

## Organization Profile

- 1. Name of Organization:** DALIT VIKAS VINDU (DVV)
- 2. Address**
- Registered Office:** At-Ropabel, P.O.- Garhi  
Distt.-Jamui, State-Bihar  
Country-India, Pin 811317  
Mob. No.- 9102865889  
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[dalitvikasvindu@yahoo.com](mailto:dalitvikasvindu@yahoo.com)
- Branch Offices:**
- a. Extension Centre: Koderma** At- D.V.C. Chowk, Ashram Road,  
Vishunpur, Jhumri Telaiya  
Dist- Koderma.  
P.O.- Jhumri Telaiya  
Distt.- Koderma, State- Jharkhand  
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Tisri, Giridih (Jharkhand)  
Mob. No- 09973740295
- 3. Name of contact Person:** Navin Kumar
- Designation Secretary
- Mobile No. 9102865889, 09334396717
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[dalitvikasvindu@yahoo.com](mailto:dalitvikasvindu@yahoo.com)
- 4. Legal status of the organization:**
- Registration** Rgtd. under Society Registration act XXI of 1860
- Place** Patna
- Date of Registration** 17 April, 1984
- RegistrationNo.** 20

<b>FCRA Registration Place</b>	Rgtd. under FCRA, 1976 Ministry of Home Affairs, GOI, New Delhi
<b>FCRA No.</b>	031130001
<b>Date of Registration</b>	28 <sup>th</sup> January, 1985
<b>Income Tax Registration Place</b>	Rgtd. under 12-A (a) of IT Act, 1861 Office of the Income Tax Commissioner, Patna
<b>Date of Registration</b>	16 February 1996
<b>Registration No.</b>	72/1995-96
<b>TAN No.</b>	06296016296216
<b>5. Auditors</b>	M/S. Dutt & Khan, CA, West Gandhi Maidan, Patna(Bihar)
<b>6. Bankers</b>	M/S. Punjab National Bank, Kawakole(Nawadah), Bihar

### **Brief about the Organization:**

Dalit Vikas Vindu (DVV) was established in the year 1984 by its founder Secretary, Late Indradeo Singh. Sri Singh actively participated in the Total Revolution, launched by renowned Social Activist Jay Prakash Narayan for which he was put behind bar by the then Congress Govt. led by Mrs. Indira Gandhi. After that he started working with Jay Prakashji out of his ashram in Sokhodeora in Nawada district, when he decided to shift to Jhilar village to stay with the tribal for 8 years to understand their problem and to organize them against oppression. Very soon he realized the importance and need of an organizational space to translate his ideas into action. This realization inspired him to set up DVV with a view to work in an organized manner for holistic development of tribal and dalit with whom he had developed very good rapport by way of staying with them for a long period of 8 years.

### **Vision:**

Jay Prakash Narayan's faith and values inspire the vision of DVV. It is to establish a non-exploitative self-reliant society in which peace, justice and equality prevail and wherein all citizens irrespective of caste, language and religion live in peace and communal harmony. It also envisages a society where the poor have equal opportunity for their involvement in the development process.

### **Mission:**

DVV works towards sustainable development of society by involvement of people and their organization in the development process. It also responds to the human suffering either by nature or manmade.

### **Geographical Area of Operation:**

<b><u>State</u></b>	<b><u>District</u></b>	<b><u>Block</u></b>	<b><u>Village</u></b>
Bihar	Jamui	Khaira	22
Jharkhand	Koderma	Domchanch & Markachcho	147
Jharkhand	Sahibganj	Sahibganj	06
Jharkhand	Sahibganj	Udhwa	43
Jharkhand	Sahibganj	Barharwa	24
Jharkhand	Giridih	Tisri	121
Bihar	Gaya	Wazirganj	10
			<b>373</b>

### **Organization's Past Experiences:**

Within the framework of the broader goal and mission, DVV has been undertaking various programmatic sectors like Community organization, Community health, Education, Natural Resource Management, Skill development and income generation.

From a modest beginning in 1984, DVV has come a long way, making its presence now in 7 districts, 11 blocks and 373 villages.

### **Community Organization:**

DVV has been emphasizing on breaking the isolation of the poor, through creating and building alternative organizational spaces for them and strengthening their participation in mainstream institutions. It has so far promoted 280 women SHGs who have been regularly saving and undertaking livelihood generation activities. Out of 280 SHGs, 240 SHGs have, so far, been linked to banks. All these SHGs have been organized and brought under four federations. 120 village Development Committees have been set up to implement village level development work. DVV has also promoted the association of Trained Birth Attendants (TBA).

### **Natural Resource Management:**

Scanty rain fall compelled with poor natural resource management in the operational area of DVV which has reduced agriculture into a non-gainful venture. With a view of harness the full potential and to create additional livelihood option, DVV has been focusing on 5 Js – Jan(People), Jal(Water), Jangal(Forest), Jamin(Land) and Janwar(Animal). We organized the community members in CBO, and facilitated them to prepare micro plans to know about the socio, educational and economic condition and available resource of the development of the area through PRA exercise. In the beginning, we help the CBO representative in getting the services from bank, block and district level government department. Now they are working as change agent of their community and became able in tapping the benefits of government schemes.

- **Land and Water Management**

It was found that there was waste land with excluded family. Our approach is to provide complete package of land development. It means we develop the waste land as agriculture land through land leveling. Develop water body for irrigation purpose. And Provide lift irrigation devices (Diesel pump set including delivery pipe to the community. It will be managed by the Farmers Club itself. In this connection DVV has been undertaking activities such as land leveling, construction and renovation of ahar (large pond), construction of **check-dam** and having water available through 30 diesel pump and 10 lift irrigation system. With DVV's support, 745 acres of wasteland have been rendered by land leveling. 28 new Ahars have been prepared; in addition to renovation of 16 existing ahars and construction of 10 check-dams have also been made. By making water available for agricultural purpose round the year, DVV has induced many tribal & small farmers to take of vegetable cultivation activities. By its all efforts DVV has provided irrigational facilities to 4500 acres of land. Under the waste land management we have also taken an initiative to develop a Small orchard. The model of orchard is ½ to 1 acres of land. We have developed 15 orchards in Koderma and Giridih district of Jharkhand. It is based on individual and community managed. Under the small orchard we promote only fruit plants like lemon, Guava, Mango, Anwala, Jackfruit Papaya, Drumstick (Sahjana).

- **Forest Rights**

DVV has been working to protect the forest and also develop the forest. DVV has been working on this issue in 25 selected villages of Dhab, Bangakhalar, Parho, Janpur Dhodhakola, & Dagarnawa panchayat of Forest area. We restructured the Forest Management Committee at village level in the light of Forest Right Act'2006. At Panchayat level Cluster Federation has been formed and at project level covering all the 5 Panchayat we have formed Project level Federation is also in function. At village level member are very active to protect the forest. All the members are oriented on their roles and responsibility, the provisions under the Act. Inter face meeting with government official of forest department with the representative of Federation of Forest Mangement Committee.

Panchayat level federation also works to explore the left out pocket for plantation. In Dhab panchayat Plantation of fruits plants like Anwala, Guava, lemon etc and Timber plants like sal, Sheesham, Sagwan, Acacia etc has planted in 100 acres of forest land. It is managed by the Federation.

There were 250 landless families are residing the in the forest area. We continued for sustained advocacy in the light of the Forest Act' 2006 and organized various Interface meetings with forest department in Koderma. As a result, we got success to provide 4 decimal lands to 188 families residing in the forest area. Community development programme has also been initiated by the forest department of Koderma district in our

area. Under this package an intake well has been constructed in Simakundi Village. A diesel pump sets including 1000 feet delivery pipe has also been provided to the community. Now there is irrigation facility is available for 25 acres of agriculture land . It is managed by Farmers club.

Till now, we have facilitated in community members in getting around 200 Individual Forest Right Claim (IFR) and 1 Community Forest Right Claim (CFR) under Forest Right Act' 2006.

### **Community Health:**

With a view to the huge gaps in assessing of health services, DVV has been striking to create capacities at local level. Ensuring safe delivery by pregnant mothers has been the prime focus where DVV has identified and trained 80 TBA, whose expertise and ready availability inside the villages have come handy in arresting death and complication during childbirth. Apart from TBA, 30 village level health volunteers have been trained for attending common diseases at doorstep. DVV has set up a small hospital where 150-200 patients avail clinical services. DVV also owns an ambulance, which caters for 15–20 serious patients in availing referral service of the district/ capital hospitals. By the efforts of DVV 205 defunct wells renovated in addition to 32 new well constructed to provide safe drinking water. It helps them to control water born disease.

### **Education:**

DVV believes that rural families remark the children as assets, as extra wage earners, a child that works instead of going to school will perpetuate the cycle of the poverty by growing into an adult without an education. Every child outside the school is a potential child laborer. Hence, DVV has set up Balwari/NFE centers (60) centres), which have been providing primary education to over 2000 children of 6-14 years of age group. Altogether 1225 Children had received the education up to primary level. Out of which 625 children had linked to government/ private middle school. Besides, 20 Adult Education centers have also been running for SHG members, 825 women have become literate and able to simple reading and writing. 150 are able to write the proceeding of the meetings of SHG. DVV has also started the unique education centres (5) under Reading Skill Improvement Programme. 60 children of class 3-5 of government primary school are enrolled and improving their Hindi reading skill.

### **Skill Development & Income Generation:**

With a view to expand livelihood opportunities for the resource poor, DVV has been providing skill-based training to the local unemployed youth in trades such as repairing of hand pumps, diesel pumps, motorcycles etc. So far, DVV has provided such training to 35 persons. Apart from this, DVV has also provided working capital support to poor artisans for basket making and for bamboo cultivation. DVV has also been providing support for agricultural activities and asset creation through piggery and goatery. As the poor tribal are illiterate and unorganized they fall as an easy prey to middlemen who procure minor forest produces at throwaway prices. In order to

minimize the adverse impact of distress selling, DVV has supported groups with working capital to enable them to get proper price and hoard the produces until the prices appreciate in the market. By intensive action of DVV more than 50 persons have been got free from money lenders. Besides the thousand acres of land and more than 200 Mahua trees have also been got free from the money leaders.

### **Livelihood Promotion:**

Since beginning Dalit Vikas Vindu has been promoting Livelihood promotional activities for the target area people to ensure food security of the families throughout the year. The specific activities adopted by the target area families were agriculture promotion, dry land farming, vegetable cultivation, development of small orchard, mushroom cultivation, fish cultivation and various animal rearing activities. Several issue based livelihood training given to thousands of farmers both male and female for skill promotion for which most of the families leads towards an improved quality of life.

With a view to expand livelihood opportunities for the resource poor, DVV has been providing skill-based training to the local unemployed youth in trades such as repairing of hand pumps, diesel pumps and motorcycle repairing, tempo driving etc. So far, DVV has provided such training to 250 persons. Apart from this, DVV has also provided working capital support to poor artisans for basket making and for bamboo cultivation. DVV has also been providing support for agricultural activities and asset creation through piggery and goat rearing. As the poor tribal are illiterate and unorganized they fall as an easy prey to middlemen who procure minor forest produces at throwaway prices. In order to minimize the adverse impact of distress selling, DVV has supported groups with working capital to enable them to get proper price and hoard the produces until the prices appreciate in the market. By intensive action of DVV more than 50 persons have been got free from money lenders. Besides the thousand acres of land and more than 200 Mahua trees have also been got free from the money lenders.

### **Housing:**

By the efforts of DVV 50 low cost houses have been prepared for the displaced poor families from the Upper Kiule Dam (Garhi Dam)

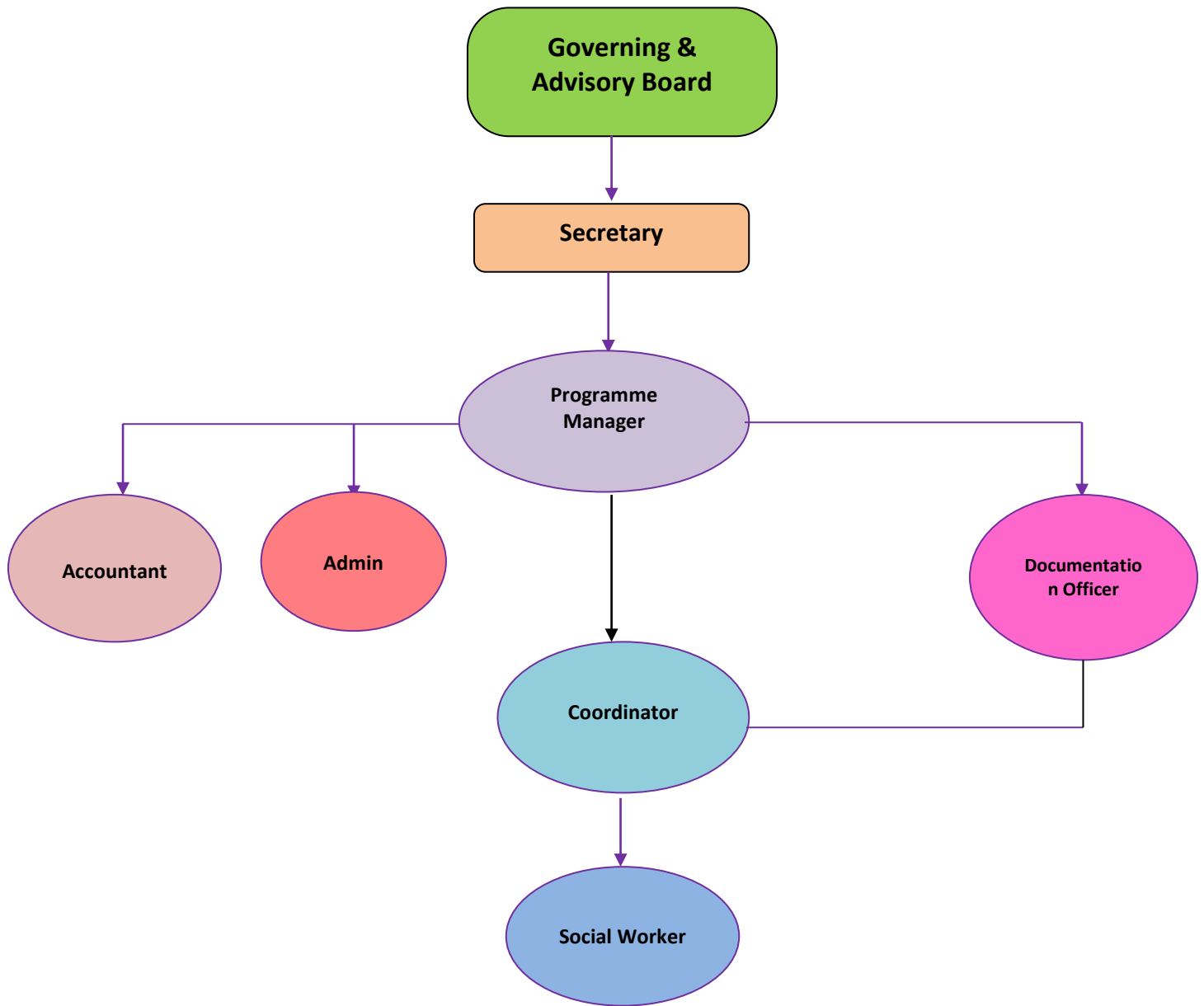
### **Our major Sporters**

Sl.No.	Project title
01	Action aid
02	Bread for the world(BFW)
03	CASA
04	MEMISA
05	Lutheran world relief (LWR)
06	Child Fund Inida(CFI)
07	Plan India
08	Government of India, Government of Bihar and Govt. of Jharkhand

09	NABARD
10	Sir Dorabji TATA Trust
11	OXFAM India
12	DKA / KFB Austria
13	IGSS

**Dalit Vikas Vindu**  
Ropabel, Jamui (Bihar)

**ORGANOGRAM**



# **Ladakh Ecological Development GROUP(LEDeG),Leh,Ladakh,J&K**

## **A brief Profile:**

Ladakh Ecological Development Group (LEDeG) is a non-governmental organisation registered as a non-profit society in the state of Jammu and Kashmir.

It is registered as a society under the Societies Registration Act VI of 1998 with registration No 766-S of 1983 dated 2<sup>nd</sup> July 1998.

LEDeG is also registered under the Foreign Contribution Regulation Act (FCRA) 1979 with the registration no. 152710007 vide Ministry of Home Affairs, Government of India letter no. II/21022/75/(15)/85-FCRA-III dated 19/04/1985.

LEDeG is also registered under the 12AA(I) of the Income Tax Act 1961 with effect from the financial year 2010-11 vide Commissioner of Income Tax, Jammu's letter no. CIT/J&K/ITO (T)/12A-III/54/34/2010-11/14242 dated 03/03/11. PAN number allotted to LEDeG by the Income Tax Department bears the number AAAAL3857B.

### **How it started:**

The work of LEDeG was initiated by Helena Norberg-Hodge, a Swedish linguist who first came to Ladakh in 1975, just after the region had been opened up to tourism. In reaction to growing trends towards 'western modernity' and the resultant dismissal of local culture and environmental degradation, Helena formed the Ladakh Project.

In 1983, the efforts of the Ladakh Project led to the founding of the Ladakh Ecological Development Group (LEDeG), as an indigenous organization, independent of the Ladakh Project.

In carrying out the work of sustainable development, LEDeG has organized its programmes that take place throughout Ladakh, with its head office in Leh and branch offices in Kargil.

### **ACTIVITIES:**

LEDeG has worked on a wide range of appropriate technologies and renewable energy technologies over the years, which have been disseminated to villages throughout Ladakh. And one or more of these technology can be found in many of the village today. These include:

- Active Solar space heating technology
- Passive Solar Housing technology
- Photovoltaic solar-electric systems and solar lanterns
- Solar water heating systems
- Solar parabolic cookers
- Solar ovens and solar crop dryers
- Micro hydroelectric power units
- Hydraulic ram pumps
- Improved water mills
- Agricultural technologies such as a hand-crank winnowing fan etc.

## **Suggested profile questions:**

### **1. What triggered LEDeG experiment:**

Over the centuries Ladakhis have adapted to the extreme go-climatic conditions and have developed a rich culture and a traditional economy in harmony with the environment and providing an ample material existence. In fact traditional Ladakhi culture has many attributes, noted for its spirit of cooperation and respect for the natural environment. The region has had a reputation of being particularly happy, open and docile. Ladakh region was strategically a very sensitive area with its boarders touching China in the north east and Pakistan on the west. The region was, therefore, a forbidden territory for outsiders including Indian nationals. Ladakh is said to be the last remaining traditional cultures on earth. For over a thousand year the Ladakhi people prospered, creating a rich, harmonious and sustainable culture. Ladakh, like other similar undeveloped and secluded regions suddenly entered a period of rapid change. Opening of the region to outside tourists and increased contact with outside world brought an unprecedented influx of new wealth and rising expectations. Booming tourism cannot reasonably be considered a sustainable source of income.

Traditional self reliance and cultural pride were suddenly replaced by feeling of inferiority, dissatisfaction and competition when in the year 1974 the area was thrown open for outsider visitors which brought with them highly idealised impressions of life in the west. All ills that were previously unknown –pollution, crime, unemployment, family breakdown, and rapid urbanization began to take hold. These were the problems that triggered the experiment with the objective of ensuring that Ladakhis themselves would be able to shape their future, one built on Ladakh's own resources and rich ancient foundations. Amidst such an uncertain and trivial situation it was felt to undertake a thoughtful and well planned development programme that will provide lasting benefits to the population.

The work of LEDeG was initiated by Helena Norberg-Hodge, a Swedish linguist who first came to Ladakh in 1975.

### **2. Intervention/Advocacy planned**

- Test and demonstrate low-cost technologies which make use of perpetually renewable energy.



- Encourage sustainable use of natural resources.
- Awareness generation on the need to consider the long-term effects of development.
- Awareness generation of the potential value of traditional culture in the development.
- Support for appropriate, community based development projects.

### 3. How has it implemented

- LEDeG has worked on a wide range of appropriate technologies and renewable energy technologies over the years, which have been disseminated to villages throughout Ladakh. These include:
  - Passive Solar Housing technology
  - Photovoltaic solar-electric systems and solar lanterns
  - Solar water heating systems
  - Solar parabolic cookers (Scheffler, SK-14, SK-10)
  - Solar ovens and solar crop dryers
  - Micro hydroelectric power units
  - Hydraulic ram pumps
  - Improved water mills
  - Agricultural technologies such as a hand-crank winnowing fan etc.
- **Agriculture and Horticulture**
  - Agriculture has always been at the heart of our economy and way of life - fostering foundations of sustainability. More specifically, the programme includes:
    - Developing and disseminating technologies such as solar greenhouses, agricultural tools; to increase the range of growing season and crop variety
    - To promote organic farming and practices
    - Value addition and marketing of agricultural and horticulture products
    - Introduction of new types of crops, vegetables, fruit trees and cash crops
    - To strengthen the economy of local agriculture – production of jams, jellies, dried fruits, pickles, etc. through new techniques
    - Bringing farmers together, to discuss options for the future and take part in participatory demonstrations and seminars
    - Participatory training program in mulching, composting and horticulture techniques such as fruit tree pruning, and nursery management
  - **Handicrafts**
    - In order to support self-sufficient local economy, it is necessary to provide villagers with the opportunity to make cash income while remaining as farmers on the land.
    - As the agriculture season is limited to 4 to 5 months in a year, the production of crafts and handicrafts offers tremendous potential in this regard. Specific programs include:
      - Formation of women Self-Help Groups in rural villages
      - Refresher courses to develop the skills in handicraft activities and management
      - Advanced training to local artisans to strengthen their skills
      - Encourage proper use of materials, tools and provide quality control
      - Engagement of consultation for product design so as to ensure income generation
      - Construction of SHG work-shed to be used as crafts development centre in the villages
      - A shop at Ecology Centre in Karzoo, Leh, sells the products of these SHGs and local artisans.
  - **Watershed Development**
    - LEDeG associated with government for the implementation of watershed development programmes since 1995, and started the programme in 12 villages of Kharu and Nyoma blocks (Rong area) of Leh district. The main objective of the program was to ensure holistic development of people and natural resources in the watershed belt. Key activities include:
      - Construction of irrigation canals and channels
      - Construction of water reservoir
      - Construction of animal sheds
      - Construction of kitchen garden and vegetable farms
      - Plantation of willow, poplar and fruit trees
      - Construction of flood protection bunds and check dam for soil erosion
      - Compound walling to protect the pasture development and plantation
      - Construction of artificial glacier
    - **Rural building center**

- At Choglamsar, LEDeG has established a Rural Building Centre to introduce and demonstrate new construction materials and techniques. The Centre serve to:
  - Demonstration on technologies and construction materials
  - Production of cost-effective and environment friendly construction materials using locally available resources
  - The Demo Building setup by the NGOs network under EU-GERES project is aimed at dissemination of information on Energy Efficient housing concepts to interested individuals and groups

- **Achievements**

- **Appropriate technology**

- LEDeG in cooperation with Dan Church Aid, Denmark and Bremen Overseas Research and Development Agency (BORDA), Germany have installed more than 62 MHPU, with capacity ranging from 0.5kW to 30kW in the remote villages since 1989.
- Different kinds of secondary devices are attached to the MHPUs either electrically or mechanically, such as multi-purpose carpentry machine, oil expeller, butter churner, flour mill etc.
- LEDeG installed 20 multipurpose watermills in Leh and Kargil districts in collaboration with CAPART between 1997 and 2001. Additional machines such as wooden lathe, wooden circular saw and alternator have been attached with the watermill to generate electricity.
- 63 Hydraulic Ram Pumps were installed by LEDeG in cooperation with BORDA since 1993 till 2010.

- **Solar photovoltaic**

- LEDeG in collaboration with India Canada Environment Facility (ICEF), Ministry of New and Renewable Energy (MNRE) and Ladakh Autonomous Hill Development Council (LAHDC), Leh has installed a 100kWp solar photovoltaic power plant at Tangtse in Durbuk block replacing the 250kVa Diesel Generator which consumed 48,200 liters of diesel annually. The SPV plant is successfully run and managed by the local people.
- LEDeG also distributed 1050 solar home lighting systems and 1420 solar lanterns in the region under the MNRE sponsored projects.
- 5 Solar Power Plants with capacity ranging from 15kVa to 10kVa were setup in 4 remote villages in Leh and Kargil district in the year 2010 in collaboration with SCATEC Solar India Private Ltd.
- In order to address of safe drinking water in Durbuk block, LEDeG installed 5 solar submersible pumps.

- **Passive solar architecture**

- Ladakh region is often described as 'Cold Desert' where temperatures can easily drop to -30 degree Celsius in winter and it entails adequate space heating provisions for improving the living conditions.
- Conventional methods of heating uses dung, wood and kerosene which has adverse socio-economic and environmental implications. LEDeG has long been endeavoring to address the issue of space heating through the use of solar energy and insulation techniques.
- In 1980s, in collaboration with Ladakh Project, LEDeG retrofitted 75 houses in Leh.
- LEDeG has constructed 392 Solar Passive Houses from 2003 to 2010 that resulted in reduction of fuel consumption by 50% by each household.
- Under the project "Integrated Development of Durbuk Block Using Renewable Energy Resources", 135 houses were retrofitted with trombe-wall technology.
- PSH houses were constructed in remote villages during the year 2008-2012 under a project supported by GERES, French NGO with funding from European Commission.
- 29 rural engineers (masons) from ..... Villages were trained in PSH housing construction for further dissemination of the technology.

- **Income generation**

- LEDeG was one of the partners of a GERES project entitled, "Learning Income Generation in Himalaya Together", lasting from 2005 to 2008. Under this project:
  - 200 Solar Greenhouse were constructed in Changthang, Kargil, Zanskar and Sham areas for vegetable production
  - 7 Solar Poultry Farms were built in Kargil and 2 in Padum (Zanskar) for supplying eggs and chicken to consumers
  - 25 Solar Lambing Shed were built in Changthang to reduce infant mortality and to promote animal husbandry
  - 10 Micro Hydroelectric Power Units were installed to serve the dual purpose of providing electricity for lighting and running electrical and mechanical devices such as carpentry machine, flour mill, oil expeller, butter churner, spinning machine etc
  - 2 Fruit Processing Units were setup in Chamshen and Lehdo to produce apricot juice and jam and other products etc.
  - 38 Self Help Groups were formed and trained in handicraft production and marketing

## Lighting a Billion Lives (LaBL)

### Background

Economically poor rural communities that either do not have electricity supply or suffer from erratic and insufficient supply still have to resort to the use of environmentally unsustainable fuel such as kerosene for meeting their lighting needs. In India, 61 million rural households have no access to electricity and use kerosene for lighting which amounts to 2.2 billion liters per year of kerosene to be burned for lighting. This burning of kerosene results in approximately 5.5 million tones of CO<sub>2</sub> emissions per year (TERI, 2014). In response to this unfortunate state, LaBL programme by The Energy Resources Institute (TERI) was initiated in 2008 towards providing sustainable energy to these rural communities and thus enable people to get clean, healthy and adequate light at an affordable cost.

### Overcoming the barriers

The literature indicates that the dissemination and sustainability of standalone solar lanterns faced challenges related to operational, financial and marketing aspects (Rubab and Kandpal, 1996; Palit and Hazarika 2002). Some of the common reasons contributing to the poor sustainability of solar lanterns include a lack of awareness among beneficiaries; lack of availability of a range of models catering to varying needs among various user segments; high procurement price vis-à-vis paying capacity of consumers; limited hours of usage and unavailability of effective after-sales service networks in rural areas. Also, the high cost of solar PV panel during the last decade and the cost of maintenance of lanterns in the absence of after-sales services within close proximity to the consumer have contributed to high price of the systems (Palit and Singh, 2011). The LaBL initiative has attempted to address such challenges through appropriate service delivery model, focusing on product quality, robustness of after-sales service and innovative financing of the initiative.

### Energy Delivery Model

LaBL is an entrepreneurial based model of energy service delivery to provide solar lanterns through micro solar enterprises set-up in un-electrified or poorly electrified villages. The local entrepreneur operating and managing these enterprises are trained by TERI, who rents the solar lamps every evening on a nominal charge from rural people. There are two models which make this possible; one is fee for service model in which a large share of capital costs are supported by grant and the people buy solar lanterns by paying only a nominal rent on a daily basis and the other one is, loan finance model in which a person can operate a solar enterprises as its own enterprise by facilitating loans through financial institutions and a partial cost of the enterprise is covered by the subsidy through TERI and/or the partner organizations including government agencies.

LaBL initiated its operation with the technology of **Solar Charging Station (SCS)** which is a community based lighting option with mobile lanterns. One SCS usually consists of 50 lanterns, 5 solar panels and 5 junction boxes. These lanterns provides light equivalent to a 40 W incandescent bulb for 4-6 hours and are given on rental basis to households and enterprises in the evening, at the charge of INR 2-5 per day per lantern. Though LaBL started its operation with SCS technology but through years it has evolved various other solar technologies aiming to light up the households in the rural communities. Such other lighting models under LaBL are:

**Solar Micro Grid** through which low voltage electricity is distributed over a short distance from the battery banks for 4 hours each night to power the household/shop lights;

**Solar Home Light Systems (SHLS)** that gives an individual ownership on the light wherein each system provides a household with a facility of two light points and a point for mobile charging. Each household is given a solar panel and a lead acid battery with a 2 years warranty. At some places, these solar home light systems are being integrated with improved cookstoves and are called **Integrated Domestic Energy Systems (IDES)**.

The main focus of the LaBL programme is to provide basic connectivity of electricity to villages and it is assumed that once people have some basic access to electricity, they would put it to some productive use. Therefore, there is hardly any importance given to productive activities while designing the electricity access models. Though recently, TERI has developed *Solar Multi Utility Units* which incorporates the ability of taking up of productive load so that village level micro enterprises such as spices grinding unit, rice/wheat mill and an artisan cottage industry can run on a clean, reliable and affordable source of energy supply.

### **Programme Scale/ Achievements**

Under the LaBL programme, the solar lighting has impacted more around 9 lakhs households. The recent data shows that this number has increased upto 3023 villages impacting over 4.3 million rural lives in India. The extent of LaBL is not just restricted to India but has reached beyond the country borders to almost 11 international countries where 123 Solar Charging Stations are in operation. This has been possible with the involvement of an efficient network of 34 Technical Partners, 114 Partner Organizations and 131 energy enterprises.

### **Impacts**

The scenario of social and economic backwardness changed noticeably after the advent of solar lighting provided through various models of LaBL programme to many rural un-electrified or poorly electrified households. LaBL's solar products have not only augmented access to modern lighting but have provided its users with a range of co-benefits such as considerable reduction in the kerosene usage, increase in study hours of children, helping households to deter animals from approaching human settlements. The villagers had to travel to long distances to get the fuel which is no more the case, and are now able to do household chores in dark and charge cell phones at home only for which they earlier used to travel to shops and pay 5to10 INR per day.

Even the incidents of house burning due to kerosene smoke from kerosene lamps have drastically reduced and people now keep their shops open post sunset hours due to availability of solar light. Similarly, health workers and midwives use the solar lanterns to deliver medical aid after daylight hours and have also been used for safe delivery of babies in rural communities. There is a direct livelihoods benefit in the form of 'green jobs' for the entrepreneurs managing the SCS and earning through renting. Many of the communities are using this lighting to enhance their business hours post sunset for activities like betel leaf farming in West Bengal, eco-tourism in tribal areas of Orissa, basket making in Rajasthan, and bamboo craft in Assam, amongst others (Palit and Singh, 2011).

Also, the school going children are studying more in solar light (more than 2 hours) as compared to not studying at all or at the most an hour in kerosene lantern light. The solar light has also helped creating small income generating activities such as sewing, vending, shop keeping, running tuition centres, and by

providing other village level services. Even health effects such as blackened nostrils, red eyes, coughing and watery eyes previously observed during usage of kerosene as a lighting fuel have gone down after using solar light.

### **Way forward**

The initiative is continuing to strive to complement the government's efforts in providing electricity access to all the deprived electricity remote rural areas following a customized delivery models.

### References –

Palit, D. and Singh, J. (2011): Boiling Point, Lighting a Billion Lives – Empowering the rural poor.

Rubab, S. and Kandpal, T. C. (1996): Financial evaluation of SPV lanterns for rural lighting in India; Solar Energy Materials and Solar Cells. 44; 261-270



**Title:** End User Revolving Fund, Manipur

**Case Study no:** 29

**Initiated in:** 2015

**Key terms:** financial inclusion, Manipur, revolving fund, remote, mangaal

Mangaal Sustainable Solutions as a part of SELCO Incubation Centre is solving energy access problems in Manipur through their customized solar powered solutions based on need and affordability of the customers.

The state of Manipur is very grim with the power situation, the region is often associated with sporadic power supply and the situation is worse in rural areas where several villages are completely un-electrified. Solar energy, is seen as a logical and eco-friendly solution to overcome the electricity crisis in the state. However part of the issue of accessibility is affordability of the end user which is compounded by lack of financing in the region. This case story captures a revolving fund model used in other contexts in the absence of a financial institution.

**Identification**

As a process of exploring alternate source of end user financing in the absence of formal financing options.

**Problem Statement**

-The banking system does not provide sufficient support for financing solar products. This in turn limits Mangaal’s business since their customer base is a lower income segment and cannot afford to pay the entire cost of the systems upfront

-Bank processing takes long in many cases and the payment term are inflexible. The revolving fund model brings in efficiency and flexibility

**Financial Model**

-A revolving fund amount is used to procure and supply solar products to the end users

-A collecting agent (either an employee of the enterprise or a locally identified collection agent/entrepreneur) collects payments based on a predefined repayment structure with end users

-The cost of collections and incentives for collecting agents is decided before hand and loaded into the cost of the systems

-The payments from the end users are plugged back into the revolving fund

-Repayments in turn utilized to finance more svstems

The Revolving Fund innovation emerged from the need to provide systems in remote rural areas where end user financing was not possible through the regular banking route, due to non presence of a bank branch or bank’s unwillingness to finance the end users. Loans are extended using soft money to households to purchase energy systems and over a period of time the borrower is expected to repay the cost of the solar system along with the stipulated interest. The repayment of loans facilitates additional amounts in the fund for further lending. A commission is taken by the operational partner for maintaining the fund and ensuring collections.

As a part of end user financing, Mangaal adapted “Marup”- a traditional, non-regulated system of money management popular among people from Manipur wherein a group of people pay a fixed sum of money periodically for a fixed period of time. Through a lottery or pre decided sequence, one member (each month) avails the total amount pooled by the members. The organizer gets the first loan even though he/she does not contribute, to compensate for the risk he/she is taking for any default. The next member that receives the total amount will get the amount with an interest from the following month of availing the total amount.

Mangaal had piloted loans for solar lighting through Marup with an entrepreneur in Imphal, Manipur in 2014. The entrepreneur worked as a collection agent for local money lenders and also runs Marup groups from time to time on a commission basis. However, this pilot did not succeed in part due to some inherent aspects of Marups which are in conflict with Mangaal’s own business model. These include:

- In the traditional system, the last marup winner will have to wait for a long time. Sometime, in years. This maybe fine for a commodity TV, Fridge, etc transaction but for something like solar which is an immediate need it can be a long wait

### Project Nuances

-Manipuris already have a form of the revolving fund process “Marup” that is practiced within their various communities. Mangaal wanted to piggy back on this tradition and extend it to solar products as well

-Mangaal used collections made from other projects as further investment into the revolving fund

### Impact

-The revolving fund as a business model has made solar systems more affordable to entrepreneurs/customers

-End users unaware of financial assistance apart from banking could avail assistance through the revolving fund

-Through reinvesting money back into the business, Mangaal has been able to expand their business to more end users

-A beneficiary, Laishram Basanti Devi, earns a living through hand-embroidery sewn by the solar sewing machine financed through the revolving fund. It usually takes 3 days to complete one piece of “Phanek Mapan Naiba”, (traditional clothing among Manipuri Women) because of interrupted electricity. She is now able to complete the same work in one day and earns Rs 200/day, as opposed to Rs 200 in three days.

-The Revolving Fund has benefited 25 such beneficiaries in Solar Home Lighting Systems, Sewing Machines, DC Fan and DC fridge.

- None of these Marup organisers use banks for their transactions so without credit history they cannot access formal financing even in the future.
- Local entrepreneurs – Marup organisers do not grow their businesses or scale up as the model is itself that of a self-financed system. For instance, proper records and financial management so that they can get access to formal financing when needed.
- Marups want to offer a cheap system and thus make it difficult to build in adequate price systems for reliable servicing and maintenance.

Encountering similar issues of customized terms of every Marup it was felt that a modified version of the funding mechanism and hence the Revolving Fund concept can be adapted and replicated within this context. Since locals are familiar with the concept of Marup and related financial costs, it was relatively easy to adapt the revolving fund concept. It also provided a prior history of collections and repayments that further instilled confidence in partners of the repayment reliability. The Revolving Fund model has been tried and tested in Karnataka and Maharashtra. The concept is to host the revolving fund with an entrepreneur to provide solar solutions to a set of customers. Soft money is utilized to provide the first set of systems to customers who in turn pay for the system in installments over a pre defined period of time. The cost of collections and incentives for collecting agents (either an employee of the enterprise or a locally identified collection agent) is decided before hand and loaded into the cost of the systems. The money collected is in turn utilized to finance more systems thus, expanding customer base and business for the enterprise.

The pilot was taken up in Bethel, Churachandpur, Manipur. A community mainly comprising of farmers and Government employees of Income levels ranging between Rs. 10,000 and Rs. 25,000 per month. The power situation is very poor and the community expressed their interest in solar home systems through loans. As a first step, Mangaal approached local financial institutions but unfortunately found them to be non cooperative.

Mangaal partnered with an organization called Rural Women’s Upliftment Society (RWUS) in Churachandpur who agreed to take responsibility for collections and identification of future customers. The agreement was for RWUS to retain 7% of the amount collected every month as the commission. Mangaal’s role is as the technology service provider and facilitator of the RF pilot.

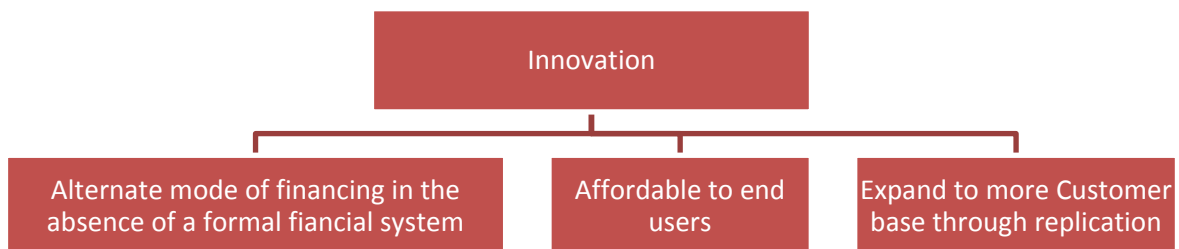
A fund of Rs. 1,80,000 was used to provide 10 lights of 40W SHS systems (Rs. 18,000 each) The systems were installed in March 2015, and so far, the operations have been smooth. The customers are satisfied with the systems installed and have paid the margin money and first installment on time.

## Key Aspects:



L. Basathi used RF to purchase solar sewing machine

- Bringing together existing repayment discipline and culture from local informal financing practice (Marup) to further strengthen revolving fund model.
- Allocation of appropriate responsibilities such as a local partner responsible for collections and identification of reliable customers in the region which leaves needs assessment and servicing in the capable hands of Mangaal.
- Partnering with Rural Women's Upliftment Society (RWUS) in Churachandpur, eased the revolving fund process and minimized risks as RWUS agreed to be the guarantor in case of default on payments. Important to engage local partners familiar with area and collections thus building confidence and trust for all stakeholders.
- The local partner can potentially be a business agent for a local financial institution if the latter is convinced of the viability. Thus the source of funds can be from a financial institution versus soft funds.
- Linking Revolving Fund and Marup culture into formal financial institutions can be more viable given the financial discipline of record keeping in the former and the existing culture of repayment.
- Reduced risks for both Mangaal and customers in terms of repayments. Margin money is collected at the time of installation and collecting installments thereafter on a monthly basis. In addition, the payment mechanism is tailored to local cash flows and is more flexible.







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POWER FOR A BETTER WORLD

**Our funding partners**



Case Story No: 5

Initiated in: Dec 2013/Jan 2014

Key terms: Revolving fund, community partner, tribals, solar home lighting

### Revolving Fund with a Community Building Partner

In the absence of an institutional financial partner like a bank, community partners can play a critical role in facilitating financing through innovative financial mechanisms. Tribal communities in remote locations are viewed as largely un-bankable and thus this case story demonstrates a model through which a community and technical partner come together to provide a holistic solution-financing plus technical product and in addition demonstrates in particular how a financial mechanism like a revolving fund can be successfully used to plug in access to credit for remote communities to purchase long term energy solutions.

## PROCESS

### Identification

Harish Hande had met the founder of BhaginiNiveditaGraminVigyanNiketan (BNGVN), Maharashtra at an awards ceremony in 2011 and subsequently facilitated site visits

### Problem Statement

Remote hilly areas have little to no access to grid connectivity or any form of reliable clean energy. Absence of electricity has set back the community crippling education, health, livelihoods and basic quality of life. Thus as a first step the community demanded basic lighting and as a next level to meet other needs of education or health of livelihood related applications. Present needs are met through kerosene lights and candles.

### System Design

Most customers bought a 1-3 LED/CFL light i.e 1.2 W-3.6W LED or 5-7W CFL combinations, 10-25Wp panels, 15-20Ah all with mobile phone charging facility

Community partner, BNGVN impressed upon SELCO the need for solar lighting solutions in its remote areas of operations in Maharashtra. Villages are in the backyard of large hydropower plants whose power is diverted to mainly urban areas leaving these regions displaced by the construction or without any access to the power generated in their own vicinity. These families are from mainly backward hilly tribal areas of Maharashtra that have little to no electricity. The average family size is 5 members with an annual income ranging from Rs.10,000 to Rs. 25,000. These families are from mainly backward hilly tribal areas of Maharashtra that have little to no electricity. Most are small farmers who barely make ends meet and at times of sparse yields they migrate into cities to look for daily wage employment to sustain their families. Their main source of lighting is from kerosene lamps.

Through three field visits by SELCO staff over a period of 6 months it was determined that stand alone solar home lighting solutions was a feasible option to meet their basic energy needs-lighting and mobile charging. Absence of a financial institution like a bank in the region willing to finance these perceived high risk customers has lead BNGVN to offer finance services in the region for various purposes. However they had not financed this particular set of customers previously.

**Two important developments lead to the replication** of a financial process to enhance affordability of end users:

-BNGVN heard of SELCO's past project (refer Case Story 4, Basket Weaver Revolving Fund) with a similar community-building partner using a revolving fund to finance un-bankable end users  
-Available soft funding<sup>1</sup> was used to demonstrate the viability of this financial model through a pilot in the region, which would then be used to convince future uptake by financial institutions.

Thus a revolving fund was set up that extended financing to households at very affordable interest rates for loan periods of upto 18 months. The collected money is put back into the revolving fund – thus enabling

more households to avail financing. By setting up a long term revolving fund it creates a channel of end user financing that is essential for

<sup>1</sup> A grant was received by The Climate Group in December 2013

### Financial model & Scheme

Cost of systems at Rs.9000, i.e. average between Rs.8000 to Rs.10,000 (1 to 3 light systems)

- Interest Rates –9% for 18 months (typical of other existing programs of BNGVN)
- Bad debts – 4% (In line with BNGVN's experience, many bad debts are typically related to sickness or crop failures)
- Transaction costs-2% on disbursed amount and collections

### Impact

-Savings in purchasing kerosene at Rs.30/litre and from related expenses in procuring the kerosene from the markets

-Increase in income by 10% for shopowners, log sellers, bamboo craftmakers

-Improved conditions to study with a brighter light and with few students confident to appear from exams due to better ability to study/prepare.

-Solar has become the primary source of light even in villages with grid connectivity

financing even beyond energy loans. The partners intend to also tap into other financial institutions in the area to convince them to also extend financing to these customers, thus, establishing an ecosystem of appropriate technology and financial support for the customer.

### Key outcomes

- A scalable and replicable revolving fund (depending on context of end users and financial institution) for solar home lighting systems.
- A fund that can be customized to the local needs in terms cash flows
- Localization can also help in restructuring bad debts in a more socially ethical manner
- Better utilization of philanthropy from traditional donations to smarter use of limited flexible funding

### Key Aspects

- Revolving Fund through a community partner as a viable financial model in absence of formal bank ecosystem
  - Clear Division of Roles between technical and financial partners
  - Setting up a Loan Monitoring Team to oversee the regular repayments and maintenance of the revolving fund. The team comprises a member from both partners and a financial advisor to ensure financial discipline and build up of a robust financial process.
  - Needs Assessment 1 to 3 months prior to commencement of project assists in understanding willingness to pay, cash flows and prospective customers over the next few months to ease efforts in maintaining regular repayments to the revolving fund.
  - Experienced partner in collections in this sort of remote hilly terrain to make the collection process as efficient as possible and lower transaction costs of multiple trips. Absence of roads or terrain navigable by automobiles makes human resource efforts quite substantial.
  - Customized technical training keeping in mind three main aspects-rugged terrain, local dialects and design of houses. Knowledge of easy pathways and ability to withstand the tedious journey is critical. In addition with over 11 dialects spoken in the identified tribal areas for this project knowledge of this language reinforces trust and ease of communication with customers. Finally Houses in the area are self made, patched together from mud and brick with hay cover for the roof. Such designs also require local knowledge of sturdiness of building.
- Simultaneous engagement with local banks to keep them updated on the viability of the concept and thus also begins institutionalizing such a mechanism through banks for seemingly “unbankable” customers.

## INNOVATION

Revolving Fund through an institutional partner

Access to credit for tribal communities

Customized technical training for remote areas

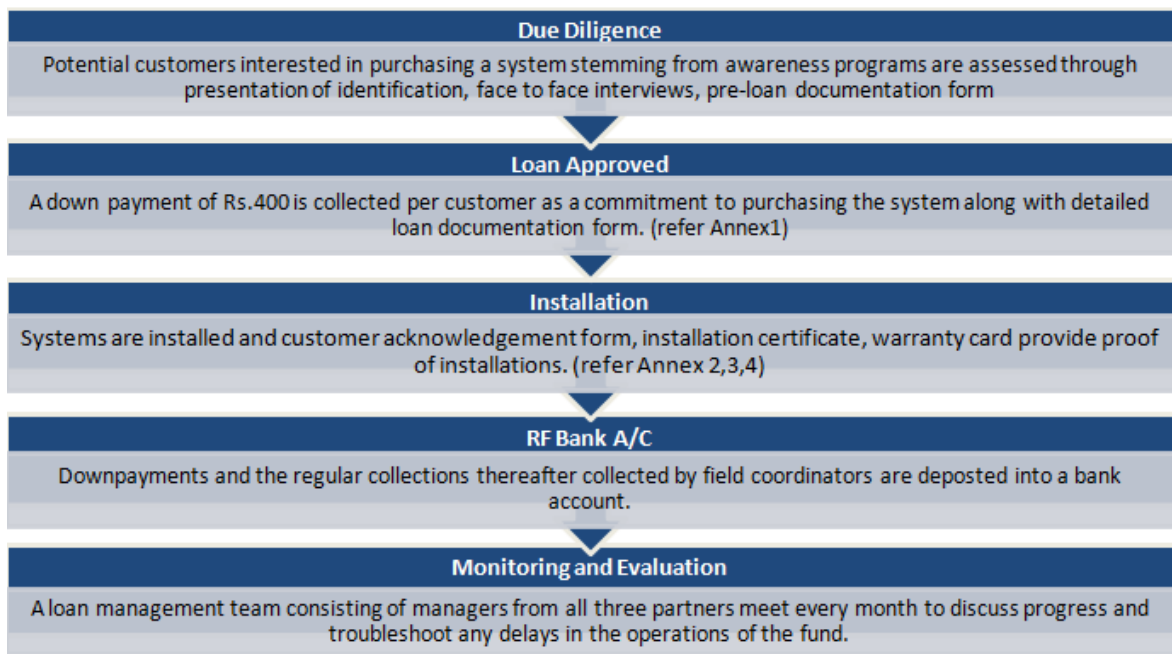


Figure 1: Revolving Fund Process



Figure 2: Rugged terrain technicians have to walk through



Figure 3: Training, classroom and on site

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## NGO PROFILE

■ **Name** : Samuel Hahnemann Associates & Research Centre (SHARC)

■ **Status** : Voluntary Organization/Trust

■ **Address**

a. **Registered Office**: At & P.O. Oriya, Via: Korrah, Dist. Hazaribag 825303, (Jharkhand)

b. **Coordination Office**:

(i) At Lakhey (Azim Colony), P.O. Korrah  
Dist. Hazaribagh 825303 (Jharkhand)

(ii) Gyanwati Bhawan, Mahabir Mandir  
Indraprasth Colony, Zora Talab  
Bariyatu, 824009, Ranchi (Jharkhand)

**Branch Office**:

C/o Saheed Bhagat Singh Public School, Dhobi, Dist. Gaya (Bihar)

■ **Phone, Fax, E-mail**

Mobile : 09234300909(O), Phone : 91+6546-292646

E-mail: [sharc1996@gmail.com](mailto:sharc1996@gmail.com), [sharc2014@yahoo.co.in](mailto:sharc2014@yahoo.co.in), [azadbinnisharc@yahoo.co.in](mailto:azadbinnisharc@yahoo.co.in)

Website : [www.sharcjharkhand.org.in](http://www.sharcjharkhand.org.in), Blog: [sharcjharkhand.blogspot.com](http://sharcjharkhand.blogspot.com)

■ **Contact Person**

(i) Ms. Binni, Secretary  
Contact No.: 09931105144

(ii) Dr. Vishwanath Azad, Chief Executive  
Contacts No.: 09234799594

■ **Registration Details**

- Registration No.10006 dated 30.9.1996. Registered under the Indian Trust Act, 1882.
- Registration No. 33770057 dated 1.3.2004. Registered under the Foreign Contribution Regulation Act 1976, Ministry of Home Affairs, New Delhi.
- Registration No. CIT/HZB/TECH/12A-25/2004-05-472-23 dated 11.02.2005. Registered under Section 12 (A) of the Income Tax Act, 1961.
- Registration No. CIT/HAZ/TECH/80G/2005-06 1840-42 dated 19-09-05. Registered under Section 80 (G) of the Income Tax Act, 1961.
- PAN AACTS3191G.
- TAN RCHS02210F.

■ **Origin, Vision and Mission**

▪ **Origin**: SHARC is registered as a non-profitable organization under Indian Trust Act in 1996. It is managed by a group of committed and devoted social activists, doctors, engineers and activists who have faith in the ideologies of Mahatma Gandhi, Jai Prakash Narayan, Ram Manohar Lohiya and Vir Birsa. Since inception, SHARC has been working for development of the poor section of the society through different interventions as well as undertaking advocacy for positive policy adaptation by the Government for general masses. It recognizes and making effort to create a society where every citizen should lead a life of dignity and self respect.

▪ **Vision**: Our spire society would be just society free from exploitation, inequality & discrimination and based on love affection, Co-operation, equality, brotherhood & justice without discrimination on the basis of caste, creed, religion, race and sex.

▪ **Mission**: To educate, organize and empower the rural poor to promote Development as a liberating force aimed at justice, economic growth and self reliance.

■ **Main Objectives**

•To serve the down trodden and rural poor of the society.

•To create favorable conditions for the empowerment of women, child and other weaker section.

•To promote health through Indigenous System of Medicines along with Homoeopathy.

•To bring critical awareness among the people on Education, Environment, Health, Gender,

Cultural Heritage, PRI and ensure their participation to accelerate the development process for sustainability to promote the people's knowledge and Human values, live love affections, brotherhood, co-operation, mutual understanding secularism, gender equality and fight against inequality.

•To revive and promote the role of women and youths in decision making and Natural resource management as well as implement people's oriented and need-based rural development programmes.

•To rebuild the system of community control over resources.

■ **Executive Committee**

<i>Sl. No.</i>	<i>Name</i>	<i>Sex</i>	<i>Designation</i>	<i>Qualification</i>	<i>Experience in Social Work</i>
1.	Chhotu Gonsai	Male	President	Post Graduate	18 years
2.	Binni	Female	Secretary	Graduate	16 years
3.	Dr.Stayendra Styarathi	Male	Treasurer	Graduate	20 years
4.	Dr. Vishwnath Azad	Male	Chief Executive	DHMS,M.D(Acup)	33 years
5.	Dhirendra Kr. Sinha	Male	Exec. Member	Civil Enginnering	35 years
6.	Ravi Kumar	Male	Exec. Member	Graduate	18 years
7.	Smt. Chinta	Female	Exec. Member	Matric	18years
8.	Dr. Rajendra Ravi	Male	Exec. Member	DHMS	33 years
9.	Akhtari Begum	Female	Execu. Member	Post Graduate	18 years

■ **Human Resources**

<i>Full - Time</i>		<i>Part -Time</i>		<i>Volunteer</i>	
<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
<b>04</b>	<b>05</b>	<b>01</b>	<b>31</b>	<b>115</b>	<b>350</b>

■ **Auditor's Name and Address**

U. NARAIN & CO.  
Chartered Accountants  
RANCHI-KOLKATA-PATNA-HAZARIBAG,  
Sogani Sadan, Main Road, Hazaribag-JHARKHAND

■ **Bank Details**

1. General Bank Account  
Jharkhand Gramin Bank  
Korrah, Hazaribag (Jharkhand)

2. FCRA Bank Account  
Bank of India,  
Zila Parisad Chowk, Hazaribag (Jharkhand)

■ **Receipt and Payments**

<i>Year</i>	<i>Receipts (Rs. in Lac)</i>	<i>Payments (Rs. in Lac)</i>
2014-2015	54.68	55.72
2013-2014	40.99	65.20
2012-2013	63.60	36.67
<b>Total 3 years Grant</b>	<b>159.27</b>	<b>157.59</b>

■ **Target Group**

Women, Children, Adolescents, Aged and Disabled belonging to the poor and marginalized section of the society. (Present target Community –Single Women)

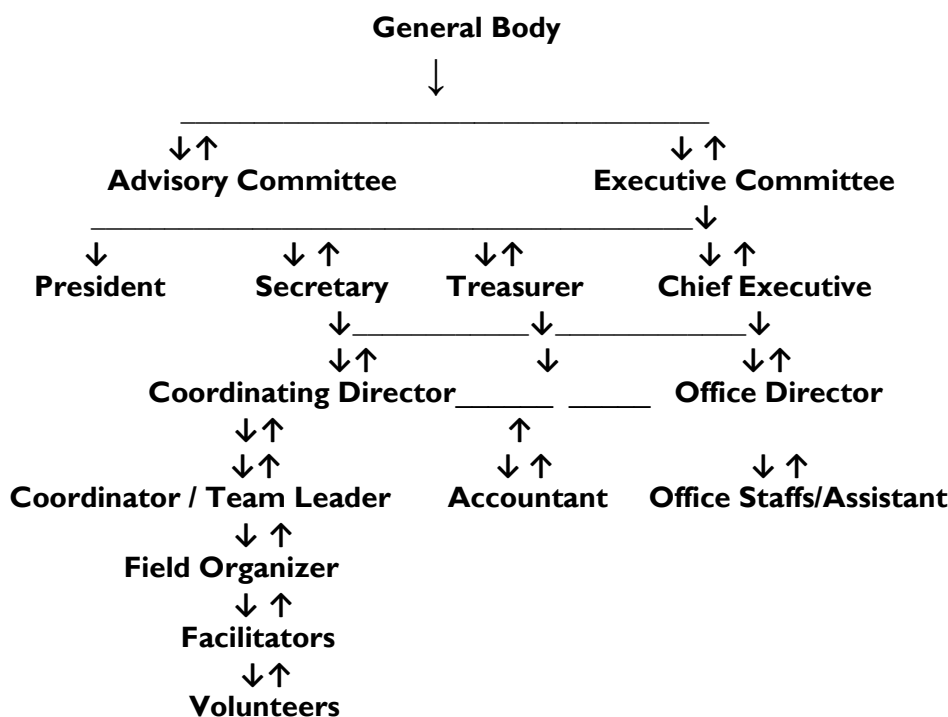
■ **Area Coverage**

<i>State</i>	<i>District</i>	<i>Block</i>	<i>Panchayat</i>	<i>Village</i>
Jharkhand	15	37	488	1600
Bihar	01	01	05	15
<b>Total 02 States</b>	<b>16 Districts</b>	<b>38 Blocks</b>	<b>493Panchayats</b>	<b>1615 Villages</b>

■ Area of Expertise

SHARC has expertise in the area of Community Mobilization, Research, Capacity Building, Advocacy, Education, Health, PRI, Networking and Awareness Generation.

■ Administrative Structure



■ Programs/Activities Up till now

<i>Sl.No.</i>	<i>Program/Activity</i>	<i>Supported by Donor Agency/ People's Contribution/VOs Contribution</i>	<i>Period of Support</i>
1.	Cataract Operation	DBCS, Hazaribagh	1997-98
2.	Charitable Homoeopathic Dispensary & Awareness on Indigenous System on Medicines (ISM)	VO Contribution	Continued
3.	Women Empowerment on PRI (Socio, Economic and Political Empowerment)	Prerna Bharti (Christian Aid) through Network of EMM	1998-2005
4.	Adolescent Centers	-do-	2000-2005
5.	Bal Badi Centres	-do-	2000-2005
6.	Health Camps on Malaria & Seasonal Diseases	Jan Vikas Kendra, Hazaribag & V.O.	2000-2001
7.	Research & Innovation on Herbal Medicines	VO Contribution	Continued
8.	Empowerment of Rural Youths on Gandhi an Ideology	Swaraj, Jharkhand and Peaceful Society, Goa (Through JUDAV, Deoghar)	1998 -2003
9.	Human Rights	PUCL, Hazaribag	Continued
10.	Breaking the Pattern of Public Inertia on Environmental Degradation through Policy Advocacy	PACS, through AAPP Network (JSP)	2003-2006
11.	Self Employment Training	V.O. & Community	2000-2005



12.	Equal Road Right for NMT (Non Motorizes Transportation) In Urban Area, Jharkhand	Institute for Democracy & Sustainability(IDS), New Delhi	2005-2007
13.	Campaign Against Trafficking	ACT Network (CWS)	2006-2008
14.	NREGA Campaign	PACS through NBJK Network	2008-2009
15.	Lead Lamp Training	V.O. with SRI, Ranchi	2008-2010
16.	SRI (System of Rice Intensification)	SRI, Ranchi & V.O.	2008-2009
17.	ENSS (The Association of Empowered Women Alone, Jharkhand)	ASTHA (Through SMS, JSR, & JUDAV, Deoghar (Christian Aid, & HIVOS)	Continued 16 blocks
18.	ENSS (The Association of Empowered Women Alone, Jharkhand)	SAMVAD, Ranchi (Christian Aid & HIVOS)	Continued 16 blocks
19.	Promote ENSS (The Association of Empowered Women Alone, Bihar)	JAN (AJWS) & IZAD	20 blocks
22.	ENSS (The Association of Empowered Women Alone, Jharkhand)	Christian Aid & HIVOS	Continued 35 blocks

### ■ Networking

Due to its sincere efforts and its good work in the development sector, SHARC has been recognized and earned accolades on several fronts. It has membership in the following networks of Bihar, Jharkhand and other States of India:

- National Forum for Single Women's Rights, India.
- PAHAL (with SRI, Ranchi)
- ASTHA, Rajasthan.
- ENSS, Jharkhand (An Association of Empowered Women Living Alone)
- Advocacy Against Pollution & Poverty (AAPP Network), Hazaribag (2003-2006-8)
- NAWO, Jharkhand.
- Ekta Mahila Manch, Jharkhand (1997-2005)
- INSAF, Jharkhand.
- VHAJ, Jharkhand.
- Health Watch, Jharkhand.
- GLRF (Gender, Livelihood and Resources Forum), Jharkhand.
- PUCL (People's Union for Civil Liberties), India.
- Equal Road Rights for NMT (Non-Motorizes Transportation) in Jharkhand with IDS, Delhi.
- Campaign Against Trafficking (ACT. Network)
- Right to Food Campaign (RFC)
- Pension Parisad

## **Society for Promotion of Wastelands Development (SPWD)**

Work in Society for Promotion of Wastelands Development (SPWD) as Programme Director since 1991. Prior to that, worked in PRADAN for four years and as an Assistant Professor in College of Agricultural Engineering, Punjab Agricultural University, Ludhiana after doing Post Graduation in Agricultural Engineering (M.Sc.) from Indian Agricultural Research Institute, Delhi in year 1986.

Society for Promotion of Wastelands Development (SPWD), a national NGO since its inception in 1982 has been playing a catalytic role in reversing the process of degradation of land and other related natural resources in partnership with NGOs and grassroots institutions. It came into inception just three years prior to the setting up of the National Wastelands Development Board (NWDB), a part of the newly created Ministry of Environment and Forests. It was the result of an initiative taken by a handful of eminent environmentalists, institution builders and visionaries. SPWD since its inception has been playing a catalytic role in reversing the trend of degradation of land and other related natural resources.

Drawing on its experience and learning's from field level activities, it hopes to influence policy interventions on the basis of research and analysis. Although SPWD was established as a non-profit organization outside the Government, it continues to work closely with the Government and assists the Government in more effective addressal of issues concerning land and natural resources degradation. Projects are undertaken by the SPWD through collaboration with local level NGOs that are selected carefully for partnership on the basis of their capability, interest, expertise and reputation among the village communities. These features enable SPWD in obtaining knowledge from the grassroots level and influencing the larger systems, policies and programmes of the government as well as other concerned agencies. This approach is the distinguishing feature of SPWD.

SPWD has a vast body of cumulative experience and knowledge of various facets of Natural Resource Management (NRM), livelihood and environmental issues across the country, built up over the years.

### **SPWD's interest in Renewable Energy**

SPWD is presently focusing on making smallholder farmers viable through natural resource improvement and integrating different farm production systems (integrated farming). The same set of primary resources is used for increasing farm production (both agriculture and livestock) and also meeting direct energy needs (cooking etc.). In some of the projects biogas plants are being installed and in many villages composting is being carried out for making bio-fertilizer. In many villages large numbers of cows are being reared only for cow dung. Though cost of rearing these is there but farmers consider it to be nil. Use of firewood for cooking is reported to lead to health problems. Any improvement in technology whether related to minimum tilling cum seeding, controlled irrigation and processing requires energy. A study carried out by SPWD for Right and Resources Initiative (RRI) on diversion of Forest Land for Non Forest Uses for eight states of central India shows that if we leave out 'encroachment' as a category then land diverted for energy is substantial and occupies third place after mining and irrigation. In case of renewable energy also only wind energy has shown success. In the case of solar energy again the amount of land required per unit energy produced is quite high and there are other problems related to maintaining continuous supply in case of off-grid production.

There are two issues of concern for SPWD

(1) How to make best use of available resources?

(2) How best to meet the essential energy needs of rural poor for improving livelihoods?

SPWD carried out a study on Tribal Livelihoods and Renewable Energy: Need and Scope for Oxfam India. We are looking forward to learn from experiences of others in the coming Vikalp Sangam.

## ***The Scientific and Social Studies of Territories Project (\*)***

**Proposal to establish a Scientific Interest Group of Indo-European action research experimentation in sciences and cultures of the territories (GIS-SSST)**

### ***The Indo-European House of territories.***

*Foreword: The original idea (\*\*) four years ago was the creation of an Indo-European professional network of practitioners, a sort of clearinghouse and shared resources for architects, planners, landscapers, Indian teachers already engaged in environmental topics and social issues who are in demand of fair trade professionals (non post-colonialists) as operational responses destined to urgently strengthen their capacity to operate and build sustainably in the Indian democracy. We must acknowledge an extremely worrying situation across the Indian subcontinent. It would be particularly worthwhile to help create among practitioners of architecture and urban planning, but not solely, a powerful intellectual force and favorable ethics to build a decolonized Indian way of architecture, urban planning and land that is currently undermined.*

*Faced with a sense of urgency and in response to the inadequacy of institutional resources committed so far by India in the field of territorial planning, this collaborative project which had the duty to respond to ethical, and scientific challenges has turned into a proposal for a joint house, a collaborative platform for territories. This platform is now taking the shape of a proposal to establish a group project of Indo-European scientific interest in the sciences and cultures of the territories under the name of Indo-European House of territories.*

### ***A -The project fundamentals: the territory as Art.***

The first initiative (\*\*) for creating an Indo-European network of practitioners of territorial planning and architecture has thus gradually been focusing for more than two years towards a post normal science project (S. Funtowick- J.Ravetz- Joan Martinez-Alier) which is based on methodological pluralism, a sort of Indo European common house (joint-house) of action research-experimentation on territoriality.

This < communal house of territories> , this GSI dedicated to the development of territories in India has for ambition to gather and support the co-construction of a change in paradigme to take a step towards a socio-economically sustainable transition.

The hybrid nature of its methodology essentially consists of combining a scientific project of academic nature to proactive terrain activities free from disciplinary boundaries in so long as they are relevant to the study of humain surroundings (ecumene) or study the spatiality linking ecologies to humain establishments.

This spatiality (architecture and territory together as a condition for the deployment of beings) is at the heart of the transformations of our contemporary societies subject to violent deterritorialisation movements. Therefore there is no doubt that the re-founding of architecture and urbanity require a detour through the territory in a country that is constantly subject to violent cultural agressions by post-colonial capitalism.

Due to the importance of the subject, the project won't hesitate to search how and based on what do men found their existence and **what does the territory name?**

By instituting in its modern ontology the hegemony of the subject, Occidental thinking has brought us to a breaking point that forces us to base our existence not outside of the world but towards it.

The scientific initiative notably expands on the territorialist approach(\*\*\*), an anthropological multi-biocentric approach, integrated sustainable development of the territories that bases its thoughts on the regenerative capacity of the location designed as a dynamic and complex system created over time.

Thanks to its methodological approach the territorialist school approaches the territory as a living neo-ecosystem of long lifespan made of six inseparable dimensions: social, economic, ecological, geographical, cultural, technical, symbolic, political, an anthropological system reminding us of the indivision between nature and culture, territory and history.

A continuity of the living exists between nature and the territory but it transforms through trajectory at the scale of space occupied by man, the ecumene. A logic of the place exists everywhere (Nishida, 1980) and the study of the surroundings (called Mesology) that takes into account techniques from linguistics and symbolics is of precious help alongside the territorialist reflexion that both deal with the social construction of human space.

The proposal suggests that the return to the territory is an experience in itself, awareness of the territory being a re-appropriation that emerges from the physical and human stories building its identity.

The local society, central point of the changes that emerge from the territorial project, while restoring the historical creation process of the territorial palimpsest (André Corboz-2001) the local society, a collective

subject and change factor emerging from the territory reveal its layers of invariance and permanence, its physical and mental sedimentation, the history of these societies that are always far from linear evolutionism due to ruptures, tensions or conflicts that have sometimes been the subject of foreclosure in the collective memory as well as in historiography.

In its prospective activity as a real utopia the territorial approach designs scenarios of revitalisation and requalification leading to co-constructed regenerative strategies of projects and territories following the co-construction of the identity and consciousness of the territory. The role of the territorial project is to increase the complexity and the potential of the territory by developing its local capacity, both individual and organisational.

This production of territorial added value is constructed by the local society based on integrated strategies that respect the political, social, environmental, economic, and territorial sustainability.

The actors of the territorial project come from various horizons and statuses, grouped in "new municipality" and become a collective subject through democratic deepening and co-construction and are able to generate a living local territorial heritage, to obtain territorial pacts based on deepening democracy to develop a regulation by merging institutional policies and social practices, co-producing a praxis by instituting a "Right to Territories" with its transformation rules to stimulate regional and public state policies. We can therefore speak of production of territoriality, of social production of the territory and of the **territory as Art**.

Finally, these territorial strategies based on increasing environmental, social, economic, and political potential of places offer a rational alternative in resistance to the globalised flux of value chains based on comparative advantages of capitalist economies that still refuse to take into consideration their externalities and that are carriers of de-territorialisation.

This proposal effectively states that it seems beneficial for the general interest to set against these economist flows with regional territorial policies of places connected by networks that will have to meet their overall sustainability: ecological, social, economic, the whole forming a regional planning with its network of stakeholders, leaving them free to co-produce during the elaboration of territorial strategies, new institutions, to complement those that already exist and the terms of the democracy that underpins it, and that is the object of new social contracts.

In summary, this creation of a "territorialist option" as a conceptual and operational tool at the heart of the human development programmes, such as at the heart of more technical programmes centred around certain infrastructures and equipments, would develop and scientifically organise an integrated approach to planification development. This commitment towards the production of new regenerative and highly sustainable territorial policies by linking the local project to close systems to global systems using a strategy of globalisation from below.

Its methodology would mobilise all the knowledge both on the side of the human and physical (including energy or the biological approaches of ecosystem studies) enabled by the diversity of contributors (\*\*\*\*) acting from local and international networks, universities, think-tanks, relays and institutional competencies, research-action via bottom-up and empowerment in connection with some NGOs, the participation of Indian civil society represented by local delegates and paid by the SIG, participatory observation organised by Indo-European university partnerships.

The importance of context naturally required in the acquisition of complex knowledge methodology will be a key epistemological point of the "joint house" that will ensure the constant link between research and the multiple realities of the Indian territorial diversity in order to develop a specifically Indian culture of the territory as well as adapt to the difficulties linked to the socio-economical and linguistic local realities. The territorial project is mirrored by a social construction project.

Beyond the methodology of creation of knowledge, the epistemology of the "common house" will ensure a permanent connection of the research to the multiple realities of the diversity of territories in India destined to developing a unique Indian culture of the territory.

One of the starting lines of research will hence be the factual study of the transformation of non-sustainable government policies into territorial planning strategies foreshadowing a meshed local metropolitan network located within regional balance poles, and medium cities organised in cross-linked ecosystems forming bio-urban areas.

This participatory regional methodological planning project also aims to help solve the ecological distributive conflicts, to build a territorial ecological economy, to suggest a democratic alternative to planification based on approaches carried by urban and territorial projects and to restrict as much as possible the migration towards megacities, by innovating in projects and strategies of the territories contributing to regenerate all the ecosystems and improving the overall sustainability of development.

Due to the scope of knowledge to be gathered, to the practices to be elaborated methodologically, to the necessity to ensure the socialisation of the experiences, the proposal of the creation of an Indo-European House of territories makes sense insofar as it needs to be a perennial solution. This group project dedicated to the sciences and cultures of territories, an Indo-European common house of research action implementation structured around the logic of places and the elaboration of strategies and local territorial projects considered as common goods calls upon our conviction and our responsibility as it brings together ethics and realism.

Le project leader brings attention to the fact that in the context of this project, the lecturers of the SUB-URBIN/ANR 2011/2015 programme (Managers: Eric Denis and Marie-Helene Zerah) have contributed by offering a better understanding of the phenomena of subaltern urbanisation opening it seems a new way towards territorial approaches and to the multi-factorial study of the territories beyond the direct influence of megacities.

### *Some Key Words:*

Territorial Approach, the territory as an art piece, science (socialised) territories, identity of places, awareness of places, local society, local project, social co-production of territorial projects, territoriality production, living heritage, concrete utopia, globalisation from below (Alberto Magnaghi 2000)

Anthropology of space, cultural geography, social and ecological anthropology, selfhood awareness— religious anthropology, philosophy, Hinduism, existential ecology, nature-culture.

Mesology, ecumene, logos, lemme, hinduism, backgrounds, mediance, trajection (Augustin Berque, 2000), ethno -psychiatry of places.

Ecological economics, political ecology, ecological-distributive conflicts, social metabolism, environmental justice, environmental debt (Joan Martinez-Alier 2000).

Regenerative development of places, regional planning, urban crosslinked network bioregions, ecosystems clusters producing sustainable technology, democracy of the commons, social production of planning, institutional praxis. Intersubjectivity, symbolism, communicative action, ethics and law of the territory - collective intelligence, conceptual innovation and socialised knowledge, critical social theory -

Urban project, equality, diversity, capabilities, general will, public policy and public procurement, public and common spaces.

Ecosophy, existential territories, fundamental anthropology, production of subjectivity, modernity, universal universalism, Mondialité (Edouard Glissant 2000).

*These human development approacheds own much to the work of Alberto Magnaghi and Joan Martinez-Alier and Augustin Berque, to the writings of Pierre Dardot and Christian Laval, Deleuze and Guattari, Amartya Sen and Jean Drèze, of Rajni and Ashish Kothari, Felix Padel and Guy Poitevin, Esther Duflo and Abhjit Banerjee, Madhav Gadgil and Ramachandra Guha, Philippe Descola and Bruno Latour and many others, too numerous to be mentioned here(\*\*\*\*\*).*

***B - The expectations of this Scientific Interest Group hosted at the heart of the Indo-European House of territories in the context of a deliberate policy in favour of new research as its engagement towards public spaces.***

The SIG would operate by collective construction and synthesis of knowledge, it will produce concepts and operational tools, operating and validating experimentation-implementation.

Being a project of social production of territories, the desire to create a dedicated GIS would correspond to Indian and European interests in a shared commitment to responsibility and commitment in the public arena in order to:

- Establish a specific disciplinary study for the sciences and cultures of the territories.
- Foster, found and spread the emergence of an Indian culture of the territories.
- Refer to Indian and European knowledge of physical and social sciences in order to connect to the global production systems of territories and companies.
- Contribute to the co-production of local companies in charge of collaborative manufacturing of the territorial projects.
- Establish a genuine ethical cooperative project of human development oriented towards transition and the fight against climate change.
- Work towards the construction of a *Mondialité* thanks to the social production of spaces (Edouard Glissant).

***B1 - The scientific and cultural programme of the Indo-European House of territories has for ambition the construction of a post-normal science of the territories constituting a body of fundamental and operational knowledge.***

Research-Action through local partnerships associated with participatory observation and co-built expertise as well as social and institutional innovation to should form the two main axes in the establishment of multi-criterion thinking with regards constituting territories of the regional planning.

It isn't question of an academic project, it is indeed an analytical-experimental project valuing responsible and ethical expertise and innovation including civil society and researchers thanks to "integrated facilitators", land delegates from local companies selected based on ethical criterion, cooperating in the manufacture of local territorial project both self-sustainable and open.

The intervention of university researchers on the principles of participatory observation in connection with the representative delegates of the local communities (to produce firsthand descriptions and analysis to monitor local conditions) constitutes the active principle of action research experimentation which will be the basis of the definition of future strategies of the territories.

We indeed aim to create new knowledge about territorial planning approaches by exceeding all past historical utopias, and suggesting new approaches to concrete utopias, methodological guides or benchmarks to better design, plan all scales from rural to megacities and reclaim political meaning in decision making, conscious and shared, to produce democratic equality (Rosanvallon-2011) both at the local level, covering fields ranging from fundamental anthropology founded on action research until the professional and collective production of architecture and landscapes.

***B2 - The construction of local society, scenarios, projects and strategies of territory, an Indian institutional alternative based on experimental praxis would aim to stimulate public policies, regulate the actors, creating a new scale of intervention for Indian architects and the creation of a regional council of territories.***

Currently the Indian practitioners of architecture and urbanism don't have the status of European regulated professions (given a public interest mandate) are unable to successfully oppose public territorial policies that may constitute real alternatives to conceptual and methodological deficits of developers, central or state planning agencies whichever the scale of the development. These actors find themselves in great difficulty to work towards the general public interest from the regional and urban planning to the construction of urban projects, landscape and architecture.

One of the other desirable objectives linked to the activity of the GIS would be to start to define the conditions for the development of a public policy regulated Architecture and urban planning in India in connection with practitioners of architecture and urbanism and some Indian institutions.

The idea would thus be to promote group collaboration and work between various bodies representing European and Indian professionals, project managers, architecture, urbanism, landscapes, in order to put forward tangible regulated public and general interest policies allowing a strong sustainability rendered necessary by the strong demographics of the Indian subcontinent.

This inter-professional mediation programme could be set up in order to break off from sectorial urban planning (of engineers, jurists, civil servants) and to replace it with integrated approaches to urban or territorial projects offering the opportunity to rethink the intervention scale of the architect, some of which would become territorial architects developing Indian space, studying the creation of local territorial councils, para-public advisory agencies of the territories.

This strong sustainability policy, or "conservation of territories" is therefore a theme of professional and institutional research to explore in order to reach a consensual and pluralistic definition of practices to be imagined, analyzed and experimented within the GIS and that will be decisive for the sustainability of the territory regardless of their specificities and diversities.

### ***B 3 - The Regional regenerative development, a scale conducive to a concrete utopia of territories will encourage the formulation of territorial alternatives of strong sustainability carried by local territorial councils.***

Such a creation of a culture of the territories, a foundation for Indian territorial strategies supported by new regional institutions would therefore be strongly linked to deepening democratic governance, a transformation of the rulers-ruled relationship redesigned from territorial issues, relationship based on complex assessments supporting the co-construction of public interest inspired from the political experiences of sustainable regional planning.

Whether the GIS will coproduce concepts geared towards practitioners and territorial institutions (architects and others who are open to this)

based on its partnership experiences with local companies and universities, or whether it adapts the methodological tools boxes and European approaches to regional planning (like the environmental approach to urban planning), it must act in order to create an experimental control dynamics to then better contribute to the emergence of an authentic Indian way of planning.

This Indian way of planning would consist of open and sustainable projects of the territories at the heart of an economy that would opt for a more endogenous development, interstate, democratic, federal and intercultural while protecting itself from the excesses of neoliberalism, the correct implementation of national public policies would come about through analysis and decentralised democratic political development and regional planning.

But this public policy of territorial planning would simultaneously involve the regional study of socio-technical production of the built environment and contribute to an important formal regulation of the construction sector whose organisation would have the burden of contributing to a sustainable "new economy" provider of employment and integrating to its analysis the economic and societal issues such as the meaning of productive activity in India, to try to transform the current socio-economy by ensuring a balance between modernity and culture.

It may well be that territorial alternatives to the Western production oriented model will appear (Sennett-2010/14) that could help tackle excessive migration, promote progressive socio-professional organisations, develop professional trainings development advocating a society based on human development and the process of selfhood (Guy Poitevin, 2000) an Indian path that itself would be useful as a comparative experiment and that in any case would contribute to transitions that we will all have to go through without delay. This work would thus inevitably part of a set of studies to be coordinated by the GIS.

### ***C1 - Societal expectations of the SIG in the double context of alternative development and climate change***

The rigour of its integrated scientific analyses and the ethical objectivity of its multi-criterion evaluations should encourage the democratic commitment of local governances hence better able to contribute to setting up a territorial planning capable of elaborating public policies to adapt to climate change, all of these actions being in the context of the elaboration of international partnerships and agreements on climate.



The production of complex and reasoned expertises by out growing cost-benefice approches, the pluralism and incommensurability of values (Joan Martinez Alier 2009), the creation of operating concepts creating local projects, the prefiguration of new collective institutional spaces (integrating a new diversity of contributors) should lead to a deepened approach to existential ecology and the ecological economy contributing to the construction of democratic institutions better adapted to the diverse transitions that need to occur.

***C2 - Institutional and geopolitical Interest of the project in the fight against climate change, a cooperative programme of global transtion, rational and gradual.***

If one of the scientific and societal objectives is the concrete and collective construction of a socialised science of territories described above as post normal science, its range would be a contribution to the emergence of new universalism and the birth of Mondialité (Edouard Glissant, 2000) working towards the sharing of universal values as much as a culture of diversity.

Beyond this scientific partnership program between the Indian subcontinent and the EU, and beyond the ethical cooperation to help address societal challenges in India, including those related to the fight against the effects of climate change (para public institutions, Universities, institutions, practitioners, NGOs and civil society in India) the following steps can be expected: building favorable convergence situations in international negotiations in the context of the global fight against climate change in an territory of prime importance due to its strong demographics and its central place at the heart of in the Asian cultural area.

Such a geopolitical act would open the possibility to a different way of solving the socio-environmental conflicts, including those relating to climate debts and an opening towards the construction of a rational international solidarity, a useful approach to global regulation approaches, climate being a planetary question with a strongly regionalised approach.

Such a SIG in its functional and ethical principles would meet the requirements of a decentralised cooperation program in social, economic, and ecological innovation between the EU and India.

This SIG by its procedure would also be able to serve as a reference to the transformation of international relations and, above sectoral agreements of the ALE, contribute to a cultural project and coherent policy from the perspective of responsibility and international solidarity.

*Thus emerge the broad outlines of the proposed creation of a GIS dedicated to the science of the territories and cultures, a kind of Indo-European common house of Action research implementation focused on the strategy of places and the elaboration of territorial projects as common goods.*

## **D - Action programme for 2016-2017-2018 (provisional)**

- Constitution of the members network and contributory organisations of the first circle of Indian and European researchers to the collaborative platform.
- Choose the institutional framework of the SIG: Board of Directors, Scientific Council, observatory territories in India, overall guidance and counselling network of contributors.
- Develop academic exchange framework programs from a series of collaborative workshops designed as a prelude to a lasting Indo-European collaboration eg IHS in Bangalore, at CEPT in TISS, with the IEA of JNU. The interest would then be to organise MoUs to co-build the collaborative science project of territories thanks to the exchange of pre or post doctoral students of the social sciences and development of territories and cities and to study relevance of the creation of action research centers in some states of India. The first states selected being Tamil Nadu, Karnataka, Kerala, AP.
- Study the possibility and relevance of case studies following the SUBURBIN program by introducing the concept of urban bioregion designed as a strategic tool for regional planning.
- Constitution of atlases, participatory observatories of the territories with the support of other Indian and European organisations such as EJOLT.
- Constitution of a glossary dedicated to regional projects with the support of Indian linguists (University of Hyderabad and others).
- Partnership Communication and translation-publishing tools.

(\*) SSST Project = provisional group project name.

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Didier Prost (DP) the project instigator, the origins and history of the project, the context: Architect (60 years old) in a private practice in Brittany, Didier Prost has known the Indian subcontinent since 1975, taking trips to India six to eight weeks a year for the past few years to meet with architects, planners, practitioners or teachers supporting "social and environmental topics" related to the architecture of urbanism but also researchers, NGOs and schools of architecture. Researcher and committed (former union Vice President of the Union of Architects and delegate of French Architects Architects' Council of Europe (ACE) and the International Council of French Architects (CIAF) from 2005 to 2011, Didier Prost has become through personal motives the bearer of a project of "Indo-European collaborative action research platform for the planning of the territories" currently being established and destined to become a SIG. Its societal objectives, its scientific program will hopefully, render the action research activity of the platform eligible to the MRSEI ANR 7<sup>th</sup> European program (FP7 Marie Curie Actions) or COFUND of the European Commission carried by the INSHS with PICS in 2015-2016.

(\*\*\*) The society of territorialists, Alberto Magnaghi

(\*\*\*\*) See Annex 1 for actors and contributors approached outside of NGOs and CSOs.

The French and European research financing organisations could open these programmes to young doctorate or post-doctorate researchers, members of laboratories or not, and these could build an inter-disciplinary group undertaking work under the tutorial of members of the scientific council group habilitated to lead research in their domains.

Provisional title and under the sole responsibility of the project leader, university research organisations or potential parapublic organisations:

Indian: CSDS, CPR, IISL, TISS, IHSS, CSE, CEPT, SPA, JNU, TERI, CEPA Colombo, NCAER Delhi, CESTEP Bangalore, PAC Bangalore, IGS-CPD Dhaka and 20-30 various NGOS / CSOS not listed here  
European: EHESS-CEIAS-AJEI-FMSH-IFP-CHS, ITCA-AUB-ENTITLE-EJOLT, SDT- UNIFI, KTH, BEE, ADEME, CERTU, IRD, AFD, CIRED, IDDRI, CEPPII-CERI-IEP, IVM, ICTSD IGCS, ENSA ENSA The Villette-ENSA Belleville, IUP-EAVT Marne la valley, GERPHAU, ADESS, IPTEH-EPFL.  
International and individual: not mentioned here.

(\*\*\*\*\*) See bibliography in Appendix 2.

## **The Scientific and Social Studies of Territories Project (\*)**

*Indo-european Scientific Interest Group proposal for research- action experimentation in the sciences and cultures of the territories (SIG-SSST).*

### **An Indo-European House of territories. The SSST Project Proposal Summary:**

*The proposal is to build a new field of study that sets out in successive steps to build a specifically Indian science and culture of territoriality, urbanity and spatiality constituted from the personal work of researchers and practitioners, on case studies and interdisciplinary scientific programs of action research, the permanent confrontation of the construction field and the transmission of visions and territorial alternatives with a target of constructive emulation.*

*By questioning the ontological foundations of modern spatiality, this program aims to develop authenticated and complex knowledge devoted to the emergence of a contemporary anthropology of space and territory in India, a post-normal science co-constructed from many new inputs identified among the keywords in the proposal.*

*But this project, linking knowledge and action, also foresees concrete transformation actions such as the creation of observatories, atlases, regional glossaries describing the great landscapes, sites, places, backgrounds, eager to inform public policy and more generally all stakeholders-residents who are linked to the territory by a certain "sub-urbanism" or the "subaltern urbanisation" that is unfolding in India in all its components.*

*The construction of an Indian citizenship, the adaptation to climate change addressed from territorialist approaches highlighting the virtuous balance between close and far flows, global and local, territoriality and urbanity and must be open to the study and the possibility of a right to urbanism, a right to the territories, a territory built as Art.*

*In terms of governance, the momentum of this project aiming to build new planning approaches based on contextualised approaches to urban and territorial projects may actually interfere with the institutional framework and lead to the creation of parastatal bodies such as advisors in territories and cities development, leading/bearing the development of agro-forest parks, of low carbon districts or general industrial clusters, entities that would be anchored in local projects in areas such as integrated regional planning.*

*These institutions that would highlight the paradigm of the territory as a fundamental tool of inclusive development would asset their place in the institutional framework by strengthening the local in its role leading to new socio-economic balance, environmental and cultural, involving all regional players in public space.*

*It should be emphasised that this field of study draws interest on the rich teachings of the Indo-French research related to Census Towns during the 2011/2015 program SUBURBIN- ANR (leaders Eric Denis and Marie-Helene Zerah) as well as the works on the effects of the decentralisation policy carried by amendment 74 of the constitution about the development of small towns (Rémi de Bercegol, 2015) and hence this proposal clearly doesn't fit the field of urban studies of cities class 1, 2, 3, 4 as megacities.*

*But this project is not solely directed to research or urban planning stakeholders. It constitutes an opening to urban and territorial projects approaches, it rethinks and recasts the intervention span of architects in India.*

*What does the territory name in India ?*

*We name the earth, admittedly, but she adjudicates us. (Augustin Berque).*

### 1. What triggered your experiment? I.e.: what was the 'problem' that was identified and where?

Lack of action oriented holistic policy research in energy domain in Indian context triggered the genesis of our Think-&-Do Tank. For instance, the recently advocated “solar alliance” and 100 gigawatts target for solar power generation capacity by 2022 clearly highlight the interest of Indian government and the potential of solar power in India over a long run; but the kind of policy frameworks and concrete strategies required to realize the potential of solar power have been underdeveloped in India and most often the policy makers are focusing only on economic aspects! What about other impacts, say for example, what will be the impacts on the availability of fresh water in Rajasthan and Gujarat when gigawatts of solar power plants get installed in these states or elsewhere? And what kind of storage technologies have to be implemented alongside solar power to take care of power demand on continuous basis and also to stabilize the grid, and what will be the environmental costs of these storage technologies? OR What kind of strategies can be devised to capture carbon from coal power plants (& whether this is an option or not) if these power plants are going to dominate the power grid mix till 2030 or 2050 (as noted by some recent projections)? The point to be noted here is Indian policy arena seriously lacks the inputs from sustainability and technology researchers who better understand the way technologies interact with environmental and socio-economics aspects. Further, there is also an urgent necessity to devise practical innovative policies that really work in Indian scenario and help to take sustainable actions right now, keeping in mind the long term goal of sustainable development.

### 2. What intervention/advocacy was planned?

We have been conducting a series of policy research studies on the promising future energy technologies of India from “system of systems” approach. The focus will be on how we can use the available theoretical knowledge and data information of energy technologies to develop and deploy action oriented sustainable strategies, apart from assessing the environmental and social costs associated with power generation options.

### 3. Any other thing they'd like to add about themselves, their work/the specific project?

Center for Sustainability, Policy & Technology Management (SusPoT) is a not-for-profit Think-&-Do Tank incorporated by "Social Engineers" with a mission to assist societies in pursuing transformative pathways for sustainable ways of living. At present our focus areas are:

1. “System of systems” approach based sustainable energy policy research from life cycle perspective
2. The role of community energy systems and micro-grids in Indian context

The above activities are being carried out in collaboration with researchers from – among others- Indian Institute of Science, National Institute of Advanced Studies, Next Energy – Germany, Technical University Delft - Netherlands and Imperial College – London; along with practitioners from FluxGen Engineering Technologies (startup) and ANGIRAS Trust.