

Chatrasal Seva Sansthan

Breaking Beliefs and
Raising Hopes with
Bio Gas in Hilly Terrain



Ministry of Environment &
Forests (MoEF), India



नहीं है भरोसा।
ही है भुवनी।।



GEF



India



CEE
Centre for Environment Education



छत्रसाल सेवा संस्थान
संयुक्त राष्ट्रसंघ विकास कार्यक्रम
(United Nations Development Programme)

पर्यावरण शिक्षण केन्द्र
लालता का नाम श्रीमती देवा केवला
पालनीकरण का नाम सू. श्री प्रियोक सिंह
पालनीकरण का नाम प्रापता
स्थान तालीम

Background of the Project

The five villages of Khudoli, Thapla, Mori, Doba and Pali in Almora district of Uttarakhand had a story similar to that of other villages in remote, hilly, infrastructure-poor areas. Increase in population, changed economic conditions and lifestyle resulted in loss of bio-diversity, decrease in land fertility, erosion and over exploitation of forests for fuel and fodder, making the once self sufficient economies increasingly un-productive.

In such a situation Chatrasal Seva Sansthan (CSS) intervened with the objective of conserving the bio diversity, to minimize dependence on forests and forest products by emphasizing and raising awareness about non-conventional energy. CSS approached the United Nations Development Program (UNDP) Global Environment Facility (GEF) Small Grants Program (SGP) and was supported with a grant amount of INR 12,60,000.

Project Goal

Conserving the bio-diversity to minimize dependency on the forest and forest products by emphasizing & raising awareness about non-conventional energy. It was proposed to be achieved through:

- Highlighting the priority rich bio-diversity sites, species and strategies for bio-diversity conservation and use of non-conventional energy within communities.
- Ensuring community participation through formation of Self Help Groups/federations and creating responsive local institutional mechanisms.
- Initiate income generation activities to stop out-migration from the villages to urban areas.
- Reducing dependency on the forest for fuel, fodder and other requirements and promoting alternate fuel to communities.

Name of Organization:
Chatrasal Seva Sansthan

Name of Project:
Tarikhett Non-conventional Energy Project

GEF Thematic Area:
Climate Change

Duration of project:
Dec 2003-2006
Scaled up 2007-10

Number of Villages:
05 in Ranikhet (Uttarakhand)
to 35 villages

Total SGP Grants:
Rs. 12,60,000 (USD 28,000)
and local co financing of nearly INR 18,00,000 (USD 38,500) raised from other sources, including savings of the Self Help Groups (SHGs), bank loans, SRTT and community contributions.

Project Details

The NGO, Chatrasal Seva Sansthan had identified soil erosion, reduction of land fertility and destruction of bio-diversity as problem areas in the villages that they were working in. Fuel, fodder and agriculture were putting pressure on forests and land. This was also threatening the livelihood security of the communities and resulting in migration from the villages. With this understanding the organization decided to initiate the project.

Step-wise implementation strategy was chalked out to ensure complete participation of the community. First step was to collect base line data on the bio-diversity resources. Using participatory rural appraisals (PRAs) as the tools, led to building community rapport and trust with the NGOs and other related stakeholders, common understanding and vision what shall be achieved in the program. The community led PRAs provided an analysis on population, dependency of the community on local bio-diversity resources, fuel fodder arrangements, livestock, forest encroachments, possible sources of non-conventional sources, utilization of water and conditions of reservoirs, utilization of the women's time, knowledge of medicinal plants etc.

During the process of planning with communities it was agreed by people that they shall work through the Self Help Groups (SHGs). Therefore it led to formation of six (6) SHGs, one in each village with focus on the marginalized women as members. This was first time that the communities were informally getting in a structural context. The SHGs acted as a powerful tool for mobilizing, motivating and empowering the community and to initiate income generation activities through local savings and later linked to bank loans. Community action plans, ideas/vision developed through SHG meetings and activities, were carried out according to the action plans. Periodic and in





house trainings were imparted to the SHG members firstly managing the savings and credit facilities. Bank accounts were opened for each of the groups and the women were trained in approaching the banks, lending and rotating savings, detailing the purpose and use of managing the accounts. Clear guidelines were made by the people for non timely deposits and fines etc. Small savings started into building the capital needs and in the first year each of the SHGs had saved nearly Rs 9,000 and in 3rd year have nearly Rs. 50,000 as savings and another Rs. 50,000 as loans from banks.

The women and the NGO 'CSS' members started making into choices on income generation activities like food processing, detergent & incense stick making, stitching and embroidery etc. The women were however very clear and wanted to pursue the project addressing the traditional needs of livestock. The NGO held numerous meetings with the communities and started convincing that it will be beneficial, if alternate fuel systems can also be worked out under the livestock arrangements. Plans were made through several meetings in villages as to who shall share what roles and responsibilities, how the costs shall be met and who will be selected as the beneficiary under the bio gas program.

Initial inhibitions on contributions in sharing costs, suspicion of the functioning of the bio gas plants at high altitude and after erection who will do the repairs were the community gossip. The NGO 'CSS' convinced within its approach, strategy began addressing in house meetings and how to address these "genuine fears". Finally after series of dialogues **twenty five (25) bio gas plants** were agreed to be set up as pilot-demonstration units in the villages. The communities came back with innovative ideas of coupling in kind contributions of land, labour, sharing the construction costs, animal dung in the Bio- gas plants. This led to the community participation at all stages of development and operations of the program.

Beneficiaries

Local hilly semi tribal communities from 5 villages, especially women and the unemployed youth. The project scaled upto additional 50 villages.

Community Participation

The locals were involved in regular meeting, documenting, opening of bank accounts at SHG level. The NGO exposed them through exposure visits and trainings for the SHG management and operations.

Nine (9) seminars and five (5) workshops were conducted with the local communities in villages surrounding the Tarikhet area and members were selected from each cluster of villages. Local people were selected and three farmers/local youths have been trained effectively in the repairs and maintenance of the plants. The people for construction are now regularly approaching one of them. At the end of project, community bio gas plant are in the making by the communities at their own costs.



The members have saved INR 90,000 in two years and have mobilized bank loan of nearly INR 300,000. The bank has fixed a limit of INR 120,000 for one of the groups. Now all women have a 'Voice' in the area.

Project Results

Through the community approach and involvement, greater awareness about issues regarding environment has spread in the area. Positive results have come in the region, such as reduction in the use of fuel wood, acceptance of bio gas as an alternative fuel, land arrangement being made for fodder and livestock management.

The department of agriculture, veterinary and horticulture have been linked by the NGO-CSS. They have jointly introduced better fodder varieties and low cost community managed compost pits (42)

The project has enabled another co-financing of INR 459,000 from the Sir Ratan Tata Trust (SRTT) for the livestock management within the area and this issue has not been addressed in the SGP. The institution has been so impressed that they have further given an additional support of Rs. 5 lacs.

The members are now engaged in income generation activities such as food processing and 42 bio gas plants are running successfully on the project area. The SHGs have reached a stage where **they are now ready to share 30%** of their profits from the income generation activities for expansion of project activities such as installation of bio gas, environment protection etc.

The State Bank of India and other banks have given loans to establish a 'Milk Dairy'. **The community program has also gone into 15 other villages and UNDP, GEF, SGP has scaled the success of the project by an additional scaling up grant of Rs. 18 lacs to the NGO.** For the co-financing for scaling up actions into other villages and setting up the milk dairy, **CSS has raised an additional Rs. 40 lacs.** This all is building a 'new confidence' in the local communities. The project has resulted in 2 years saving of 47 mts of wood as fuel. Also the alternate clean energy is trapping the release of GHGs through cow-dung decay etc. In the milk dairy the NGO is selling **nearly Rs. 25,000 worth of milk daily.**

Communities have made contributions of nearly Rs 5000 per plant in terms of labor and costs (in total INR 130,000)



Lessons from the Project

- Involving the locals in decisions, planning, implementation and management processes helps build visions and ownerships of assets, thus we need to ensure that this is done from the start of the project.
- **Transparent and flexible ways of thinking** with the locals and the NGOs together led to mutual trust, timely responses led to confidence building. Addressing the fears openly and timely led to mutual faith on delivery and performance.
- It is important to address the livelihood needs of the community as in absence of that it was extremely difficult to generate interest among the communities.
- The community was not ready to accept any alternate source of energy on just the face value of it and the local government was also not proactive in this matter. In such a situation it was imperative to establish a demonstration unit and **gain confidence** of the villagers before planning for scaling-up of the activities.
- The interest and participation of the local communities in terms of decisions, sharing costs and roles and responsibilities is very essential.
- Involvement and working through **women SHGs** helped better institution building. The project is addressing the productive and strategic needs of women, which is enhancing their image in society.

Potential to Scale Up and Replicate

The project shows a potential to scale-up with positive impacts and interest from neighboring villages for similar interventions. The project can be replicated in regions where similar problems/community needs are noticed. However, scaling up needs to be considered after taking into consideration the local conditions/needs of the area. Also capacities need to be built at the community level to achieve scaling up of such efforts. The sensitivity and responsive ways in which the community worked need to be shared as case studies with other partners.

Global Environment Benefits

One of the biggest reasons for de-forestation in the areas is the growing dependency of wood as a fuel by the communities. With the interventions made by CSS the community's dependency on forests for fodder and fuel has reduced by 50% in winters and by 80% in summers. The introduction of biogas plants as an alternative has been able to save 47mts of wood per year within the users, which has resulted into checking 5mts of carbon emissions per year. In addition, the plantation activities and livestock management has enabled to increase the forest cover and the crop productivity. The shift to organic manure by the communities has reduced the application of chemical fertilizers. The manure produced by the biodynamic heaps, slurry from the plants and cow pit have increased the productivity by removing Kirmul, a type of pest.

Involvement and empowerment of women increased in the project. Women have been given space which has led to an enhancement in their economic value and they are now seen as equal partners in the program.

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