

**NARRATIVE REPORT OF FOR THE PERIOD JANUARY TO JUNE 2013 – PROJECT  
NUMBER 300-900-1270 ZG (LINEX ASIA)**

**PROJECT REPORT OF LINEX- CCA INDIA**

**1. Formal details**

1.1 **Name of partner organization :** 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 June 2013

**2. Brief description of how the report was prepared:**

The report is based on the activities carried out during the period Jan-June 2013 of the second year of the project by INHERE. The coordinator of the project made use of the information from various activities carried out during the period as well as external engagements related to the project.

**3. Changes in the project setting**

Activities in the project were affected by lack of financial resources. Anticipated and sanctioned resources for the period July-Dec 2012 and Jan- June 2013 were received only partially in June 2013.

There were no administrative changes in the project setting that affected implementation in India. In June there were heavy rains and devastation in large parts of Uttarakhand which affected travel and communications.

**4. 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 of India develop locally adapted innovative technologies to respond to climate change and become more food- secure.*

The five innovations which were identified and selected for participatory Innovation Development (PID) in the course of the first year were:

1. Small implements development for agriculture and post harvest work.
2. Akarkara for white grub control
3. In situ water conservation in terraced fields.
4. Liquid manure

## 5. Chickpea and groundnut as drought resistant crops

Two of the PID arising out of innovations by women were to be taken forward by them while two were to be of men and one in a mixed group. The work on participatory innovation development was initiated in this period and is in progress.

In two villages Naugaon and Bina, modified agriculture implements like VL Syahi Hal (Plough), and small implements like darati, kudal, khurpi, rake, line maker and khurpi were provided to a group of farmers. VL Syahi Hal was found more effective than the local one by the farmers testing it. Only one small problem was identified where the nada used in the plough (connecting jute rassi with Jua) was getting worn off quickly. Traditionally this nada is made of leather which is more resistant. With return to the leather nada this problem could be solved.

The women did not find the new version of darati to have the sharp edge they were used to. The angle of the kudal had to be changed to make it more functional and effective. Equipment like rake, line maker and khurpi were found to be more effective than the traditional ones .

White grub is a major problem in the fields. It was noticed by a farmer that the akarkara plant reduced the number of white grubs in the field. It was decided that in this period the value of akarkara plant in keeping away the white grub would be tested in fields of a group of farmers as well as provided to the VPKAS Almora for testing. Unfortunately the available akarkara seed did not sprout in the nursery and the seeds provided to VPKAS Almora also did not grow. Now it is decided that naturally grown seedlings at INHERE premise at Ratkhet during July-August will be planted in the farmers land and will be tested. Seedlings will also be provided to VPKAS for trial.

15 farmers from 3 selected project villages (5 farmers from each village) namely Naugaon, Quairali and Bina will do plantation of Akarkara as soon as seedling get ready at Ratkhet campus of INHERE in the month of August. Among 15 farmers there are 6 women and 9 men farmers.

For in situ water conservation, farmers are making bunds in their agriculture field and digging trenches on upper side of the field so that water would not run off and would be trapped in the field and as a result moisture could be maintained on the field. In project villages Naugaon, Quarali, Malsakhet and Brahmdevchauri in situ water conservation initiatives have been taken in one acre area by 20 farmers in which 6 women and 12 male famers are there.

Efforts are being made in the project villages to grow drought resistant crops. In this reference it was decided by the farmers in the workshop organized at INHERE campus Chinoni that if it does not rain timely at sowing time they will grow madua in nursery and will transplant when it rains. Fortunately in this season rainfall occurred quite timely so there was no need of raising nursery.

Chickpea seeds were provided to 10 farmers (5 men and 5 women) and they grew timely but unfortunately sprouted plant and even seed was damaged by birds and wild animals. As this was noticed in all the villages we can say that chickpea crop

is not suitable for climate change adaptation in the present circumstances. Ground nut seed could not be provided due to unavailability of seed.

Under joint experimentation the species of crops sown in Rabi season are given in Annexure 1. Crops were sown in the month of Oct.Nov.2012 and harvested in the month of April – May 2013. All the information and data regarding cultivation and production was documented. Among the crops experimented wheat and barley species was found successful and gave good results. Lentil (Masoor) has also almost satisfactory results but Peas and Gram could not be successful. In 11 project villages 65 farmers were given rabi crop seeds namely wheat, Lentil, Mustard, Barley, Gram and Pea. These crops were sown in 390 nali or approximately 8 hectare area. In demonstration area of Ratkhet and Bhatoli was also taken into consideration. The main crops like Barley, Mustard, Lentil, Gram and Pea were tried in 10 nali each at both the sites. The result was same as in project village. Detailed information regarding name of the crop, species, seed quantity, no. of farmers is given in Annexure 1.

Farmer wise detailed information table is attached as Annexure No.2.

### **Joint experimentation in kharif crop**

Joint experimentation in kharif crop namely Dhan (Paddy), Madua, Ugal, Madira, Bhat, Gahat, Soyabean and Makka is being done in this monsoon season. Before selecting above crops suggestion was taken from the farmers as well in regard to species and then seeds were procured and distributed. In this joint experimentation 35 motivated farmers consisting of 19 men and 16 women farmers from 6 project villages have been selected and provided seeds well in advance in the month of May 2013. (Annexure No. 3)

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

Training with the support of Prolinnova PID trainers from Nepal was planned but did not materialize due to lack of resources.

## **Training community groups in joint experimentation for climate change adaptation .**

On May 15, 2013 a workshop was organized at INHERE Training Centre, Chinoni. The objective of this workshop was to provide basic knowledge of cultivation of kharif crops to be provided and distribution of selected kharif crop seeds .Apart from this detailed information was imparted to the participants on SRI / SCI technique on paddy cultivation by the CCA team .Total 18 farmers consisting of 8 women and 10 men farmers participated in this workshop. Seeing the results of SCI technique on wheat in Rabi season some farmers are very enthusiastic for adopting this on paddy also. This time 5 farmers of village Naugaon and Quarali are following SRI technique for paddy in 07 nali areas. (Annexure No. 4)

### **Exposure visit**

For gaining better understanding and practical knowledge on basics of agriculture and water conservation technique, one exposure was organized on April 13, 2013. Eleven farmers of project villages were taken to VPKAS agriculture farm at Hawalbagh, Almora. Farmers freely interacted with the agriculture scientists. They also observed In Situ water conservation techniques in the agriculture fields and got motivated to try on their own fields. (Annexure No. -5)

### **Sharing of experiences**

Experiences of CCA project are being shared with the farmers of adjoining non project villages like Akhoria, Jukanauli, Baralgaon, Purama Lohwa, Pansaragaon, Panduakhal, Navan etc. Farmers of these villages are very keen to adopt the validated techniques in agriculture providing reduced risk in changed climatic conditions.

### *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 Nairobi, Kenya on May 25 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. Issues leading to delays in reporting and financial disbursement were also discussed and appear to have been resolved.

### *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*

Local initiatives were shared at the 3<sup>rd</sup> Asia-Pacific Climate Change Adaptation Forum held at the Songdo ConvensiA Centre in Incheon, Republic of Korea from 18-20 March 2013. The main theme of the forum was “Mainstreaming Adaptation into Development”. The Forum was hosted by the Korea Environment Institute (KEI) in association with the Korea Adaptation Center for Climate Change (KACCC). The co-organisers were the United Nations Environment Programme

(UNEP), the Institute for Global Environment Strategies (IGES), the Regional Resource Centre for Asia and the Pacific (RRC.AP), and the Stockholm Environment Institute (SEI).

INHERE also became a member of the Climate Action Network, South Asia to engage more effectively on policy issues.

### 3.3 Additional effects and risks

In mid June the state of Uttarakhand was devastated by cloudbursts and subsequent floods. The rains and floods were untimely. We anticipate that this natural disaster will lead to loss of seed and affect farming related livelihoods.

### 3.4 Evaluation

Too early for evaluation of the project

### Conclusions

The efforts were hampered by a long delay in the arrival of funds. We expect this to be rectified and the project to make up for lost time. The plan of action for the period July-December 2013 is given in Annexure 6.

## - ANNEXURES

### Annexure I

Sl. No	Crop Name	Variety	Area sown (Nali)	Seed (kg)	No. of farmers	Production kg/Nali	Local prod kg /Nali	Remark
1	Wheat	VL – 907, VL -892	55	110	(65) 30 women 35 men	35-40	30-35	<ul style="list-style-type: none"> <li>○ Production was 35 to 40 kg per nail</li> <li>○ The color of the whole plant was deep green in comparison to local and other varieties.</li> <li>○ The seed and ear (Bali) of VL-892 was big and long in comparison to VL 907 and production was also slightly more than VL-907.</li> <li>○ SCI technique was found very effective in wheat crop and the production of VL-892 under this technique became 75-80 kg/nali.</li> <li>○ In some villages wild pig caused damages to this crop.</li> </ul>
2	Lentil	VL Masoor-56 and PL-4	55	110	65 (30)	10-12	12-15	<ul style="list-style-type: none"> <li>● The color was black and size was big of the variety VL masoor -56 where as of PL -4 the color was brown and seed size was also comparatively small.</li> </ul>

					women and 35 men)			<ul style="list-style-type: none"> <li>The production of VL-56 was more in comparison to PL-4</li> <li>The production of both the varieties was less than local variety.</li> </ul>
3	<b>Mustard</b>	PPS-1	55	27.5	65 (30 women and 35 men)	8-10	10-12	<ul style="list-style-type: none"> <li>This variety is been developed by Pant Nagar Agr. University.</li> <li>Pod (Fali) was very bulky but size of seed inside was small</li> <li>The expansion of the plant of this variety is more and height is less in comparison to local and other varieties</li> <li>Probably this variety is suitable for Tarai</li> </ul>
4	<b>Barley</b>	VL – Jon -56	55	55	65 (30 women 35 men)	35-40	25-30	<ul style="list-style-type: none"> <li>The production of VL-Jon -56 was more than the local variety</li> <li>The plant height is less and expansion is more than other varieties.</li> <li>This barley variety has the capacity to be grown in dry areas as well.</li> </ul>
5	<b>Gram</b>	Pant Gram - 186	55	110	65 (30 women 35 men)	Negligible	Not grown in these villages	<ul style="list-style-type: none"> <li>Just after the sprouting of the seed whole crop was damaged by birds and animal like hare etc at all the places. So production was nil.</li> </ul>
6	<b>Pea</b>	VL Matar - 10	3	6	2	Negligible	70-90	<ul style="list-style-type: none"> <li>Sprouting could not happen timely due to late rainfall and unavailability of irrigation facilities.</li> <li>Late sprouted plants were damaged by wild hen, hare and birds so production was nil.</li> </ul>

### Annexure 2 (Separate excel attachment)

### Annexure 3

Sl. No	Name of crop	Species	Area sown (Nali)	Quantity of seed distributed (kg)	Benefited farmers.
1	Dhan (Paddy)	VL-65 VL-87 & VL-85	40	40	16(10 Female, & 6 male)

2	Madua (Ragi)	VLM-149, VLM-315 VLM-324	132	66	20 (12 Female, 8 Male)
3	Ugal	VL-7	05	05	5 (3 Female, 2 Male)
4	Madira	VL-207	16	08	15 (10 Female, 5 Male)
5	Bhatt	VL-65	50	100	25 (15 Female, 10 Male)
6	Soyabean	VL-47	25	50	25 (15 Female, 10 Male)
7	Gahat	VL-15 VL-19	35	70	35 (20 Female, 15 Male)
<b>Total</b>	<b>07 Crops</b>		<b>303 Nali</b>	<b>339 kg</b>	<b>35 Farmers.</b>

#### Annexure 4

#### 1.1 Farmers training on Climate Change Adaptation and PID

Date	Subject	Venue	Name of trainer	Gender of trainer	Name of farmers	Gender	GP Name	RV name
15/05/2013	Training of farmers on Climate Change Adaptation and Jiont experimentation on Rabi crop i.e. Wheat, Gram, Barley, Lentil, Mustard and Pea	Campus Chinoni, INHERE Masi, Distt.- Almora, State- Uttarakhand, INDIA	Mr. Girish Pant (Social & environmental expert)	Male	Bhagwati Devi	Female	Quairali	Quairali Walli
					Geeta Devi	Female	Quairali	Quairali Walli
					Hema Devi	Female	Quairali	Quairali Walli
					Basanti Devi	Female	Quairali	Quairali Walli
					Chandra singh	Male	Beena	Beena
					Amar singh	Male	Beena	Beena
					Hansa Dutt	Male	Bhaltwani	Brahmdevchauri
					Shyam singh	Male	Quairali	Malsakhet
			Pratap singh	Male	Quairali	Malsakhet		
			Tara singh	Male	Jukanouli	Jukanouli		
			Puran singh	Male	Naugaon	Naugaon		
			Madan singh	Male	Quairali	Malsakhet		
			Bhupal singh	Male	Quairali	Malsakhet		
			Kishan	Male	Naugaon	Naugaon beria		

				singh		beria	
				Neema Devi	Female	Naugaon beria	Tragtal
				Hema Devi	Female	Naugaon beria	Tragtal
				Kamla Devi	Female	Bhaltwani	Brahmdevchauri
				Bachuli Devi	Female	Beena	Beena

### Annexure 5

#### Exposure visit to VPKAS, Almora

Sl No.	Name of farmers	Name of village
1	Kisan Singh (Male)	Naugaon
2	Bhupal Singh (Male)	Naugaon
3	Syam Singh (Male)	Malsakhet
4	Nandan Singh (Male)	Naugaon
5	Neema Devi (Female)	Taragtal
6	Prema Devi (Female)	Taragtal
7	Ku. Rekha (Female)	Taragtal
8	Bhagwati Devi (Female)	Quarali
9	Govind Singh (Male)	Rohid
10	Basanti devi (Female)	Quarali
11	Hansa Dutt (Male)	Brahamdevchauri

## Annexure 6

### Six month financial and functional action plan

Sl. No.	Project head no.	Nature of work	Estimated unit cost	Particulars	Total cost
1	2.3 Implementation of PID	Implementation of PID at Patalgoun	225000	1	225000
		Liquid manure preparation in three villages, 3 group from 3 villages each consisting 5 farmers.	5000	3	15000
		Required napier roots for 3 villages is 10 qt.	550	20	11000
5		Check dam and plantation at Bhatoli	15000	1	15000
6		Bio-gas and bio-slurry	25000	2	50000
7		Polyhouses	30000	2	60000
2		2.2 local Innovation implementation and documentation	Sun dryer	20000	2
3	Extractor for experiment		2000	2	4000
4	Essential oils Extractor for farmers use (Condensor, Collector and Separator)		35000	1	35000
8	Drip irrigation technique at Bhatoli		15000	1	15000
9	Seed germination tray		500	50	25000
10	Sprinklers		25000	1	25000
11	Machaan formation		5000	1	5000
12	Torch		2000	1	2000
13	Light trapper		1000	8	8000
14	2.4 Training community group in joint experiment	6 training workshop will be organised for joint experiment for PID and Innovation	6000	6	36000

15	3.1 Training of CSOs and partners NGOs on LI & PID	3 NGO namely Grass, Janadesh and Mount Valley.	15000	3	45000
16	6.1 International exposure	Exposure to Nepal, 6 persons	10000	6	60000
17		Exposure to Cambodia 3 persons	40000	3	120000
<b>Total estimated cost</b>					<b>796000</b>