.7	30-35	20-25		60-65
Brahmdevchauri	Chandan singh	2	2	2	1	VL-87	30	20	---	50	30-35	20-25	---	60-65
	Hansa datt	1	2	2	1	VL-87	35	20	---	48	30-35	20-25	---	60-65
	Santi devi	1	2	2	1	VL-85	30	18	---	46	30-35	20-25	---	60-65
	Chandra datt	1	2	2	1	VL-87	30	20	---	50	30-35	20-25	---	60-65
	Dev singh		2	2	1	VL-87	30	23	---	52	30-35	20-25	---	60-65
	Sub Total	5	10	10	5		31	20.2		49.2	30-35	20-25		60-65
Rampur	Gopal singh	0	1	2	1				---	48		25-30	---	65-70
	Siv singh		1	2	1			16	---	50		25-30	---	65-70
	Khim singh		1	2	1			18	---	50		25-30	---	65-70
	Jagat singh		1	2	1			20	---	65		25-30	---	65-70
	Jiwan singh		1	2	1			25	---	60		25-30	---	65-70
	Prem singh		1	2	1				---	60		25-30	---	65-70
	Ratan singh		2	2	1			16	---	60		25-30	---	65-70
	Pratap singh		2	2	1			16	---	55		25-30	---	65-70
	Basnti devi		2	1					---	54		25-30	---	65-70
Bhagirat singh		2	1				18	---	55		25-30	---	65-70	
	Sub Total	0	14	18	8	0		21.5		55.7		25-30		65-70
Naugaon	Kishan singh	1	2	2	1	VL-87	40	26	---	50	35-40	25-30	---	65-70
	Mehrab singh	1	2	2	1	VL-85	40	24	---	48	35-40	25-30	---	65-70
	Ganga singh	1	2	2	1	VL-87	40	28	---	60	35-40	25-30	---	65-70
	Devaki devi	1	2	2	1	VL-87	35	26	---	60	35-40	25-30	---	65-70
	Pan singh	1	2	2	1	VL-87	35	25	---	60	35-40	25-30	---	65-70
	Yasoda devi		2	2		VL-87	40	25	---	55	35-40	25-30	---	65-70
	Sub Total	5	12	12	5		38.3	25.7		55.5	35-40	20-25		65-70
	Anand singh	0	3	2	1			15	---	60		25-30	---	65-70
	B.S. kuwar		3	2	1			15	---	65		25-30	---	65-70
	Dharam singh		2	2	1			18	---	60		25-30	---	65-70

Maikholi	Kedar singh			2	1			15	---	55		25-30	---	60-65
	Gani devi		2	2	1			20	---	60		25-30	---	65-70
Sub Total		0	10	10	5			16.6		60		25-30		65-70
Hargarh	Pratap singh	0	2	2	1			15	---	60		20-25	---	60-65
	Gabar singh		2	2	1			15	---	60		20-25	---	60-65
	Dhan singh		2	2	1			15	---	50		20-25	---	60-65
	Balwant singh		2	2	1			20	---	55		20-25	---	60-65
	Dev singh		2	2	1			18	---	55		20-25	---	60-65
Sub Total		0	10	10	5			16.6		56				60-65
Beena	Prem singh	0	2	2	1			15	---	55		20-25	---	60-65
	Narendra singh		2	2	1			20	---	50		20-25	---	60-65
	Gajendra singh		2	2	1			20	---	50		20-25	---	60-65
	Kamala devi		2	2	1			15	---	50		20-25	---	60-65
	Sarop singh		2	2	1			15	---	50		20-25	---	60-65
Sub Total		0	10	10	5			17		51		20-25		60-65
Rohida	Mahipal singh	1	2	2	1	VL-87	45	18	---	50	35-40	20-25	---	65-70
	Ganga singh	1	2	2	1	VL-85	40	20	---	50	35-40	20-25	---	65-70
	Govind singh	1	2	2	1	VL-87	40	19	---	55	35-40	20-25	---	65-70
	Bahadur singh	1	2	2	1	VL-87	35	25	---	60	35-40	20-25	---	65-70
	Buthi devi	1	2	2	1	VL-87	38	16	---	52	35-40	20-25	---	65-70
Sub Total		5	10	10	5		39.6	19.6		53.4	35-40	20-25		65-70
Total		30	120	120	60		34.2	19.2		53.088	30-40	20-30		60-70

Annex 5: Field Trials in Joint Experimentation for Winter Crop (Rabi)

S.N.	Village Name	Altitude	Wheat				Lentil for Rainfed		Gram for rainfed		Mustard for rainfed		Barley for rainfed		Pea			
			No. of cultivator Male/Female	Area Rainfed/Irrigated	Area (in Nali)	Qty. (in kg.)	Area (in Nali)	Qty. (in kg.)	Area (in Nali)	Qty. (in kg.)	Area (in Nali)	Qty. (in kg.)	Area (in Nali)	Qty. (in kg.)	Area Rainfed/Irrigated	Area (in Nali)	Qty. (in kg.)	
1	Khatyari Talli	1200	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
2	Khatyari Malli	1200	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
3	Bhaltwani Walli	1300	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
4	Bhaltwani Palli	1300	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
5	Brahmdevchauri	1300	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
6	Querali walli	1450	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
7	querali Palli	1450	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
8	Malsakhet	1500	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
9	Jaintha	1450	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
10	Sirda	1100	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
11	Gajar	1100	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
12	Kotyura	1000	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
13	Naugaon	1250	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
14	Golkhal	1300	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
15	Taragtal	1250	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
16	Maikholi	1100	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
17	Hargarh	1300	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
18	Beena	1400	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
19	Jogina	1400	2	3	Rainfed	5	5	5	5	4	6	5	1	4	4	-	-	-
20	Rohida	1600	2	3	Irrigated	5	5	5	5	4	6	5	1	4	4	-	-	-
21	Ratkhet	1000	1	-	Rainfed	-	-	4	4	1	1.5	2	0.5	1	1		2	3
22	Kanhoni	1000	1	-	Rainfed	-	-	4	4	1	1.5	1	0.25	1	1		2	3
			42	60		100	100	108	108	80	120	103	20.75	82	82	0	4	6