

DEVELOPMENT ACTIVITIES ON IMPROVED COOK STOVES IN NEPAL

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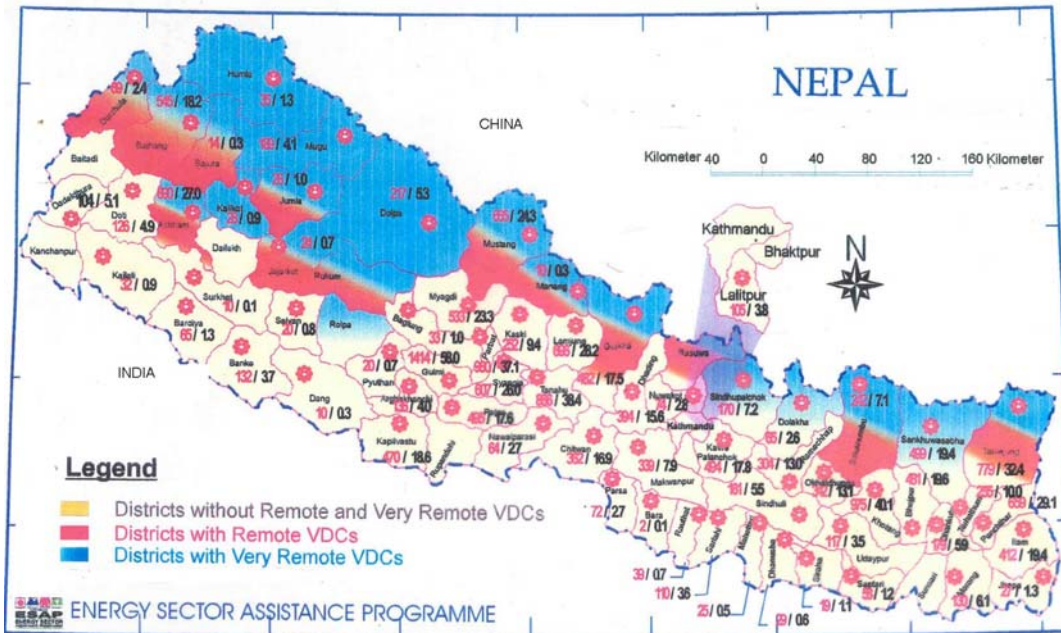
Need of ICS

- Around 78% of fuel wood is used for the purpose of cooking, heating and water boiling (640-4000 kg/ year)



INTRODUCTION

Physical Setting



- Location: China in North, India in South, East & West
- Area : 147,181 sq. km.
- Ecological Zones :
 - Mountains (33%), Alt. 7487 m
 - Hills (51%), 600, Alt. 4870 m
 - Terai / Plain (16%), Alt. 90 – 600 m

INTRODUCTION..... contd.

Demography Setting

- Population : 23.1 million
- Population growth : 2.08%

INTRODUCTION..... contd.

Economic Setting

- ~ 84% in rural areas
- ~ 42% under poverty line
- Per capita income : US \$ 240
- Area of cultivated land \approx 18% of total land
- 16% of it has irrigation facility
- Unemployment : 54%
- Under employment : 4%

INTRODUCTION..... contd.

Energy Setting

- No mineral fuel
- 13% of energy demand is met by imported fossil fuel at a cost of about 40% of country's total merchandise export.
- 75.78% of energy demand is met by fossil fuel.
- 89.05% of energy goes into household (mainly for cooking, water boiling and heating)
- 65% of residential energy demand goes only for cooking
- Only 1.47% of energy demand is met by electricity (although Nepal has a huge resource of Hydropower $\approx 83,000$ MW, from which only 548 MW has been tapped - so far this is about 1.3% only)
- Per capita energy consumption is 15 GJ only.

NEED OF ICS

Consequences

- depleting forest (1,00,000 ha/year)
- deteriorating ecology and environment (floods, landslides etc)
- loss of people & prosperity
- growing desertification process
- increasing load for fuel collection
- increasing health hazard due to smoke

NEED OF ICScontd.

- Need of technology intervention to reverse /stop/reduce this process
- Need of ICS (to efficiently use the fuel wood)



HISTORICAL DEVELOPMENT OF ICS IN NEPAL

- Introduction of Hyderabad & Magan stoves in 1950s.
- Slow, inefficient and haphazard progress in the development & dissemination until 1970s
- Inclusion in Nepal's Five Year Plan during 1980s



HISTORICAL DEVELOPMENT OF ICS IN NEPAL..... contd.

- Development & dissemination of various types of ICS e.g. Ceramic Stoves, Tamang stoves etc
- New initiatives since 1990s
- New stove design from cheap readily available local materials
- Changed approaches from top-down to target oriented , subsidized approach to bottom-up, demand driven, self-construction approach

DEVELOPMENT EFFORTS

- Initiation of national ICS programme (with the support of DANIDA)
- Which include
 - Development of appropriate Information, education & communication (IEC) materials & their distribution to all concerned
 - Identification of technical service to be provided
 - Providing technical training

DEVELOPMENT EFFORTScontd.



- Networking of ICS promoting organizations (with the support of ARECOP) totaling 38 members till date (includes good, semi-government., research organizations, INGOs, private organizations)
- Formation of policy guidelines by HMG/N (to encourage development application)
- Planning for the installation of 250,000 ICS within 2007

DISSEMINATION STRATEGIES AND APPROACHES

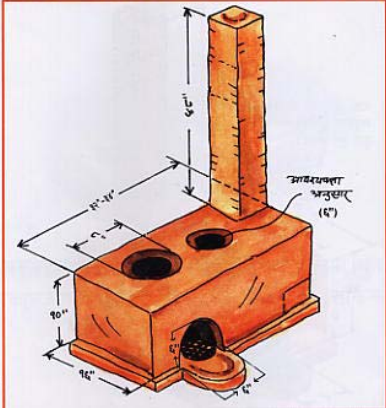
- Local people, especially women are trained to be local Promoters
- The promoters get installation cost
- ICS models are developed based on the needs of the community (ethnicity, family , size, specific use and geographical and climatic condition)
- Regular follow-up and monitoring services are done on the use of ICS in collaboration with local promoters
- Full timed technical staffs are deputed in the districts
- Awareness creation through project staffs
- Integration of ICS program with other programs

DISSEMINATION STRATEGIES AND APPROACHES..... contd.

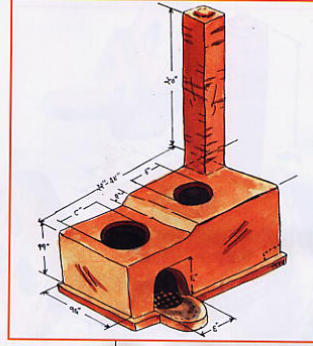


DISSEMINATION STRATEGIES AND APPROACHES..... contd.

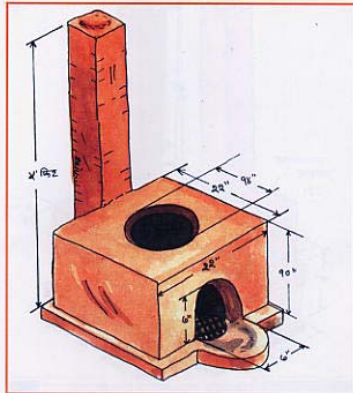
दुईमुखे चुलो (समान सतह)



दुईमुखे चुलो (फरक सतह)



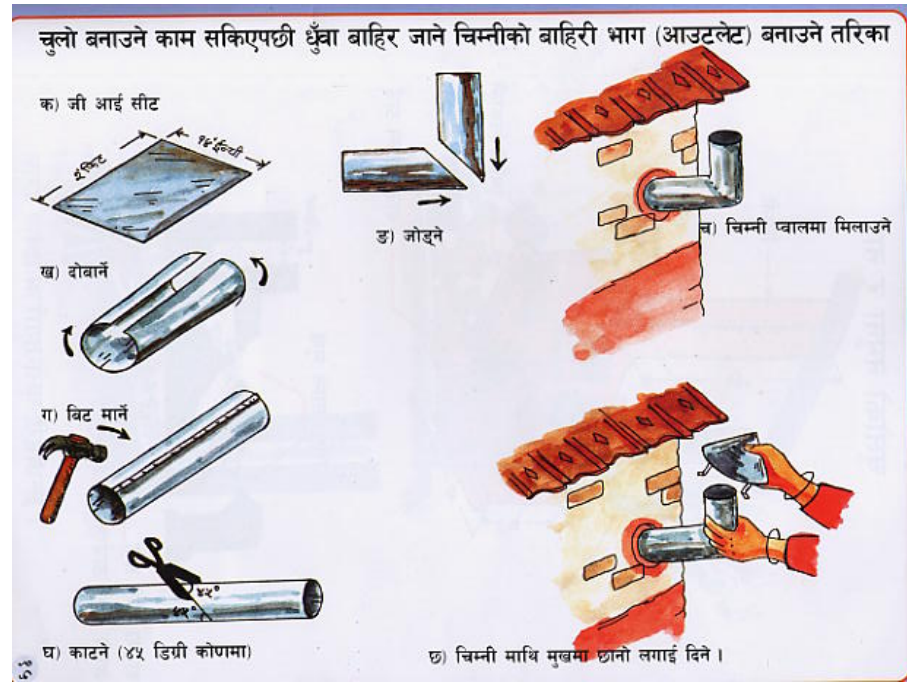
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DISSEMINATION STRATEGIES AND APPROACHES..... contd.



IMPACTS AND EFFECTS

- Increase in demand of ICS
- Increasing demand for training on ICS
- Time and fuel wood saved
- Positive impacts on health and sanitation
- Indoor air pollution is reduced, thus reducing ARI problems and eye infection among women and children
- Better kitchen environment and surrounding areas due to smokeless environment
- Trained promoters get installation cost, thus generating source of income for local people
- Emission of less soot has reduced the amount of detergent used to clean the vessels

MAJOR ISSUES IN NATIONAL ICS PROMOTION

- Similar model of ICS are not acceptable by all the community members
- The users lack knowledge on technical aspect and maintenance of ICS
- Method of selection of promoters is not proper. Most of the promoters remain inactive after the training
- There has been cases of backfire in some of the households due to lack of proper T shaped chimney outlet
- In some places, it is seen that ICS is consuming more fuel wood and time especially with large families
- The local people lack awareness on importance of ICS for conservation of forest and health of the users,
- There is a lack of transportation for transporting iron rods
- Problems due to cultural constraint (astrologists/ priests determine the cook stove installation site, the chimney should face a particular direction, ICS should be constructed in certain period/month of the year only).
- Reluctance to change from traditional Cook stove to ICS
- Most of the models of ICS are suitable for household use only . Bigger sized pots cannot be used
- Lack of appropriate models for space heating

MAJOR ISSUES IN NATIONAL ICS PROMOTION..... contd.



ACHIEVEMENT & PROGRESS STATUS

Many organizations, INGOs and NGOs have adopted ICS in its program and are involved in the promotion of ICS in their working areas

a. Progress

- More than 75,000 ICS installed
- No more direct subsidy since December 2000
- 90% of users satisfied and more than 95% ICS are in Operation
- Out of 75 districts , more than 26 districts are already supported

ACHIEVEMENT & PROGRESS STATUS

contd.

b. Sector supports

- Training support to **978** ICS promoters (50% active of which 50% are women)
- Certification of more than **250** promoters providing quality services
- **73** TOT Training conducted to local partners (more than 100 people)
- Information material on National ICS program

ACHIEVEMENT & PROGRESS STATUS

contd.

c. Standard , Quality control and Monitoring

- Standard household ICS with basic requirements were promoted through the stove installers , promoters
- Monitoring system developed - 5% of ICS installed by the promoters technically tested to assure quality of the stoves.

LESSONS LEARNT

- Awareness creation is essential for ICS programs to be effective
- Local Promoters should be prepared and active promoters need further orientation and refresher training to make them more competent
- Users should pay installation cost of ICS
- Dissemination of ICS information during literacy classes provide good forum for understanding the importance of ICS , specially among the women group
- The metal stoves are beyond the reach of the poor families due to its high cost. Cost should be affordable by the beneficiaries

LESSONS LEARNT..... contd.

- Due to lack of sufficient orientation in the installation, operation and maintenance, there has been cases of fire hazards
- Improved design with effective promotional activities is required for the program to be effective
- The technology should be simple, cheap and easily made from local resources
- Installers, promoters and implementers should be familiar with various designs of ICS , its features and principles, and also with social aspects, ethnic groups, cooking habits etc

THANK YOU & NAMASTE!