



Climate Change



Promoting Fish Drying Using Efficient Biomass Fired Dryers For Better Livelihoods



Project Background

The project was undertaken with a view to promote fish drying using efficient biomass fish dryers. The project focussed on introducing a new method of drying fish which was currently being done using either of the following approaches. The first approach is the traditional open sun drying of the fish, and the other one was electric drying of fish by only some rich users. The sun drying of fish was done either on open floors or on beaches, which involved low investment and no additional energy input. The disadvantage with this method was the intermittent nature of sun energy throughout the day and at different times of the year. It also led to contamination of the food materials by dirt, insects, causing spoilage and losses etc. The net result was low hygiene and contamination of fish and therefore low incomes and benefits. The second alternative used was to have electrical drying. Since electricity is supplied only for a few hours in a day, this alternative was not very useful for the village level poor communities.

Thus, TIDE explored the alternatives with the local women and aimed at providing biomass-fired dryers for drying various products such as vegetables, fruits, herbs, spices and fish. The main thrust behind this project was to introduce fish drying operations, which provided hygiene, was cost effective, and could be operated and managed through local community institutions of women at small scales. TIDE then developed the idea to evolve a technology with its large scale replication and with the involvement of end-users, mostly women and approached United Nation Development Program (UNDP), Global Environment Facility (GEF) and Small Grants Program (SGP).

Project Objectives

The main objectives of the project were:

- Disseminate and popularize an environmentally benign technology amongst the socially and economically backward sections of the society and in the process, contribute positively to climate change initiatives
- Provide opportunities for enhanced incomes for fisher women through appropriate, easy to manage and low cost technological interventions
- Encourage, institutionalize and empower the local community to use a common resource and create a **business model approach**

Project Details

TIDE, the implementing NGO with the support from local communities, banks and CEE started initial interactions with the fisher-folk; assessment of the current fish drying operations; identifying local networks; working with fishing community. Through regular field visits, village meetings, capacity building exercises in Self Help Group (SHGs); exposure visits to the fisher folk to biomass dryers constructed by TIDE led to a mutual trust building. Need based exposure and training of fisher women in fish drying and trial production of dried fish were done; installation of dryers of appropriate capacity in identified locations; setting up of appropriate market linkages; development of mechanism of 'pay and use' for the dryer by members of self help groups was ushered into.

Project Beneficiaries

Following were the project beneficiaries:

- Fisher women identified as project partners.
- Others engaged in drying operations (who could pay for the use of dryer).
- CBO/NGO working with the TIDE project.



Geographical area	:	Coastal areas of Thrissur, Ernakulam and Kozhikode districts of Kerala.
No of Beneficiaries	:	74 women members.
SGP Grant	:	Rs. 11,90,000
Co Financing	:	Rs. 16,90,000
Project Time Period	:	Jan. 2003 - July 2005.



Community Participation and Capacity Building

Four SHGs (43 members), formed under the Kerala state government's Kudunbashree Poverty Alleviation Programme, were identified. Sharing of costs, decisions and roles in the management and operations of the units were agreed. Regular trainings organized for women members of SHGs in usage of dryer, production of value added products, packing, storage, enterprise management and profit sharing.

Gender Focus

This project has been implemented through the **all women SHGs** with a strong focus on the empowerment of women, by training them in processing of marine produce and managing rural enterprise, earning their own resources.

Global Environmental Impact

Biomass fired dryers replaced the open fish drying, electric dryers. The project initiative to shift towards the use of renewable source of energy was attained. The effective use of biomass which otherwise was left to decay checked the release of methane. 1.6 tonnes of fish has been dried in three years, preventing the release of 1620 kg of CO₂ and conserving 1400 kg of coal.

Project Impact and lessons

Marketing network involving the local agents had been established to market the dried fish products. These enterprises are now running profitably through the women SHG members.

- A report on the status of fish drying operations in Kerala and a training manual on fish drying for fisher women has been developed in local language and English. This is a necessary step for sustainability of project actions.
- Ernakulam, Thrissur and Kozhikode have been identified as potential districts for demonstration and replication of the fish drying operations to the locals, as in the area the open fish drying systems prevail.
- Four sites were identified and fish drying enterprises initiated and replicated into 2 more sites.
- Out of the 4 Self Help Groups (SHGs), one withdrew and later 2 more joined after seeing the performance and benefits from the fish drying units. From 2003 the fisher women have made savings of **Rs 5,00,000 (10,200 USD)** and have accessed credit from banks for more than **Rs 425,000 (11,000 USD)** for investment in the dryers and working capital requirements. TIDE visualised the strengthening of the institutional arrangements at the local level for long term sustainability. **Thus the SHGs were federated into Dryer Management Committees (DMCs)** and this committee meets every month, agrees on the pricing with the entrepreneur, on the product mix, discusses issues and concerns on profits, production, quality, opportunities to value addition etc.
- Problems were often defined by the community. TIDE facilitators often assisted in understanding the local issues.
- Extensive capacity building training and exposure visits (**11**) conducted for the SHG members on operation and maintenance of the units, 3 more trainings have been formally arranged other than the numerous meetings and one-to-one discussions with a wide range of stakeholders for value addition with the Government of Kerala.
- A marketing network has been developed by TIDE with a product brand 'Sagarshree' involving the women SHG members and local **entrepreneur** to market dried fish products. Generating **revenue of Rs 725,000 (19,000 USD) per annum** in the last four years by all SHGs with a profitability of nearly **Rs 4200 (110 USD) per month per SHG to be shared between 10 women at an average**. One **entrepreneur developed is also earning nearly Rs 3500 (90 USD) per month**. The participatory processes have led to empowerment of locals. Individuals sense of confidence has greatly increased through the project.



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