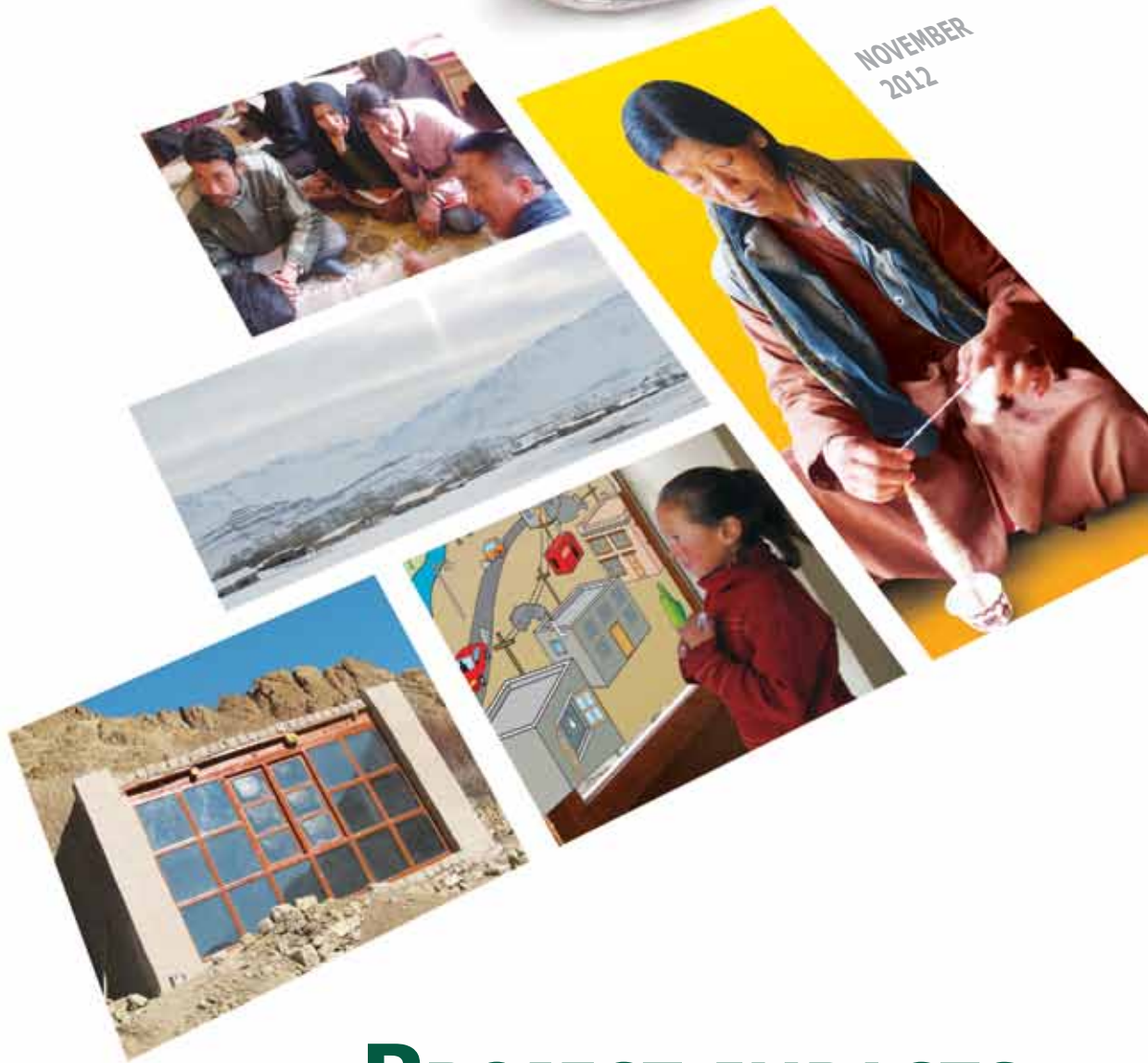




NOVEMBER
2012



PROJECT IMPACTS

Stakeholders' testimonials

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Stakeholders' testimonials

Remote in the west Himalayan range, the valleys of these desert areas lie at more than 3,000masl. They are characterized by temperatures that can easily drop below -20°C during harsh and long winter, a short frost-free period, meagre annual rainfall (10-100mm) and scarce vegetation. Villages are isolated both geographically and economically. Shortage of local fuel and high price of imported fossil fuels result in energy vulnerability. Since thermal efficiency of most of the buildings is poor, indoor temperature often falls below -10°C in winter. Living conditions are all the more difficult as combustion in traditional stoves produce lots of unhealthy smoke. Besides, the impacts of global climate change have been increasingly perceptible in the region over the last 10 years.

This region benefits from an exceptional sunshine of around 300 days per year, exploitable for the dissemination of renewable energy technologies.

GERES is a French NGO that has been working in India since 1986, aiming at supporting local NGOs and institutions to promote income generation activities and ecofriendly technologies by using renewable energies and energetic services. GERES along with five partner NGOs (Ecosphere, LEDEG, LEHO, LNP and SECMOL) formed a consortium to implement a project from 2009 till end 2012. They aimed at reducing the pressure on rural mountain communities in securing their winter heating needs as well as the pressure on the fragile ecosystem from the unsustainable harvesting of scant natural resources. The approach consisted of improving livelihoods of rural populations living in these remote villages of the trans-Himalayas by improving unhealthy winter conditions, supporting the development of income generation in the newly improved habitat, alleviating energy vulnerability and setting up a sustainable network for dissemination of energy efficient housing technology.

OUR FIELDS OF ACTION

Household energy

Since most buildings are thermally poorly efficient, room temperature often falls below 0°C in the early winter morning, which – when combined with smoke from dung combustion in traditional stoves - results in unhealthy winter living conditions.

To take optimum benefit of solar radiation and retain heat, the consortium of NGOs has developed low-energy consumption houses and buildings. Families can build such passive solar rooms with local materials and techniques, at affordable cost, saving up to 60% in fuel and reducing pressure on the environment.

Awareness and adaptation to climate change

Over the last few years, impacts of climate change have been increasingly visible in Ladakh and Lahaul & Spiti. Rainfall and snowfall patterns have been changing; small glaciers and permanent snow fields are melting affecting water runoff in the rivers and streams, and rise in temperature and humidity inducing favourable conditions for the invasion of insects and pest aggression. The consortium's approach was to assess the impacts specific to the project region, as it had never been done in the past. An important activity of community awareness has been performed. Later on, adaptive strategies were explored and tested such as artificial glaciers.

Economic activities and local industry

The consortium also encourages traditional income generation activities, such as wool transformation, in solar community building which enable artisans to increase their production and generate additional income. 420 women from SHG and 33 individual artisans were supported by the project so as to improve their handicraft production, skills and income.

Capacity Building and Governance

Besides the consortium of NGOs, the project also set up grassroots-level networks composed of local representatives (village heads, councillors, etc.) and policy-level networks involving policy makers from District Authorities. The objective was to ensure wide dissemination of the LEC technologies and sustainability of the Consortium's initiative. For the same purpose, particular efforts were made to strengthen the capacities of the civil society.

Several stakeholders have been interviewed to express their feedback regarding the project in which they have taken part. Their testimonials gathered in the present document illustrate the impacts of the Consortium's initiative.

Abbreviations used in this document:

LEC: Low-Energy Consumption
LNP: Leh Nutrition Project
LEHO: Ladakh Environment and Health Organisation
LEDeG: Ladakh Ecological Development Group
SECMOL: Students' Educational and Cultural Movement of Ladakh
CBSE: Central Board of Secondary Education
SHG: Self Help Group

Local words:

Goba: village headman.
Panchayat: village level government body.
Thap: traditional stove.
Bukhari: traditional space heater.
Yakzes: a wild plant that grows in the mountains.
Shingsak: decoratively carved wooden lintel over doors and windows in traditional Ladakhi architecture.



“If we don’t do anything then I don’t know what Ladakh will be like in the future.”

TASHI LAMO ADAPTATION TO CLIMATE CHANGE

Age: 17 years old
Village: Phyang
School: Druk Padma Karpo. Shey
Situation: student in 10th standard class
Number of siblings: two sisters

I am a 10th grade student and I first heard about climate change at school. Last year we did a project called ‘Glacier melting in Ladakh’ in which students and teachers participated as a team. First we read about the greenhouse effect and later we made experiments and field observations. Climate change is often mentioned during morning assembly and we commemorate world environment day.

LNP came to our school and gave us a very good climate change awareness presentation through posters and movies. They showed us where the polluted areas are located and clearly explained how they got polluted. I learnt several things: that now more than ever is important to use natural resources like the sun, water and wind; to take measures in our daily life to reduce CO₂ emissions; to plant as many trees as possible and not to use polluting materials.

I liked the posters but I liked the movie the most because the subject is difficult to understand just by reading a book or by being told by someone. A movie is entertaining and makes it easy to understand.

Climate change is a lasting change in the weather and the main cause is CO₂ emissions. The entire world is feeling the effects of climate change and Ladakh is no exception. Nowadays everyone in Leh wants to have a car, at times it looks like a competition. They don’t think or they don’t care about the effects of too many cars in such a small place. We should use public transportation or, if the distance is short, walk or ride a bicycle; I often do that.

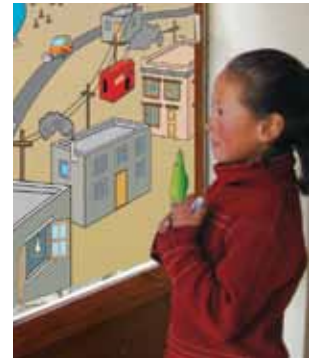
Not all is bad, some changes are happening, CFL bulbs are becoming popular; lots of trees had been planted; a huge hydro power plant is being built at Alchi and solar panels are now a common sight. All this is good for us and the environment.



It is now in our hands, the young generation, to take measures and to make people aware. If we don’t do anything then I don’t know what Ladakh will be like in the future. I am

very concerned because I think this is a big issue and shouldn’t be taken lightly.

At school I discuss the issue with my schoolmates but I wish we could find a way to discuss it with other schools, only by telling one another the information can be spread across the population. The best thing we can do right now is to campaign on ‘environment awareness’, especially in rural areas because the vast majority is unaware of the situation.



I have discussed the issue with my family. I prefer to discuss it with elders because they have a better idea of what’s happening and have witnessed changes in the weather. My grandfather told me there is no doubt that glaciers are retreating and that not long ago the snow fallen in December used to melt only in April or May, in time for the agricultural season, but now is melting in February. Other people told me there is now a worm called ‘codling moth’ in Nubra which is very harmful for agriculture, and they believe its appearance is due to the warmer climate. Many have noticed a decrease in the amount of drinking water; streams polluted and drying up and that the water level of Tso-kar, Pangong and Tsomoriri lakes is lowering.

I would like to learn more about climate change. It will be good to have a specific course about its impacts, mitigation and adaptations. The more I know the better I’ll be prepared to contribute to save the environment. I have already joined several school programs such as wild life protection and bird watching.

However, we are just ordinary citizens, the number of people we can reach is limited. The Government has the means to approach the rural areas and make awareness campaigns on a large scale as well as taking measures to mitigate climate change impacts. Dramas are very popular in Ladakh. Government officials should make street plays to convey the message. People get bored with lectures whereas with a drama they remain interested.

I don’t know much about the projects local NGOs are implementing in Ladakh but I was impressed with LNP presentation.



“As teachers the biggest problem we face is the lack of accurate information.”

TSEWANG DOLMA ADAPTATION TO CLIMATE CHANGE

*Age: 26 years old
Village: Mulbekh
School: Mahabodi Residential School, Choglamsar
Experience as teacher: 1 and a half years
Situation: School's Principal*

I am a school principal and even though we keep hearing about climate change on radio, television and newspapers, the awareness workshop conducted by LNP was very helpful to make us understand how urgent the situation is.

The innovative presentation through slides and posters was very informative and effective. We, students and teachers, learnt a lot. For example, I didn't know that cows emit CO₂ and hence contribute to the greenhouse effect. The students always asked us how is it possible that cutting trees to grow crops could cause global warming. It was difficult for us to answer that question, but in the LNP presentation we got a clear answer to this and other questions.



It was a pleasure to see how the presentation inspired the students. Long afterwards they were still asking questions related to climate change. So to keep the subject alive in the students' minds we created week long activities, special projects and presentations during morning assemblies. The students' enthusiasm is now focusing in organizing workshops and projects in the villages. And all this was unleashed by the LNP presentation.

As teachers the biggest problem we face is the lack of accurate information. We have a collection of movies on climate change but they aren't very helpful. We would like to have scientific and updated information in the form of books or movies.

At school level we are taking the issue of global warming very seriously and the CBSE and other state boards have included the subjects of environmental science and disaster management in the curriculum. We don't have a specific course on climate change but to compensate we have created eco clubs led by pro active students who do research in books and on the Internet to make presentations on occasions like environment day, Earth day or plantation day. Their involvement is essential to assimilate such a complex subject.

We have taken also some measures to mitigate climate change. We use only CFL bulbs and advise the students to do the same at their homes. We use the school bus for both students and staff and promote vehicle sharing.

Global warming or climate change is already affecting Ladakh. The 2010 floods were a lesson for all of us. We should learn from it and understand that there is something very bad happening with the climate. Almost every day we hear about unusual events related to climate change all over the world. We hear of floods and landslides in Himachal, we know that the weather in Leh is becoming unusually hotter and we hear that the sea water level is rising. These are very dangerous signs.

Local authorities should take the lead and work seriously on climate change impacts and adaptations. As far as I know they have taken some initiatives like plantation drives and cleaning campaigns, which is good but hardly enough.

It is very important to educate the younger generation, they are Ladakh's future and they are probably going to face even more problems than the ones we already have. If they are aware, they will be better prepared to find ways to solve or at least mitigate the climate change impacts.



I don't have a clear picture of what are they doing at the moment but sure I have heard of NGOs like LEHO, LEDeG and LNP since many years and even when I was a student I participated in many programs organised by LNP. I think is very good that there are so many NGOs in Leh working on different issues such as wild life, education, sanitation etc. In India, with such a large population, the government cannot cope to solve all the problems.

Schools and NGOs should work together alongside with the government to tackle the climate change issue, one entity alone cannot do much. For example, in Ladakh the government cannot reach the remote and far flung areas but the NGOs do it often. Therefore NGOs have a great role to play and should come forward.



“It is my belief that even without the NGOs support people will construct LEC houses gradually.”

SKARMA TSERING HOUSEHOLD ENERGY

Age: 56 years old
Village: Khanji
Occupation: LEC Mason
Family status: Married
Family members: seven

I have been working as a mason for the last 43 years. I never kept track but I would say I have built around 30 houses using conventional methods and about 15 houses using passive solar techniques. Nobody taught me how to build a house, I learned by myself by paying attention when someone was building a house in my village and by visiting several construction sites. In the same way I taught myself carpentry. Nowadays I have 5 students learning my trade.

In 2009 I attended my first training on LEC housing. There were a large number of masons from all over Ladakh. That training was an eye opener; I came to realize that we can use the sun energy to warm our houses! Something so simple turned into a very interesting and practical alternative since Ladakh is a very cold place, has lots of sunny days and people suffer a lot during winter. But not everything was easy during that training: I never went to school and don't know English and suddenly there were concepts such as 'thermal mass' or 'window ratio' and mathematical rules that I didn't understand at all. And I wasn't the only one.

Despite the difficulties I persisted because I was really interested, and attended four more trainings organized by LEDeG, LEHO, LNP and SECMOL. Little by little I was able to understand the technicalities involved in LEC building. The trainings were very interesting. I liked especially the practical sessions.

During the sessions I came to learn about other uses of solar energy, such as solar lighting and solar water heaters. I wish I could learn more about it so we can incorporate it into the passive solar house and have an even more comfortable home. I hope there will be more training opportunities on LEC technologies.

One of the most interesting features of a passive solar house is that you don't need sophisticated techniques or materials; they are built mostly with local materials such as mud bricks, stones, wooden beams and sticks, etc. And even for the insulation you can use materials such as peat bill, yakzes or hay that are readily available everywhere in Ladakh. The exceptions are the glass panes for the windows and the polythene used in an attached greenhouse.

It is true that passive solar houses are a bit more expensive than conventional ones and some people complain about it but I believe the difference is not insurmountable considering that its benefits make it all worthwhile.

In my opinion, without diminishing the merits of the other passive solar house types (attached greenhouse and direct gain), the solar wall is the most adequate for Ladakh even though is slightly more expensive than the others chiefly because the large window requires more wood and glass.

Whenever I start a new house it is me who makes the design, occasionally the owner makes its own but in the end he has to consult me and the carpenter before taking decisions. I try to convince him to build a LEC house but is not easy. Over the years I have noticed that in general people think of a house in terms of status and they focus in size and aesthetics. They don't care if the house is oriented to the North or if it will be warm during winter. Many people still like to build their houses using large amounts of cement and iron, which have to be brought at a great expense either from Srinagar or Manali.



Wherever I go people ask me about LEC housing. I tell them about orientation, shading obstacles etc. but my first and foremost advice is that the house should have a minimum of 6 hours of sun exposure to perform correctly. It is my belief that even without the NGOs support people will construct LEC houses gradually.



LEC houses are very good for health as well. I have also been trained as an Amchi* and in that capacity I have corroborated how warm rooms help to prevent cold related diseases like pneumonia.

* Amchi: Tibetan medical system that provides a holistic approach to health care



“My health has improved, now I don’t suffer from joint pains as before.”

TSERING ANGDUS LEC HOUSE OWNER/PROMOTER

Age: 54 years old
Village: Saspotse
PSH type: Solar wall
Family status: Married
Family members: three

Old houses in Ladakh usually have a room located somewhere in the middle of the whole house called *chantsa*; during winter that room is the place where the whole family gathers to warm up, cook, eat and sometimes sleep. In our old house the *chantsa* had only one small window. The house was built by an old mason from Hemis and he just followed the traditional ways. I don’t think he knew about house orientation or sun exposure.

As a result the house was not comfortable during winter. When I was a kid we didn’t have a *bukhari*, to keep warm we had to light a fire inside the house. At times we had to keep the fire running the whole day. For that it was necessary to collect a large amount of cow dung and sheep and goat droppings.

At the end of summer, just after threshing, we used to make trips to the mountains to collect cow dung, shrubs or anything that burn. It’s hard to estimate but I would say we needed about 300 kg of fuel for the whole winter. The mountains are far away, to go and come back takes an average of six hours, so we have to make dozens of trips. It’s a time consuming task that keeps us busy for two months at least.

In Ladakh the working season is in summer and during winter there is not much work to do and we mostly do handicrafts and wool spinning but if it is cold our hands freeze very fast and we can’t work.

People like to orient their houses facing the road in order to see what’s going on in the village but to me that is not so important. What matters most is to be warm and a smoke free environment. When people from LEHO explained us that it was better to orient the house towards the south to have warm rooms I had no doubts and immediately decided to build a LEC house.

Even before I started the construction many people asked me whether I was doing the right thing by building a LEC house. Others told me it may not be warm. They were extremely skeptical and kept saying all kind of negative comments but I didn’t pay attention and went ahead with the construction. Now those who questioned me regret not building a LEC house



when they had the chance. They regret it because the subsidy given by the NGO (the window mostly) is not available anymore. If they build a LEC house now they will have to bear all the expenses. LEC houses are indeed more expensive than conventional houses as we have to make double walls and need insulation and double glazing.

As I said before I never had doubts and I like the house just the way it is, I don’t even miss the traditional Ladakhi look and ornaments. What matters is that now we are warm and comfortable even at the height of winter.

The construction process was extremely educative. I came to realize how relevant insulation is to keep the warmth inside the room. I learnt about the different materials to insulate walls, roof and floor and also learnt about why we have to install double glass. Now I understand why a house without insulation is so cold. Whenever I hear someone is going to build a house I tell them to orient the house towards the south to get more sun radiation and to insulate walls and roof.

Now that we don’t have to go so many times to the mountains to collect dung we can spend more time doing handicrafts or spinning wool and goat fleece. We can work comfortably till 10 or 11 PM. In the old house we had to go to bed at 8 PM because it was so cold we couldn’t do anything at all. Even sleeping was difficult. My health has improved, now I don’t suffer from joint pains as before. Aged people are probably the most benefited with a warm room.

I had no idea what a LEC house was until LEHO came to our village and explained to us what it was and how beneficial it would be for us. It’s been four years since we built the house and we can emphatically say that it has changed our lives for good.





“It is more expensive than conventional houses because of double wall and double glass but the benefits outweigh the investment.”

SONAM DOLMA LEC HOUSE OWNER/PROMOTER

Age: 54 years old
 Village: Umla
 PSH type: Direct Gain
 Family status: Married
 Family members: four

I am originally from Stok but I got married in Umla. My house was built by two local masons but is so cold that in winter we had to use both a *thap* and a *bukhari* at the same time to keep the main room warm, so a lot of our time and effort would go in collecting large quantities of firewood and cow dung from the nearby mountains. I think the house is so cold because the rooms are too big and they don't get enough sun light.



From my point of view to have a comfortable house is even more important than having land for growing crops. Umla has only twenty households; we all know each other very well and there is a lot of social interaction.

Me and my family didn't know anything about LEC housing until one day LEHO came and explained us what it was and asked us if we were interested in building one. They also said that with a LEC house we will save a lot of fuel. Many of us showed interest and I immediately agreed to build. Afterwards they came back to check the feasibility. However, I am a farmer with no source of income so I couldn't build a new house but I decided to retrofit the main room using the direct gain technique.

The NGO staff came several times and explained and supervised everything so thoroughly that right from the start it was clear the room will be comfortable. During the construction I learnt about insulation and that we can use sawdust, hay or straw to stuff the walls, roof and floor. We have to insulate not only the walls but also the roof and floor to prevent heat losses. In my case we didn't insulate walls because the passive solar room has a room to the east and another to the west so they serve as insulation. But the roof I made sure to insulate it very well.

Although I wanted to insulate the floor I couldn't because it was impossible to excavate deep enough to fit the insulation. It would be very nice if we could incorporate some traditional features such as *shin-*

gtsak but I couldn't afford it. Wood for construction is very expensive in Ladakh. As a matter of fact when I agreed to retrofit the room I made sure the NGO would provide the window otherwise I wouldn't have been able to retrofit the room.



People usually want to have a nice good looking house and they orient the house towards the road so villagers see how beautiful house they have. But in terms of warmth and comfort we need to orient the house towards the south. Using solar energy we save a lot of fuel. Only once in the early morning and late in the evening and for a short time we have to use the *thap*. The *bukhari* became obsolete. And the window is so big that we have lots of sun light during the day.

Many people have come home, including foreigners, asking me about the benefits of a LEC house. I tell them that it is very good for everyone but especially for old people and children. One of the foreigners came in winter and brought a thermometer. He told me the temperature inside was 19 degrees Celsius. Whoever wants to build a house should embrace LEC principles. No one has criticized the house, I have heard positive comments only. People say it looks nice and is very comfortable.

The only problem I had was that some glass panes broke two or three times. I asked the NGO representative for the cause and he said it was an overheating problem. They solved it soon after.

The health of the whole family has improved mainly because now we don't have to burn so much dung and there is less dust and smoke, but also because the room is so warm that our bodies can relax instead of being stretched tight and stiff because of the cold.

My family and I are very happy with the LEC room. Looking back, it was one of the best decisions we ever made. It is more expensive than conventional houses because of double wall and double glass but the benefits outweigh the investment. Reducing the fuel consumption substantially means we need to collect less cow dung. To many families this is crucial since they don't have anyone to collect it.



“We have come a long way with LNP and are very grateful for their support over the years...”

TSEWANG STANDOL SELF HELP GROUP MEMBER

Age: 59 years old
Village: Chemday
Family status: Married
Family members: Five



We are a group of twelve mothers that in 2005 decided to get together and create a Self Help Group (SHG) to learn how to do handicrafts in order to improve our livelihood. We are farmers and have no source of income. During

summer we are busy working in the fields and looking after the animals. We grow barley, peas and potatoes for our own consumption. Occasionally we sell part of it if we are pressed for money.

In autumn, when farming is over we start gathering to work for the SHG. But it is mostly in winter when we have more time to do handicrafts. We get together in the morning around 10:30 after milking the cows and sending our children to school to work continuously till 3:30 in the afternoon. We are able to work in winter thanks to the passive solar workshop with an attached greenhouse that we built with the help and supervision from LNP. The rooms are so warm that we can work comfortably and forget about the cold outside. Before we had to bring a *bukhari* to warm up. To make *phingpa** we use a lot of water but the water was either frozen or so cold that it was impossible to work.

LNP encouraged and helped us ever since we created the SHG. That was crucial because when we started we didn't know about knitting or anything else. First they took us to Nubra for an exposure visit and after a brief training we started knitting sweaters and socks using a borrowed machine.

Later on the NGO brought a trainer from Chuchot who taught us during six months how to make *phingpa*. With felt we produce carpets, cushions, bags and slippers. It took some time to learn but we are very good at the end of it. Apart from *phingpa* we produce traditional woolen socks, gloves and caps and garments for small children using commercially produced yarn. We buy wool from Kharnakling and yarn we buy from Leh market.

* *Phingpa* (felt): a fabric made of compressed wool.

Since 2005 we have taken several trainings in techniques such as hand knitting, natural dyeing and in administration topics like accounts, marketing, business management and book keeping, as well as experience sharing workshops with other SHGs and exposure visits.

Phingpa products have high demand and usually we don't sell them in Leh. Drivers buy the cushions and we sell the carpets mostly in the village. In Leh we sell woolen products which are popular among the tourists. We keep the items in a shop and they are sold very fast mainly because we don't produce much.

So far we have saved 150,000 rupees (€ 2,149). The money is distributed according to both the SHG and the members needs.

For example, last year we gave six thousand rupees (€ 86) to each member to buy uniforms and books for their kids. My family (husband, two daughters and a son) are very happy with my work at the SHG and have supported me from the very beginning.



All group members are very cooperative and don't hesitate to help each other. If one of us cannot come to work for a day there is no problem. All decisions are taken democratically, whether it is which products we are going to produce or to elect the SHG president. I am the group's president and we have a vice-president and a cashier. None of us went to school so there is an educated girl that comes to help us once in a while with the accounts and office work.

We have come a long way with LNP and are very grateful for their support over the years: first we learnt the trade and then improved the quality of our products and the efficiency of our organization. Apart from that we are very sorry that our relationship came to an end. It came at a bad moment, we were thinking of increasing the production but if we do we will definitely need support to implement a marketing strategy; we have no idea about how or where to place a large number of products. We approached the government for support but we are still waiting for a response.

We are still functioning, although not at the same level as when LNP was with us, and hope we can keep improving.



“...what helped me the most was their support to build a passive solar workshop...”

LAMCHUNG TSEPHEH INDIVIDUAL HANDICRAFT ARTISAN

Age: 55 years old
Village: Liker
Family status: Married
Family members living with him: seven

When I was 15 years old my father passed away. Back then people were very poor and all I wanted to do was to go outside Ladakh to work as coolie but my relatives convinced me to become a potter since it was a traditional craft in Liker. I accepted because I thought it was a good way to earn a good income.

To develop my first products I asked help from the village experienced potters but they weren't keen on passing-on their expertise. However, I observed closely their products and got inspiration from their work. In the beginning I carried my pots to the nearby villages in a donkey and exchanged them for barley. I was very happy.

When I started, every household was connected to pottery in one way or another. Now the situation has changed drastically. In recent times there were only three experienced potters in Liker and two of them retired recently. So now I am the only one left.

I keep asking the youngsters to learn my trade but they don't seem to be interested. It could be because they don't like to dirty their hands with mud but it is also true that most of them prefer to go to school. There is a new women self help group in Liker that has started to do pottery and LEHO, asked me to train them. The women's group is doing well. My son, who is also learning the trade from me, is very good at it and I hope he will keep the tradition alive.



There is neither clay nor sand in Liker so I have to bring them from a place six kilometers away. I also have to collect cow dung and chunks of grass with soil. I use the cow dung to fuel the kiln and the grass chunks as a wind barrier to prevent the fire from extinguishing. To bring home all that I used to borrow cattle or donkeys from my neighbors but nowadays I can't find any so I have to hire donkeys.

I design the pots' shapes myself; for decoration I use motifs given to me by Tsering, a professional painter

I design the pots' shapes myself; for decoration I use motifs given to me by Tsering, a professional painter



from my own village, whose family is entirely devoted to traditional painting.

I heard there are machines to decorate the pots, a process I do by hand. I would like to go outside Ladakh to learn more about my trade and to see machines or kilns that could help me to speed and improve my work. Mechanization would be very helpful because I work alone and the whole process is a heavy task for a single person.

I know there is a demand for pottery products but I cannot keep up with the supply and the main market is in Leh which is sixty kilometers away. When I have time to spare I stay in Leh and sell the products myself but when I don't I keep the products at a shop asking them to sell them for me. It will be great if I could have my own shop. Most of the buyers are locals, seldom tourists buy my products and most of the demand is for decorative items such as flower pots, incense holders, carafes, etc.

This is my only source of income and my earnings are enough to support my family. Besides pottery I do farming. Although I don't have immediate economical needs, I wish I could get economical support to mechanize the whole process; to get grass and cow dung and to go outside Ladakh for an exposure visit.

I would like to see the government providing assistance to the youth to encourage them to consider pottery as a reputable profession and a profitable one. I think that is very important to preserve the tradition.

LEHO has helped me in many ways. I got accountancy training and local exposure visits but what helped me the most was their support to build a passive solar workshop where I work comfortably the year round and where I can store the pots without worries. In the past I faced many problems, especially in winter when it was impossible to work and protect the pots from the cold.



“Local NGOs had been and are fundamental to Ladakh’s sustainable development.”

TSEWANG RIGZIN ELECTED REPRESENTATIVE (COUNCILOR)

*Age: 35 years old
Village: Khardong
Family status: Married*

I have been a councilor since 2005. In 2010 I was elected Diskit Hill Council representative. Most of the villages in my constituency are not well developed in terms of road connectivity, education and rural infrastructure. I am from Nubra and I was reluctant to be involved in politics but the need to improve the villagers quality of life forced me into action.



At the grass root level, my main role concerns the planning and coordination among Gobas and Panchayat members in order to get an agreement about what to include in the Hill Council’s annual and five year plans. In that respect I found out that the key areas that need to be addressed are education and land development. Villagers depend on agriculture as a subsistence activity. Due to the altitude a single crop is cultivated and since there is no other source of income people tend to migrate to Leh. To stop migration we have to build water canals in new zones to bring them under cultivation so villagers can cultivate cash crops.

PSH activities

Collecting energy from the sun to warm up a house is a very practical way to improve people’s life but I know for a fact that many people don’t know anything about it. Winter in Ladakh is harsh and there are villages where firewood is not available. In Khardong, my own village, many families move to warmer places during winter. LEC housing is beneficial in many ways and doesn’t pollute the environment.

As a public representative it is my duty to disseminate such techniques and help people understand the benefits of LEC housing. I am also enforcing the government ordinance stating that public buildings should follow LEC principles. At a personal level I have incorporated LEC features in some small constructions I have built, so my fellow villagers can experience the warmth by themselves and in turn become disseminators of the LEC model.

Climate change activities

I didn’t watch the TV programme but I listened the radio broadcasts on climate change. I think is a great initiative to make people aware of a situation that is already affecting us. I also think that radio is the most effective way to reach people; every household in Ladakh has a radio and has been the most important communication tool in the region.

NGOs

Local NGOs had been and are fundamental to Ladakh’s sustainable development. Ten years ago government and NGOs used to work together. Then something happened, I don’t know what, and little by little they went their separate ways.

Nowadays there is a big communication gap between government and NGOs and is not unusual to find out that both are working on the same topic in the same area without telling each other. Both sides are to be blamed for the state of the affairs and something needs to be done so there are no duplicate efforts, whether it is education, passive solar housing or any other activity.

LEDeG, LNP, SECMOL and LEHO have not only made people aware, they have also successfully implemented a large number of initiatives. In many areas they are the pioneers and should be credited for it. The government is a huge, slow bureaucratic structure that in many cases is not reliable. NGOs have smaller structures, high mobility and have earned people’s trust. The reason villagers don’t talk about LEC housing in our meetings is that they prefer to deal with LEDeG, rather than the government.





“My work has definitely improved after the trainings. The TOT training was particularly useful.”

TSEWANG THARCHIN CAPACITY BUILDING

Age: 28 years old
Village: Shayok
Experience with NGO: Five years
Position: Field worker in LEC, livelihood & climate change
Education background: 12th grade

This is my first experience in an NGO. The first year I was part of the solar greenhouse project and for the last four years I have been part of the passive solar housing team as a field worker. I have no subordinates, I report to my superiors.



In the last three years I have attended six capacity building trainings: a seven day training on 'Training of Trainers' (TOT), a five day training on 'Result Based Management' (RBM), a three day training on Management Information System (MIS), a three day training on Advocacy, a four day training on Leadership and Human

Resources Development and a two day training on Accountancy.

My work has definitely improved after the trainings. The TOT training was particularly useful because as a field worker I spend a lot of time in the field providing training to the villagers regarding LEC construction. During the training I became aware of the qualities a good trainer should have and I applied them in the field. Villagers were happy and I believe the trainings were quite effective. It's hard to measure its effectiveness, for that we should have a regular follow-up but due to lack of resources we cannot have it.

In general both trainings and trainers were good. The TOT was mostly practical which was good for me and the advocacy one was a bit difficult to understand but I have no complaints.

I would say trainings outside Ladakh are particularly more beneficial for us. The MIS training took place in Andhra Pradesh and it was a great opportunity to be in a new environment, interact with people from different backgrounds, exchange experiences and broaden our views. Ladakh is a very isolated place and we

don't know much about what is happening elsewhere.

The trainings left me with a feeling of wanting to have more. Specifically about management, reporting and advocacy. We are very weak in these areas and I am not talking only of LEHO. I have noticed the other NGOs lack expertise in the same areas.



I haven't heard of any local NGO having its own capacity building program although I am sure they are aware of its importance. Lack of resources might be the chief reason. I don't have a clear picture of how LEHO is funded but I do know that it is a complicated issue and that if there is any money it goes firstly to finance the project needs. Rarely there is any money left. That's why I believe letting foreign agencies finance a capacity building program is not a bad idea.

Not many foreigners come to LEHO to work as volunteers, probably two or three per year. Some come to get data for their own projects and I have mixed feelings about those who come to participate in our projects. Although their desire to help is commendable only a few are experienced, most of them have just finished school. However, there are exceptions, some are real good at planning and keeping up with a time schedule. We can learn a lot from this kind of volunteers.

At present the average educational level at LEHO is 12th grade. But the situation is improving; more and more Ladakhis that went to study to other parts of India are coming back and is becoming easier to find qualified personnel.





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