

# **ENHANCING ENERGY SECURITY AND RURAL ENTREPRENEURSHIP THROUGH ENERGY INTERVENTIONS: Capacity Building Of Rural Women On Solar Dryers**

## **Part II. Problem Statement And Project Description**

### **A. Problem Statement**

Energy production and consumption in the rural areas are closely linked with the goals of sustainable human development: eradicating poverty, increasing women's role in development, reducing women's drudgery and making them more time available for their choice of development activities, providing people with income earning opportunities for better livelihoods. The availability of energy services has a distinct impact on the lives of poor people, and women in particular. This is most critically felt in rural areas where women shoulder the main responsibility of food processing, household cooking and family subsistence activities. In many rural areas, though potential with local resources, inaccessibility to energy sources and the related technologies has been identified to be one of the major barriers to meet the basic energy requirement of the rural people.

One of the energy consuming activities in the rural areas is the drying of food products such as fruits, vegetables, livestock products. Drying has evolved as a common practice, as it enables women to preserve perishable good for consumption in off-season when these products are not available, thereby providing a vital source of family nutrition, as well as for sale in market. In fact, there are many products, which fetch a better price in the market, when dried and sold.

The most commonly used method for drying of food products, fruits, vegetables, and livestock products is under the open sun. However, we know that open sun drying is slow, has no quality control and collects contaminants like filth from birds and rodents, dust, dirt, and dead insects etc. There are several other problems with sun drying of food products as well. With governmental stipulations (the food product orders (FPO) on sanitary and hygienic requirements of marketed food products is becoming stringent, it is increasingly becoming difficult for small scale industries to maintain the quality of sun-dried products, who cannot afford to purchase and maintain costlier equipment. As a result, they cannot sell their food products in distant markets and get benefits from value added price. At the same time, nearly 30-40% of the fruits and vegetables grown in rural India or Nepal get spoiled either due to lack of transportation, lack of storage facilities or simply over-production than the local people can consume. If only the excess can be stored and processed properly, there is an automatic activity and employment at the village level and excellent returns as well.

Alternative methods of drying such as solar dryers are increasingly emerging as an alternative for women who want to have healthy dried food products for family consumption or rural and semi-urban poor people wanting to commercialize food processing as their secondary or primary enterprises to support their livelihood through selling value added products. Solar dryers can, not only save drying time but also maintain the quality of food products. The solar radiation passes through the

transparent glass window, located on the top of the cabinet, which is oriented to south with a tilt equal to latitude to collect maximum solar radiation. The solar drying process has many advantages like: zero energy cost, fast drying, moisture control, export quality products, income generation, self-employment, sizes for small farmers to commercial production, multipurpose, applicable to multi-crop produces and works for 300 days. However, rural poor especially women have not been able to harness these advantages as they have no access to solar dryers.

Although women play a vital role in household energy use and management, they have not been properly involved in the mainstream of decision making process including planning as well as awareness building and skill transfer on the subject matter of rural energy, especially the renewable energy. Unless women are provided an opportunity to equal and active involvement with men in energy development activities, the question of sustainability and energy security would persist throughout the development process.

## **B. Project Description** (how the proposed project will address the above problems?)

The proposed project will increase the awareness of and build the capacities of various stakeholder groups, i.e. rural women, community based organizations such as women's self help groups, and NGOs in the adoption and use of solar dryers, with the overall objective of promoting rural entrepreneurship through commercializing this technology.

Rural women are increasingly taking initiatives to participate in developmental activities through formation of women's organizations such as savings and credit groups, mother's group, women and men youth clubs, etc. A large number of women groups have also been formed and activated under various development programs/projects in South Asian countries energy related or other rural development projects. These organizations are potential vehicles for renewable energy technology promotion, including solar dryers. The benefit of involving village-based groups in such initiatives is two-fold. First, they are familiar with the local markets, users' needs and preferences etc. Secondly, it can provide an opportunity to these groups for income generation and livelihood support, critical to the very sustainability of these groups. The project will actively involve village-based women's groups for the promotion of solar dryers. Many of these groups have already received training courses under various governmental and non-governmental programmes and building on their knowledge and skills will be an advantage to fasten the process of adoption and use solar dryers as a livelihood support activity for drying agricultural produce.

The proposed project considers two groups of beneficiaries:

- Group 1 constituting of NGOs, private entrepreneurs, local partners and community-based organizations. The focus of activities for this group will be on technology transfer, income generation and enterprise management.
- Group 2 constituting of rural communities and their representatives such as women self-help groups. For this group, the project will focus on healthy processed food products for home consumption, value addition of marketable agricultural produce, women's empowerment through energy inputs, nutrition and health improvement.

For capacity building of these two groups of beneficiaries, two sets of training programmes, with two modules each, in Nepal and India will be designed and implemented.

### Training Modules

Module	Target group	Location	Contents
1	NGOs, private entrepreneurs, and community-based organizations	2 training programmes, one each in New Delhi and Kathmandu	<ul style="list-style-type: none"> <li>• Technical aspects of solar drying technologies, including basic principles, use, operation, maintenance,</li> <li>• Products, Business skills and enterprise management, including inventory management, marketing, accounts management, market assessment etc.</li> </ul>
2	Rural people and SHG representatives	Project Sites in the participating countries	<ul style="list-style-type: none"> <li>• Awareness on use and advantages of solar drying, Technical aspects of solar drying technologies, including basic principles, operation, maintenance,</li> <li>• Products, Business skills and enterprise management, including inventory management, marketing, accounts management, market assessment etc.</li> </ul>

The detailed training schedule of the above two target groups will be formulated and implemented after training needs assessment is carried out and reflected in the inception report. However, activities like awareness creation on solar dryers and their utilization will be undertaken as per the work schedule given below.

By supporting for training on hands on skill development to rural women’s groups in solar drying, the project will enhance rural entrepreneurship, using energy as an important input. It will also increase the incomes of rural communities, through value-addition of farm produce. At the household level, it will improve food security for the family providing them off-season but nutritive and more hygienic food products.

The Center for Rural Technology, Nepal (CRT/N) has just completed a 2 years project on “Women in Water and Energy Management” in two hill districts (Palpa and Dhankuta) in Nepal supported by the International Center for Integrated Mountain Development (ICIMOD) and UNEP. The project aimed at uplifting the livelihood of rural women by building their capacity in water and energy management through promotion and adoption of environmentally benign technologies. So far, CRT/N has successfully facilitated the formation and strengthening of 11 women groups in two project districts covering 398 households, where women have started to adopt technologies to meet their practical needs such as improved cook stoves, kitchen management, solar lantern, solar dryers, green house, bio-gas etc, as well as productive needs through interventions like off-farm income generation options such as bee-keeping, agriculture improvement etc. The project has raised the capacity of the members of women groups to effectively use

these technologies for household activities and has provided increased opportunity for income generation as well. Furthermore, the women trained by the project have been valued resource persons in the community imparting their knowledge and skill to other community members in and around the project area. These women groups have obtained training on institutional strengthening, technology dissemination, and linking energy with income generating activities, etc. CRT/N intends to build on this project while implementing the proposed project.

Likewise, the partner institution, AIWC has also proposed to build on its success on use of solar dryers among women groups in India. AIWC on realizing the potential of dryer technology procured 4 SDM 50 solar dryers from Society for Energy, Environment and Development (SEED) and installed them in its 4 project areas of Andhra Pradesh, Kerala, Tamil Nadu and Delhi. AIWC had conducted short duration training programs to demonstrate effective and hygienic processing of fruits and vegetables using solar dryers with an intention to create income among poor women. This is an action cum research project funded by ADB/Manila.

In view of the short time available for implementation of the proposed project, CRT/N and AIWC both would like to build on the successes and experiences of these recently completed/nearly completing projects and operate in and around the existing project areas. At the same time, the proposed project activities will be tried out among 24 new women groups, 12 in each country, to replicate the project ideas already initiated in the project areas with new dimensions of engendering modern energy issues like solar drying and management for improving the living standards of rural poor with a special focus on rural women.

## **C. Implementation and work plan:**

### **1. Project Objectives:**

The overall objective of the initiative is to promote rural women entrepreneurs, using modern energy services as an instrument. The specific sub-objectives are:

- To create awareness among women to utilize clean and affordable energy services for productive and consumption uses.
- To develop capacity of the rural women's groups to participate in the promotion and dissemination of solar dryers in the community.
- To improve the livelihood status of rural people through value addition of farm produce by using solar dryers for processing of food products.
- To mainstream women in decision making process related to the choice and adoption of the energy technologies appropriate for drudgery reduction and upliftment of their social and economic status.
- To share the results/outcomes of the project with the participating countries for further replication elsewhere in South Asian countries.

The objectives are set in line with the UN's key objective of MDGs to alleviate poverty, and to promote gender equality and empowerment of women. The backward and forward linkages of energy utilization would bring positive changes in employment generation and economic upliftment of the rural poor, especially women

and children. At the same time, promoting women's enterprises through introducing modern energy sources will empower women.

## **2. Concrete results**

- A pool of 48 trained local human resources will be created (representing 24 women's groups, 12 in each country) to set up and run enterprises based on solar dryers.
- Local communities (especially women) are made aware about an array of available solar energy technologies focusing on adoption and use of solar dryers.
- Poverty situation of participating women's households is improved through application of solar energy technologies to various productive end uses.
- Idea sharing is done among the participating countries for transfer of suitable solar dryer technologies in other countries.
- Circulation of hygienically prepared food products in the market and among school children.

## **3. Work plan**

The key activities in the preparatory phase will include consultative meetings among the stakeholders, field visits for rapport building, campaign for awareness creation, assessment of training needs of both target groups, NGOS/CBOs and women and SHG representatives, and preparation of the inception report. The main results will be linkage establishment, project planning, preparation of training modules, identification of resource persons and identification and selection of trainee participants.

In the implementation phase, the key activities will include formation and strengthening of women groups, conduction of training programs, demonstration and promotion of solar dryer technology. During this phase, handholding support to entrepreneurs including helping with bank linkages, materials sourcing, identifying suppliers etc will also be carried out. It will also include activities to promote forward and backward linkages of solar dryer technology, procurement and installation of solar dryers to market exploration for the processed products.

The follow-up phase will include activities like interactive study visits to project sites, preparation of case stories and dissemination of lessons through websites and other networks like ARECOP, ENERGIA, INFORSE, Breathe Easy, and HEDON, and through CRT's and AIWC's own networks, and other national focal points on ENERGIA.

The project will be implemented over a period of 9 months. The final report, however, will be submitted by the 10th month of the project implementation. The details of the action plan are provided in the following page.

*Action Plan for “Enhancing Energy Security and Rural Entrepreneurship through Energy Interventions:  
Capacity Building of Rural Women on Solar Dryers”*

**Nepal and India**

SN	Activity Plan Months	1	2	3	4	5	6	7	8	9
	Activities									
<b>1.</b>	<b>Preparatory works for project implementation</b>	■								
a.	Consultative meeting among the local partner institutions in the partner countries	■								
b.	Review and draw lessons from the previous projects in both partner countries	■								
c.	Detailing of project activities for implementation in both countries (inception report)	■								
<b>2.</b>	<b>Awareness campaign program and end use demonstration in partner countries</b>		■	■						
a.	Collection and preparation of demonstration materials on different solar dryers		■							
b.	Transportation and assembling of demonstration materials		■							
c.	Awareness campaign and demonstration in the project locations in both countries		■							
<b>3.</b>	<b>Formation &amp; strengthening of women groups of project sites in both countries</b>			■	■					
a.	Forming new groups in each project district (location) in India and Nepal			■						
b.	Training on group strengthening and management as needed in both countries			■						
<b>4.</b>	<b>A series of training on application of solar energy tech. in partner countries</b>				■	■	■			
a.	Training needs assessment of target groups on solar energy technologies/applications				■					
b.	Preparing training curriculum, logistics and resource persons				■					
c.	Providing training course/s on different solar energy technologies focusing dryers					■				
<b>5</b>	<b>Assisting to establish forward and backward linkages of the energy technologies</b>						■	■	■	
a.	Identification of potential forward and backward linkages (market and raw materials)						■			
b.	Resource mobilization, subsidy, upfront cash, management of micro-credit						■	■	■	
c.	Procurement/installation of energy technologies and linking F/B						■	■	■	
d.	Procurement of inputs/sale of products from/in the linked markets						■	■	■	■
<b>6</b>	<b>Review of the program and sharing of findings for future replications</b>									■
a.	Participatory review and evaluation events in the project sites in the partner countries									■
b.	Analysis of results and drawing lessons for sharing with partners									■
c.	Seminar on project findings/lessons jointly organized by all partners									■
d.	Preparation of the project concluding report for submission to SARI									■

Note: Specific training courses focused to solar energy technology (solar dryer) for both groups of direct beneficiaries will be designed and implemented after the training needs assessment is done. This will appear in the inception report.

#### 4. Deliverables and delivery dates

S N	Deliverables	Date of delivery
1.	Report on preparatory works (Inception Report)	End of 2 <sup>nd</sup> Month
2.	Progress report at the end of six months	From 6 <sup>th</sup> Month
3.	Project Concluding Report	By 10 <sup>th</sup> Month

#### D. Expected outputs:

##### Impact on regional energy development and cooperation

The key partners to undertake the joint venture include the Centre for Rural Technology/Nepal (CRT/Nepal) and All India Women's Conference (AIWC / India). Since both partners will be implementing the project responding to their varied contextual environment, naturally the diversity in the choice of solar energy technologies by the beneficiaries' groups in the partner countries may be different, and thus, there will be differences in experiences and learning from each partner institution. Accordingly, the solar energy technologies might need to be tuned in to suit the local cultural practices and preferences in the market for the range of products, agro-based or otherwise. The sharing of learning would be more readily applicable in the partner countries with little or no modification.

It would also provide a platform to know the products of each rural setting and thus generate the demand for specialized rural products from one another country. This would encourage using the available energy sources for producing commodities based on comparative advantages e.g. *lapsi* candy or *gundruk* (from brassica oil plants).

The technology is applicable for the climatic conditions and products throughout South and South East Asia, and this practical experience would help further refine products in the area.

##### Beneficiaries:

The project has the following sets of beneficiaries:

- Individual members of women groups/organizations of each partner country, as direct beneficiaries from the project.
- The implementing partner organizations at the local level such as local NGOs, CBOs and Welfare Societies in each country, who will get income generation and entrepreneurship opportunities.
- Partner organizations of both countries India and Nepal will assist the beneficiaries in carrying out promotional activities of the rural energy technologies, and will also get benefited from the project.

There will be many more beneficiaries in the project areas, which would directly/indirectly derive benefits from the project through sale of their service.

##### Project's contribution to SARI/Energy program and other activities

Since the project will be implemented in an action research mode, it will certainly increase cooperation among the regional project partners through sharing of experiences and learning. Exchange visits to one another's project sites and interaction among partner agencies and beneficiaries, and seminars on achievements and lessons learned will provide a better platform for fulfilling the SARI objectives of improving regional energy cooperation, sustainable institutional relationships and dissemination of results from cooperative research to the various stakeholders groups in the region including policy makers.

Similarly, dissemination of news and bulletins about results of SARI supported projects through internet would reveal the marketing potential of rural products from the beneficiaries of different countries in the region. The trade issues and barriers existed between the countries will also get safe solutions through understanding developed among the cooperating partner institutions and their influence on the policy makers of both countries. More avenues of regional cooperation will also reveal among the partner institutions of the region with regard to dissemination of energy technologies and even sharing of energy resources available in the region with justice.

#### **E. Project sustainability**

- All beneficiary groups are made aware of energy issues and their capacity for household energy management would have been improved through the use of solar dryers during the project period. Representatives of these groups are trained as promoters of rural energy technologies, who could also get incentives for helping to install technologies. Therefore, they are likely to continue their job as promoters.
- The groups have also their saving and credit scheme already on-going and they are lending money to their members at times of need. This would also continue to bind them together. Moreover, the micro-credit institutions operating in the project areas recognize these groups, and thus, they could borrow more required amounts from these institutions for continuation of project activities.
- By the time project period is over, women group members would have established strong linkages with local and district level merchants / markets for their products and required inputs.
- The local level NGOs and CBOs would also likely continue their job for providing further training and assistance to the local community as they are no profit making institutions trying to provide service to the community. These NGOs and CBOs together with local beneficiaries groups would have developed good linkage with the Village Development Committee and District Development Committee level coordination committees in case of Nepal, and similar parallel local governance institutions like gram and block committees in case of India. These committees are permanent in nature and upon requested coordinate services from related line agencies for the community people, especially when they are in groups.
- There is also a national level coordination committee for energy sector, which can be requested for incorporation of budget for rural energy development specifying the project area through National Planning Commission. These institutions are made obliged to the given functions only if local level institutions create pressure on them. Beneficiaries from the project areas would be capable to create such a pressure in times of need.

- CRT/N's and AIWC's working strategy involving the local institutions and beneficiary organizations would guarantee the sustainability of the project functions beyond the project period.
- Learning from this project, the beneficiaries will maintain similar pressure groups, local level committees, and organizations for various other purposes as well. They will continue the institutional advantages for linking their products to the markets and be able to afford for clean energy to improve the quality of their lives.
- For sustainability, it is also necessary that the technology (solar dryer) should be of good quality lasting longer and it should be easy to repair then and there. Similarly, raw materials should not get spoiled either in transit or by retention for a reasonable period. Processing should be simple which a common villager can easily understand and practice. It is also necessary that local, regional and central governments support the beneficiaries in line with the project objectives through facilitation to establish distribution agencies. Last of all, the solar energy solution should be affordable and available to the users.

## **F. Management and Staff Involvement**

The project will be implemented in partnership by two organizations:

- The Center for Rural Technology, Nepal
- All India Women's Conference, India

Since the two partner institutions are the members of ENERGIA, which has a mission of engendering energy and empowering women, the implementing partners, CRT/N and AIWC will seek support for technical backstopping from ENERGIA as and when required. This will further support the project implementation towards achieving success.

There will be frequent consultations between the partner countries through Internet, email and telephone conversations. At CRT/N and AIWC level, a project management body will be formed to guide and supervise the project while at the grassroots level; the local women's groups will manage the project. Local NGOs, CBOs and Welfare Societies having women representatives will implement the project at local level.

CRT/N and AIWC will jointly implement the project in their respective country context. CRT/N will take the lead role for the management of the project. Any differences that may arise during project implementation for any reasons will be resolved through amicable consultations between the two partner institutions. In case of Nepal, at the project site level, the district partners, Red Cross Society in Palpa district and Solve/Nepal in Dhankuta district will implement the project through mobilization of local women's groups. Similarly, in case of India, AIWC project implementation partners will implement the project activities in Andhra Pradesh, Tamil Nadu, Kerala, and Delhi.

The name, capabilities and responsibilities of Staffs from Nepal side to be involved in the Project is given as below:

### **1. Team Leader: Mr. Krishna Hari Maharjan (Consultant)**

#### ***Capabilities:***

- Overall Project Management
- Coordinating necessary services from all relevant stakeholders
- Guiding project staffs including professionals
- Encouraging participatory implementation, monitoring and evaluation processes
- Composing analytical project reports and timely reporting
- Drawing inferences and lessons for improvising the design of new projects of similar nature for sustainable implementation in replicated sites

#### ***Responsibilities:***

- Overall Project Management
- Forming a central and two district project implementation committees and maintain coordination with all stakeholders
- Detailing of project activities for implementation
- Encourage participation of all stakeholders in the project
- Supervising and guiding the staffs and participating beneficiaries
- Disseminating and sharing the project findings and lessons with the partner institutions
- Designing training curriculum
- Establish forward and backward linkages of energy technologies
- Reporting to SARI/Energy in consultation with project partners

### **2. Team Member: Ms. Nilam Kayastha (Programme Officer)**

#### ***Capabilities***

- Sound knowledge in renewable energy technologies particularly in household energy promotion
- Significant background in the tasks of social mobilization and group forming
- Sound knowledge in gender aspects

- Profound professional background in conducting action research and preparation of case stories along with best practices in rural energy development.

***Responsibilities***

- Collecting information on different experiences and best practices in renewable energy and gender related aspects
- Establishing resource centre of best practices in rural energy,
- Assisting in conducting various training activities
- Assisting to preparing training curriculum
- Assisting to forming women groups in both the districts
- Collect, prepare and assemble the demonstration materials
- Involve in awareness campaign

**3. Resource Persons:**

**Mr. Ganesh Ram Shrestha (CRT/N Executive Director)**

***Capabilities***

- Intensive knowledge in Renewable Energy System of South Asia Region
- Significant knowledge in renewable energy components including rural decentralized energy models
- Contributed experiences and papers at the national, regional and international forum on renewable energy
- Significant background of Renewable Energy Technologies in academic as well as professional experiences
- Significant professional background in preparation of cases of best practices in rural energy systems

***Responsibilities:***

- Review and draw lessons from the previous project
- Assist in developing training curriculum and organizing trainings on application of energy technologies
- Assist in participatory review and evaluation events in both the sites
- Analyze the results and experiences drawn to share with the partners

**Mr. Lumin Kumar Shrestha (CRT/N Director)**

***Capabilities***

- Sound knowledge in renewable energy technologies particularly in household energy promotion including.
- Profound professional background in conducting action research and preparation of case stories along with best practices in rural energy development.
- Contributed experiences and papers at the national, regional and international forum on rural energy particularly on renewable energy development and application

***Responsibilities***

- Assist in developing training curriculum and organizing trainings on application of energy technologies
- Assist in participatory review and evaluation events in both the sites
- Analyze the results and experiences drawn to share with the partners

**Mr. Gyanendra Sharma (Coordinator, CRT/N Technical Support Unit)**

***Capabilities***

- Sound knowledge in renewable energy technologies particularly in household energy promotion including rural decentralized electrification model.
- Profound professional background in conducting action research and preparation of case stories along with best practices in rural energy development.
- Contributed experiences and papers at the national, regional and international forum on rural energy particularly on biomass energy development and application

***Responsibilities***

- Facilitate the team for collecting information on different experiences and best practices in renewable administration, management, financial viability, sustainability
- Establishing resource centre of best practices in rural energy,
  - Compiling consensus and participatory methods to overcome barriers in rural energy development particularly rural electrification.
  - Assist in establishing the forward and backward linkages of energy technologies

**Ms. Rakshya Pandey (CRT/N Network Officer)**

***Capabilities***

- In-depth knowledge of gender role in renewable energy

- Having extensive knowledge & experience in information & communication dissemination.

### ***Responsibilities***

- Collecting experience of best practices in renewable energy
- Organizing workshop and meeting with concerned stakeholders
- Publication of the best practices.
- Sharing of experiences in energy and gender networking

## **India:**

The Project team consists of:

### Management team

1. Dr. Aparna Basu, President, AIWC
2. Ms. Gomathi Nair, Secretary General, AIWC
3. Ms. Veena Kohli, Treasurer, AIWC
4. Ms. Lalita Balakrishnan, Chair Person, Rural Energy Department, AIWC

### Project Team

1. Mr. R.K. Jain, Accounts Officer, AIWC,
2. Ms. Manjushree Banerjee, Program Officer, AIWC.

## **G. Plan for sharing results and lessons**

The experience of both CRT/N and AIWC will be shared through the experience-sharing workshop at any one of the countries. A consolidated report will be prepared and disseminated for sharing with partner organizations working for the promotion of renewable energy technologies in the region.

With Stakeholders:

- Internet and e-mail connections,
- Exchange of case study reports,
- Documentation of best practices through Internet and e-mail connections
- Exchange visits to the partner countries' project sites while attending the major training events.
- Seminar and talk programs within the partner countries,
- Publications and bulletins

With other relevant institutions:

- Internet and e-mail correspondences,
- Publications and bulletins

## H. Information on Range of Solar Dryer, Solar Dried Products, Research Institutions and Manufacturers:

Range of Solar Dryers used in Participating countries:

Table 1: Range of Solar Drying Technologies Available in Nepal and India

Type of Solar Dryer	Purpose/Use	Drying	Quality of Finished Product	Capacity	Cost
Flat Type Solar Dryer	Household and Micro-enterprise Level	With Direct Sunlight	Good	Can be constructed as per need	Low
Cabinet Type Solar Dryer	Household and Micro-enterprise Level	With Indirect Sunlight	Very Good	Can be constructed as per need	Medium
Tunnel Type Solar Dryer	Commercial Level	With Direct Sunlight	Good	Can be constructed as per need	High

Table 2: Solar Dried Agricultural Products in Nepal

Commodity	Particulars
Fruits	Apple, Persimmon, Mango leather and other fruit leather, <i>amala</i> , <i>lapsi</i>
Vegetables	Leafy vegetables, Cauliflower, Radish tuber plus leaves, Radish slices, Potato chips, onions, and mushrooms, <i>masaura</i> (paste from cereals and vegetables in different forms), <i>gundruk</i> , <i>sinky</i>
Spices	Ginger, cardamom, garlic bulbs, chillies and turmeric tuber
Other NTF Cash crops	Medicinal herbs
Livestock products	<i>Chhurbi</i> , and other milk products

Table 3: Solar Dried Products in India

Commodity	Particulars
Fruits	Mango bars, pineapple bars, papaya bars, guava bars, grapes, coconut
Vegetables	Potatoes, <i>donda</i> , carrot, tomato, mushrooms, <i>karaya</i> gum
Green leaf & Spices	Curry leaf, spinach, tamarind leaves, gogu, mint, drumstick leaf, ginger, chillies
Food items	<i>Vadium</i> , <i>sameya</i> , pickled chillies, cellulose, fish
Medicinal plants	Honey, <i>amala</i> , rosemary

**Research Institution:** Research Center for Applied Science and Technology (RECAST), Tribhuvan University, Kirtipur, Kathmandu, Nepal.

**Dryer Manufacturers:** Sun Works, Balaju Yantra Shala and other private workshops in Nepal, manufactures in the states of Gujarat, Maharashtra and Andhra Pradesh in India.

**Training capabilities:** Existing trained personnel from AIWC and CRT, Ministry of Health India for technical training. CRT has been promoting solar dryers for many years, and has the necessary wherewithal, including equipment, and personnel to conduct these training programmes.

\*\*\*\*\*