

BHANDARA NISARGA, DISTRICT BHANDARA (MAHARASHTRA)

The project is on benefitting lives, landscapes and focuses on “Conservation of Fresh Water Biodiversity by Involving Dhiwar Communities in four villages of Gondia – the lake district of Maharashtra. The project involved Dhiwar, a nomadic tribe which is also a traditional fishermen community. Dhiwar community being unorganized, before the project was engaged in unscientific methods of resource exploitation which resulted into loss of local biodiversity in delay of some of the planned activities in project.

The project and communities led to breeding of *Channa striatus* and other local fishes has been closely associated with cycle of rain, this has been challenged due to erratic and irregular rainfall in the projected areas. The local GEF/UNDP SGP NGO partner, Bhandara Nisarga started to address these issues. The overall objective of the project was to develop “community led micro-plans at village level” for the conservation of fresh water biodiversity and capacity building of local communities to improve livelihoods through water resource based and related enterprises and actions.

Project Impacts:

- Conservation of 14 indigenous fish species in 7 water bodies due to de-siltation of tanks and preparation of tank bed in these 7 tanks followed by introduction of local fishes. Nearly 80,000 fingerlings have been provided in last three years and this has led to proliferate the actions sustainably.
- Increase in fish production from 40 kg per acre to 1000 kg per acre in 5 water bodies which has been achieved through a more process based approach and linking 5 women SHGs (106 women members) with banks for access of cheap and timely funds (Rs 120,000).
- 80% rise in the income from lotus roots and gums for 70 families achieved after exposure to systemic adoption of sustainable harvesting practices and transport mechanism with the help of SHGs.
- A documentation of the local aquatic biodiversity was undertaken and there are total 53 species of aquatic plants found in the area in the period of four months. The detailed year long scientific documentation has been done and shared with policy makers.
- The project focused in bringing about ‘self-reliance’ between locals to become critically aware of those social forces which have brought about their current unsustainable conditions, by reflecting on their life, living conditions and use of the local resources, links to use of markets and explore new forms of co-management systems
- Indirect strengthening of livelihood activities and resource development in 4 villages through workshops and village meetings.

The project has resulted in increased self confidence of the communities, aimed for its replication and change in attitude of concerned departments towards water management. Networks of NGOs, platforms of Government and community, people’s informal network of relations with other villages can be used for the replication of idea. A project under the theme of Maharashtra Gene Bank is developed with similar line of actions with fishing cooperative societies in two districts. It is submitted to Rajiv Gandhi Science and Technology Commission.

CASE STUDY – CTRD PROJECT, GUDALUR BLOCK, NILGIRIS DISTRICT, TAMIL NADU

The project was to support 500 households in 15 tribal villages for bio gas units, with a funding support from Airbus Corporation Foundation, GEF/SGP and in partnership with Raleigh India and implemented by Centre for Tribal and Rural Development Trust (CTRD). The quality of life for these Pania tribal communities has been a challenge as they have “limited access” to both knowledge and resources on various schemes benefitting them. The objective of the project is to “Promote the adaptation of Renewable Energy Alternatives through Community Led Approaches”. The project aimed at enhancing incomes, quality of life of the tribal and marginalized communities by promoting a range of renewable energy options, e.g. bio-gas units, smokeless, cook stoves etc. local biodiversity through community participation, enhancing local skills, management practices and to build capacities sustainably.

Project Impacts:

- Through the use of participatory rural appraisals (PRAs), communities have benefitted from 165 cook stoves, led to minimize smoke and soot in homes to improve the health of the local women.
- Established 28 livestock sheds for 32 families and set up 32 biogas units, first time promoted with these forest gatherers-.
- Nearly 17 women Self Help Groups (SHGs) based on kinship, common trade relations, and nearly 350 women members making regular savings. These 32 biogas units are saving annually nearly 50 Mts of firewood, minimizing deforestation thus improving the ecological balance of the area; saving nearly 100 Mts of carbon emissions annually and also save cooking time. The housewives are able to use the spare time gainfully for the family and enterprise management;
- Women and children are freed from the drudgery of fetching fuel wood from the forests;
- Cow dung slurry from biogas plants serves as manure which is rich in nitrogen, the households have adopted kitchen gardens with turmeric, ginger and other crops, this all helping to enhance and improve the soil structure, crop yields, and increased incomes;
- Plantation improved along margins of land holdings and houses in homestead land to improve local biodiversity and access for long term gains and to act as carbon sinks.
- More than 60 livestock are providing nearly 400 liters of milk every day and all the households have been linked to the dairy, this has increased their incomes by nearly Rs 3400-5800 per family per day.

The project is now being seen as path breaking in the areas, and the other farmers are demanding such support to scale up and replicate these technologies in the poor remote areas.

CASE STUDY – NERD SOCIETY VADAVALLI, COIMBATORE, TAMIL NADU

The project is to facilitate a community ownership in the Thanaji Panchyat through community managed biogas program, and solar lamps, promotion of small local institutions to facilitate the timely and cheap credit, promotion of organic farming with bio-digested slurry of Biogas Plants. The project is being taken up in partnership with range of stakeholders, e.g. Forest Deptt, MNRE and MoEF ministries of the Government of India. The project is implemented by local GEF SGP partner NERD, based out of Coimbatore to enhance the livelihoods and check conservation of the green areas in forests. The tribal communities are in the reserved forest areas in the Annamalai Forest range.

The project led to form first time 09 women self help groups (194 women members), loosely structured and on kinship basis; linking all SHGs to banks for ensuring regular savings and credit systems at the member levels (Rs 51,000) and accessed as loans and grants from banks in last two years nearly Rs 354,000; and NERD organized more than 47 days of training and creating skills in the management of the institutions (SHGs), structures (Biogas units) and systems (credit and enterprise) at the community levels. The Communities through the link to banks have also formed a federation of all the 9 SHGs thus formed, and an institutional body to manage resources e.g., power tillers, oil engine, and tractor and trailer etc.

The NGO encouraged and addressed the needs of the communities to enhance agricultural produce. **Two biogas plants of 35 cum and 55 cum capacity each have been installed and commissioned for power generation.** The daily biogas production from the 2 biogas plants commissioned under the project is nearly 60-70 cum per day. It is generating 60 units of electricity per day from the daily gas production of about 40 cum. Funds were sourced from the Ministry of New & Renewable Energy for training and capacity building on the use of Biogas trainers. Two local youth have been trained for the maintenance and upkeep of the biogas units in the village areas. They are doing service on chargeable basis. The NGO has also facilitated links with the livestock department of the state and several veterinary camps have been held in the area. The local breeds of large ruminants have been introduced and the cattle size per family has increased. Since the biogas project started, the livestock has increased by 300 cows, 95 buffaloes and 51 goat and a few horses.

Achievement of Carbon Emission Reduction (CERs)

The power generating capacity of the generator is 12 KW. The average daily running of the generator is 5 hours and the daily power generation is $5 \times 12 = 60$ KWh. In a year of 300 days operation, the annual average generation of power is $60 \times 300 = 18,000$ KWH. Through this biogas based power generating model, approximately 18 CERs are generated annually, thereby reducing 18 tonnes of carbon dioxide (GHG) emission is achieved through this project.

CASE STUDY – TURTLE PROJECT DISTRICT RATNAGIRI, MAHARASHTRA

The project aimed at Marine Turtle conservation (endangered species throughout the world) in five coastal villages in Ratnagiri District of Maharashtra. It aimed to increase community participation in marine turtle conservation and develop livelihood activities to promote the well-being of the locals involved in conservation. The project objective was to create a model project through community participation and efforts for better standard of living of local community involved in conservation practices. Also set up nature education through eco-clubs in schools.

The project institutionalized 3 women SHGs and later all these were linked to banks and nearly Rs 230,000 accessed as grants and loans. The NGO had regular meetings in the villages and created a community institution as Kasav Mitra Mandli for hosting visitors and ensuring turtle conservation. Through regular partnerships with Forest Department and other departments, the NGO created 15 volunteers along the 73 Kms coast line to protect the areas. Links established through fairs, and exhibitions organized for turtle conservation. Nearly Rs 800,000 sourced as co financing from Ecotech hotels, Mumbai and Raleigh's International, (UK) for the fairs and construction of an Interpretation Centre in the region.

Project Impacts:

- A Marine Turtle Knowledge Information Centre developed in 400 sq. ft. hall (on a land given by the community) having entire lifecycle of Marine Turtles, current status and threats to the species, with all conservation activities listed out on a chart.
- A booklet based on the available literature and experience of 16 years was published on Marine Turtle Protection/Conservation and is distributed free of cost to volunteers working in turtle conservation.
- The turtle conservation is practiced now in 36 villages, with 295 nests protected and 6,700 hatchlings released.
- A total of 459 visitors visited in one year 2010, with 110 students and an income of Rs.145,000 was generated. This is increasing with every year and more than 1000 members visited in year 2012, leading to generate Rs 200,00 plus
- A turtle conservation fund is established by generating funds from members who are providing lodging and boarding to visitors.

The State of Goa, conferred on the Director, Sh Bhau Katre the best conservation prize in the year 2010, for creating responsible actions for the turtle conservation, organizing community actions for conservation.

CASE STUDY – LOK PANCHAYAT SANGAMNER, DISTRICT AHMEDNAGAR, MAHARASHTRA

The project was taken up in 35 villages and aimed at achieving food sovereignty and securing local agro bio-diversity through intensification of sustainable agriculture processes and practices, using indigenous and improved methods to enhance productivity of the indigenous seeds varieties. Also, reach out through self help groups and develop self sustainable *Institute of Village Entrepreneurship* owned and managed by farmers. The project linked with NABARD, Local banks, Agricultural University, Krishi Vigyan Kendra, (KVK), Indian Council for Agriculture Research (ICAR) and Deptts of Agriculture and Livestock, Government of Maharashtra for partnership.

Project Impacts:

- NABARD Farmers Club program started in 13 villages and later extended to additional 25 villages. Specially Krishak Panchayat groups are leading and activated in this program. More than 260 families joined this program initially and now more than 1100 families have joined this movement.
- Irjik organic spot - an initiative of Baliraja Krishak Producer Company has completed its 2 years service. Through this shop more than 200 farmers benefitted in the process of quality seed, fertilizer, adequate rate to various agri-commodities and forest produce.
- Total 60 farmers were trained in seed production skill and good quality seed goes to above 700 farmers of nearer block and villages
- Farmers and Activist of the Panchayat became trainers of sustainable agriculture practices.
- Three types of food-grain varieties were sown on 58 acres of farm land. 32 seeds producing farmers are motivated and participated in to the seed conservation and producing process of indigenous seeds.
- Conserved 23 different indigenous varieties of crops (pulses & vegetables). 20 farmers have been identified and selected for self-sustainable Farmers Body.
- Krishak Panchayat emphasized on revitalization of mixed cropping pattern which was common among the farmers in the pas and identified 21 different crops.
- Organic farming advocacy with farmers has had strong emphasis on living soil, microbial flora and fauna in the soil and their contribution to soil quality and micro nutrients of the crop. The NGO is working as a service provider in organic farming certification program of Ministry of Agriculture, Gol.
- A retail outlet for organic farm produce is set up in Sangamner town. In the first year, the outlet sold 50Q Pearl millet, 40 Q Sorghum, 30Q Wheat and 25Q Kalbhat, a local variety of Rice. This outlet has a committed consumer base which is gradually increasing.
- As recognition of efforts in conservation of local crop varieties, Lok Panchayat is invited to participate in Maharashtra Gene Bank, a mega project of Rajiv Gandhi Science and Technology Commission of Maharashtra.
- Until 2009, the seed bank reported exchange of the seeds with more than 550 farmers from Ahmednagar district and Nasik district. Today it has more than 1200 members.

CASE STUDY – YERALA PROJECTS SOCIETY SANGLI (MAHARASHTRA)

The project is on “Community Actions and Conservation Practices in rain shadow and degraded tribal areas”. It is located in Jalihal village near Karnataka-Maharashtra border which is among several villages with a population of 30,000, with arid, degraded land in rain shadow areas and the local tribal communities face high migration and circle of poverty. 35 SHGs of 400 women farmers were developed, with regular savings done and links established with banks. Nearly Rs 600,000 was sourced from banks for the SHGs for setting the enterprise.

By developing demonstration plots, exposure to similar practices with high yields using low cost, low external inputs, community confidence and interest was created by the NGO. The members are involved in planning for seed selection, marketing, sending vegetables together to nearby market, i.e. four villages. The community produce is also purchased by the NGO for processing/value addition into products, like tomato ketchup, pickles, sauces, jamun squash and other fruit juices. The focus is to demonstrate an institutional model by promoting a systematic approach to community empowerment and benefits.

Project Impacts:

- 150 women from migrating families trained with modern water management techniques for sustainable vegetable cultivation;
- At least 5 acres of land per year is brought under green cover. A total of 16 acres of land has been brought under green cover during the last three years;
- Six men and women vegetable growers’ groups in four villages formed, totaling to 122 farmers. 2-3 SHGs plan for seed selection, marketing arrangements, sending vegetables together to nearby markets of 4 villages.
- A community-led enterprise is established which buys community produce for processing/value addition into products, with a brand name “Yummy”.
- The project has resulted in increase of incomes by 50% for 122 households.
- The NGO is now exploring possibilities to enhance use of the subsoil systems of irrigation with the help of SHG members in all the 22 villages.

The NGO has been in regular touch with the agricultural and soil conservation department, sourced the subsidy for micro irrigation. Strengthening interpersonal commitment, trust and alliances in multi stakeholder groups of diverse individuals and institutions that share similar degradation, sense of helplessness, lack of control on effective use of resources and landscape related issues has led to bring greater creditability and knowledge centre in the area by the NGO.