



Promotion of Improved Cook Stove in Bangladesh

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General Energy Situation in Bangladesh

- Power: Installed capacity: 5000 MW (Operating: 3900 MW)
- Natural Gas: 11 tcf, Consumption: 500 bcf/a
- Coal reserve: 2 billion ton
- 50% of total energy supply is provided by biomass
- 40% of HHs: connected to grid electricity (rural area, 20%)
- 6% of the HHs: natural gas, primarily in urban areas
- For cooking: >90% depend on biomass, e.g. rice husks, jute sticks, cow dung, wood.
- The way is traditional, inefficient



Traditional biomass stove





Cooking with traditional stove





What is improved cook stove (ICS)?

GTZ recognizes a stove as ICS if it has

- i) a chimney to take smoke out of kitchen,
- ii) optimum geometry to facilitate good combustion of fuel,
and
- iii) a grate to hold biomass in optimum distance from the pot.



ICS being promoted by GTZ

- Adaptation of technology developed by BCSIR Dhaka
 - affordable to people (e.g. low cost)
 - acceptable by people
 - usable by all types of biomass available
 - by locally available raw material, e.g. clay, brick

Learning through doing & field testing

- 3-pot ICS with 1 chimney & 2 grates
- 2-pot ICS with 1 chimney & 2 grates
- 1-pot ICS with 1 chimney & 1 grate

Brand Name: Bondhu Chula



Improved cook stove

- No smoke in the kitchen
- Efficiency: 26%-29% (traditional stove: 5% - 15%)
- Fuel saving: 50% - 60%

- Household, which buys fuel, saves 250 – 400 Taka/month
(payback period: 2-3 month)

- Restaurant saves 200-400 Taka/day
(payback period: 1-2 month)



Impacts of ICS

- ✓ Significant reduction of indoor air pollution in kitchens
- ✓ Reduction of cooking fuel by about 50% - biomass saving
 - Saving of money
 - Reduced burden on forest resources
 - Improvement of soil by increased use of bio-fertilizer
 - Time saving
 - Clean kitchen & pots
- ✓ Income generation for builders and trainers



1-pot ICS





2-pot ICS





3-pot ICS





ICS in a small restaurant





Industrial ICS





Potential Market

- About 24 million rural households
- About 3 million urban households
- About 2 million restaurants, hostels, etc.



Achievement till 30 November 2008

- About 85,000 domestic ICS
- About 1,000 institutional ICS
- Dissemination is speeding up!
- Over 120 POs, more are coming.
- Over 6000 technicians have been trained.
- Over 600 persons are earning livelihood by making ICS



Principle of cooperation with Partner

- Facilitate Partner **to do business** with ICS, which will make it sustainable.
- The project does not end with the fulfillment of in the ToR mentioned target. The partner **should continue** dissemination of ICS after project period.



Dissemination Strategy

- Work with local partners all around the country
- Training on
 - manufacturing of ICS
 - inspection & monitoring of ICS
 - maintenance of ICS
- Institutional capacity of partner
 - Revolving fund
 - Fund for promotional works (leaflet, posters, etc.)
 - Fund for chimney manufacturing facilities



Training on ICS Construction





ICS Fair





Role of the partner organization (PO)

- PO may be non-profit or profit making organization

Responsibilities

- Undertake marketing of ICS
- Conduct training
- Build ICS only by trained ICS technicians
- Undertake inspection & supervision of ICS
- Collect payment
- Provide user's training
- Ensure use of ICS
- Provide after-sales service



What should be the business for PO?

- **Selling price for domestic ICS:**
 - 3-pot ICS: 700 - 2500 Taka
 - 2-pot ICS: 700 -1500 Taka
 - 1-pot ICS: 500 -1000 Taka
 - **Profit: 200 - 1000 Taka**

- **Selling price for institutional ICS:**
 - 5000-7000 Taka
 - **Profit: 2500 - 3000 Taka**



How do the customers pay?

- Cash payment
- Installment payment (suitable for poorer households)
- To reach the ultra poor special mechanism needs to be worked out.



What do we want to reach?

- ✓ As many ICS as possible
- ✓ Technically perfect ICS
- ✓ Households / institutions use ICS
- ✓ Partners have capacity to run ICS business
- ✓ Trained ICS technicians all over the country



What is the main challenge?

POs do ICS business

Business means

- Construct good ICS against money
 - A good ICS boosts the market!
 - A bad ICS destroys the market!
- POs must supervise the construction.
- POs must provide after sales service.



New Developments

- GTZ approach is being appreciated.
- World Bank is coming forward.
- DFID is discussing how to reach the poor.
- Carbon fund may become available, which will ensure after sales services over the next few years.



Perspectives for the Future

- ✓ After reaching the critical mass, the ICS program can go on its own.
- ✓ Replace all traditional stoves by ICS.
- ✓ For that, GTZ wishes to cooperate with more and more local and international organizations.



Thank you