

Commercialisation of Improved Biomass Fuels and Cooking Devices in India: Lessons from India

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Background

- The National Programme on Improved Chulha (NPIC) implemented by Ministry of Nonconventional Energy Sources (MNES) was terminated in March 2003.
- A World Bank assessment study in 2002 had revealed that NPIC had in general failed to create a culture of sustained use of improved stoves, except for a pocket in western Maharashtra, where ARTI had promoted improved stove entrepreneurs.

Specific Objectives

- ① Create a self-sustained entrepreneurial network of at least 100 rural microenterprises for delivery of improved biomass fuels and cooking devices in Maharashtra.
- ① Establish use of improved biomass fuels and cooking devices as a common practice in at least 100,000 rural households in Maharashtra.
- ① Demonstrate significant improvement in Indoor Air Quality and therefore health of women and children.

Methodology

- ☹ Market Testing
 - ⇒ Entrepreneurship Training & Finance
 - ⇒ Promotion & Marketing
 - ⇒ Monitoring & Expansion
- ☹ Project being implemented through ten grassroots level NGOs; two in each of the five socio-economic regions of the state.

Comparison with NPIC

- ☹ NPIC was
 - ❖ implemented through government machinery
 - ❖ target-oriented
 - ❖ subsidy-driven
- ☹ ARTI project is
 - ❖ Implemented through NGO-entrepreneur network
 - ❖ sustainability-oriented
 - ❖ market-driven

Market Testing

- ⦿ A picture of users' preference for certain models emerged from area of operation of each NGO, through market testing.
- ⦿ General comments from Users:
 - ❖ Improved stoves produce no or less smoke compared to traditional stoves, leading to significant increase in cleanliness and comfort in the kitchen.
 - ❖ Fuel saving, time saving and ease of operation.
 - ❖ Aesthetic value and status symbol (in the case of Sarai cooker).
 - ❖ Cost is a deterrent for some sections of the rural society.

Entrepreneurship Training

- Potential entrepreneurs selected by NGOs, trained by ARTI.
 - ❖ Selection of potential entrepreneurs as per guidelines fixed through discussion.
 - ❖ Training programme duration: 8 days
 - ❖ Theoretical as well as hands-on training in improved stove production, production of char briquettes from agrowaste, fabrication of molds for stove manufacturing and kilns for char production, basics of entrepreneurship.
 - ❖ Entrepreneurship training common to all trainees, technical training as per the preference of the individual trainees.

Glimpses of entrepreneurship training



Promotion & Publicity

- ☺ Promotion strategies include
 - ❖ Village level Awareness Camps
 - ❖ Participation in rural exhibitions, meetings, etc.
 - ❖ Publicity through local print and electronic media.
- ☺ Village level Awareness Camps were found to be most effective.

Smoke Free Week

- ARTI and its collaborating NGOs organised a massive publicity and awareness generation campaign throughout the entire state during November 1-7, 2004.
- Simultaneously, awareness programmes were conducted in 70 village-clusters throughout the week.
- As a build up to this Week, a series of radio programmes was aired from 10 radio stations in the state covering 20 of the 33 rural districts. The NGOs published articles and announcements in local media. ARTI generated publicity through state and national level media.

Smoke Free Week

- ① A special issue devoted to 'environmental pollution and health' of an education-based bimonthly (distribution: 3000+) was sponsored. It contained articles about IAQ and the project. Copies were distributed to rural schools and voluntary organisations during the Week.
- ① Handbills and pamphlets were widely distributed throughout the week.
- ① More than 10,000 people from 325 villages were directly reached through Awareness Camps. In addition, the message of the project reached millions of people through various media.

Glimpses of Smoke Free Week



Status as on December 31, 2004

- ☺ 131 entrepreneurs active, and about 25,000 households using the fuels and devices.
 - ❖ Entrepreneurs being financed through revolving fund, local banks and financing institutes being encouraged to support the new businesses.
 - ❖ Increased involvement of SHGs to reduce the burden of cost on the consumers.
 - ❖ Use of existing government and non-government welfare schemes to reach the products to the poor.



Stove production units

Exhibition stalls



Lessons learned

- ① The project is generating enthusiastic positive response from the rural people. This is due to a people-centric approach in the promotion strategy, range of models available to suit varied cooking needs as well as affordability levels, and ready availability of the products in the neighbourhood market.
- ② The entrepreneurs emerging from the project are individuals traditionally engaged in stoves-related business as well as complete novices. Self help groups too are emerging as manufacturers as well as dealers and financiers.

Lessons learned

- ARTI and the collaborating NGOs are nicely complementing each other in the project implementation. The know how and experience of ARTI is reaching the people more effectively through the promotion and publicity campaigns thanks to the credibility and goodwill enjoyed by the grassroots level NGOs among the rural people.
- The effectiveness of an awareness camp is enhanced by the presence of the local entrepreneurs to accept orders. The new entrepreneur can be immediately financed through the revolving fund to meet the sudden surge in demand. This strategy is proving most successful everywhere.

Lessons Learned

- Although the 'subsidy mindset' created by NPIC is a bit of a deterrent, a number of other government-run schemes for upliftment or rural people are indirectly proving beneficial to the project.
- The lack of business attitude in the NGO sector is an obstacle in the NGOs playing a more proactive role in the commercialisation process. In the interest of sustainability, there is a need to supplement the philanthropic objectives of the NGOs by a business mindset.

Sustainability and Scale up

- ⦿ Once the minimum target of 100 enterprises and 100,000 households is achieved, the emphasis will be on:
 - ❖ conducting refresher courses for successful entrepreneurs,
 - ❖ conducting training courses for new entrepreneurs wherever required,
 - ❖ continuing with promotion and marketing activities.
 - ❖ Ensuring quality of the products through continuous monitoring and evaluation.

Sustainability and Scale up

- Some data on market potential is available through previous studies, and ground level experience during the project more or less confirms it.
 - ❖ Statewide potential: ~ 96,50,000 households
 - ❖ Potential per district: 3,00,000 - 5,00,000
 - ❖ *Source: MNES & Planning Commission (2000)*
- The project outcome so far demonstrates that the right strategy for converting the potential into market demand is in place.

Sustainability and Scale up

- ☹ Supply chain issues are being sorted out to ensure ready availability of products in the market at affordable-to-customers and profitable-to-entrepreneurs rates.
 - ❖ It is more economical to distribute fabricated items like grates, moulds, charring kilns and Sarai cookers and other portable stoves through a sole agency for the entire state. One of the NGOs, (Sahyadri) has evolved as the distributor; the other NGOs act as liaison for the entrepreneurs in their vicinity.
 - ❖ It is more economical to manufacture cement or mud stoves, char briquettes, chimney pipes and cowls, locally.

Sustainability and Scale up

- The publicity, promotion and training activities will have to be continued beyond the project period.
- More NGOs will have to be involved to reach the concept to each village in each district of the state.
- A tri-monthly newsletter 'Blue Flame Bulletin' has been launched to enable the project partners to share their thoughts and experiences with each other, and with other interested persons and organisations.

Why is ARTI Project Sustainable?

- ☺ Rural families motivated to purchase the products at market price from local entrepreneurs.
- ☺ As entrepreneurs earn their daily bread through the sales, they keep the activity going beyond project period.
- ☺ Entrepreneurs encouraged to pay service fee to NGOs to enable the NGOs to continue with their training and marketing support beyond project period.

Global Perspective

- ☉ We believe that we have demonstrated a model for promotion of improved biomass energy for fulfilling cooking energy needs of the rural people in a sustainable manner.
- ☉ The main features of the model are:
 - ❖ Use of people's organisations as agents of change
 - ❖ Emphasis on awareness generation and commercialisation rather than charity
- ☉ The model can be universally applicable, if these basic principles are applied suitably in the local context. The Global Toolkit developed on the basis of our project will serve this function.