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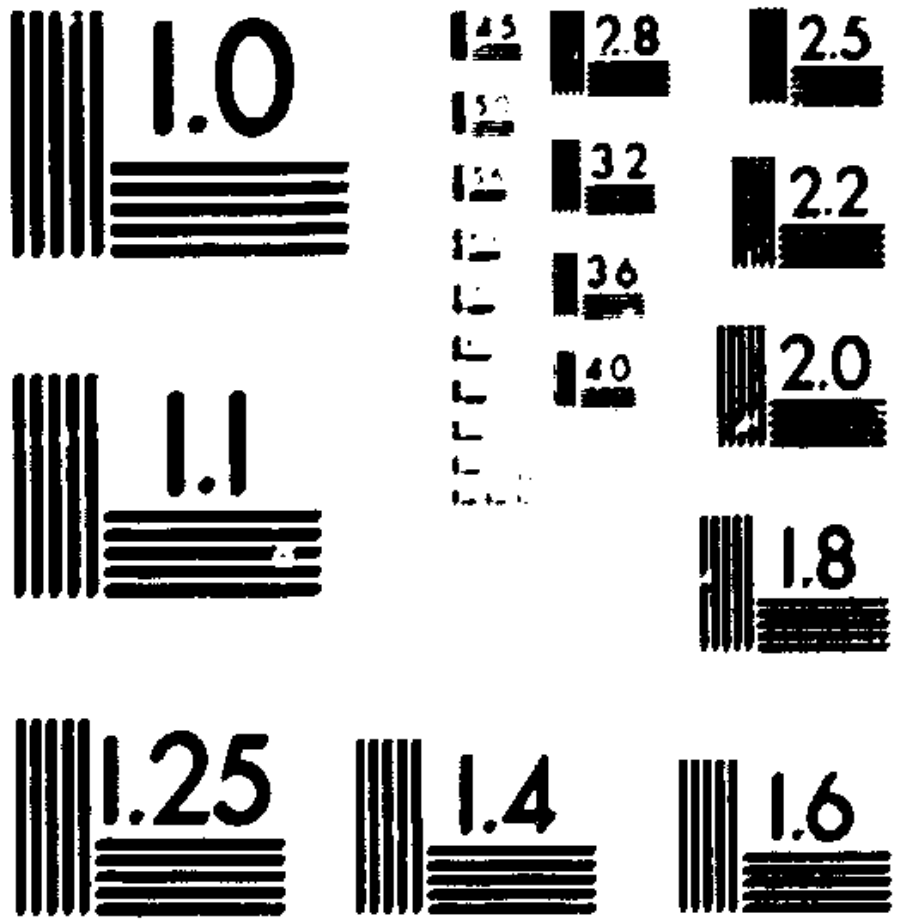

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ADHOC EXPERT GROUP MEETING FOR DISCUSSION AND PREPARATION OF AN INTERNATIONAL COLLOBARATIVE PROJECT ON THE INDUSTRIAL APPROACH TO THE MANUFACTURE & DISTRIBUTION OF IMPROVED WOOD STOVES - VIEANA.

18 - 20 MARCH 1985.

1985

PAPER PRESENTED BY MR.R.M.AMERASEKERA
ON THE NATIONAL STOVE PROGRAMME OF
SRI LANKA.

3400

ROLE OF FIREWOOD

Firewood has been estimated to account for 67% of the total energy consumed in Sri Lanka, while oil accounts for 22% and hydro electricity for 11%.

Nearly 94% of the total households use firewood for cooking a and 80% of the biomass energy consumed is specifically for the purpose of cooking. The most commo method used for cooking is the 3 stone open hearth while a small category also use a semi enclosed hearth.

At present total biomass fuel consumption in the country is 3.8 millions TOE per year. Assuming that the biomass fuel required by the domestic sector will grow at the same rate of population increase i.e. 1.7% and that the biomass fuel required by the industrial sector grow at the current average GNP grown rate (5.4%) the biomass fuel demand in 1994 is estimated to be 4.8 million TOE or 25% more than what it is now.

The present supply of biomass fuels come from three sources.

29% from crop wastes mainly from coconut.

18% from rubber wood.

53% from other firewood.

The category "other firewood" comprises mainly of cuttings from home gardens, wayside trees, shurb wastelands and some cuttings coming directly from the forest.

The forest cover which was 44% twenty five years ago has now been reduced to less than 25%.

In the absence of any other indigenous source other than the hydro potential, development of which so far only accounts for 11% of the total energy, biomass is the only indeginous source of energy of any magnitude that could with proper development & management assuredly provide an increasing supply of energy in the future.

The general pattern of consumption is unlikely to change much in the near future. The increasing cost of commercial energy and limitation of supply will force people to use more fuelwood to meet their domestic energy requirement.

In 1983 Sri Lanka spent 57% of the export earnings to import its oil requirements.

From what has been stated in the foregoing section it is evident that Sri Lanka will have to undertake a sustained drive to develop the biomassfuel resources with a sound policy frame work for its management.

National Fuelwood Conservation Programme (NFCP)

In addition to the efforts of the Government to enhance the supply of fuelwood, by means of large reforestation & aforestation schemes, Ministry of Power & Energy has launched a course of action for widespread dissemination of improved stoves covering a large proportion of the population, with a view to ease the pressure on available resources of biomass energy.

In the year 1985, the target is to produce and disseminate 30,000 improved pottery stoves of the 2 pot Sarvodaya - ITDG design in the rural areas and to make the necessary infrastructure for a large programme in the future.

Although the end objective of the programme is to bring the operational structure to a commercial level by means of commercialised production, distribution and marketing systems, initially it will be necessary for the Government to invest in market research, production & distribution, initiative promotion & public education.

To begin,with, the strategy of implementation is to make use of the existing village level institutional infrastructure with the assistant Government Agents as local co-ordinators who manage a network

of promotors stove builders and potters. The target for each A.G.A. division is 2000 stoves per year. To enable the AGA to fulfil the target, NFCP ataff will train potters in each division to make the pottery liners and a suitable number of unemployed youths to take up stove building as a full time or part time career.

At present Norvegian & Dutch Governments are financing this programme under the Integrated Rural Development Programmes in some districts. In these programmes, the pottery liners are provided free of charge while the cost of installation is borne by the users.

In another programme funded by the Ministry of Power & Energy (MPE) the cost of pottery liner and installation is borne by the user while transport & other administrative costs are borne by the MPE.

The lack of skilled staff required to train potters and stove builders is one of the principal constraints at the moment. To over come this, a 10 day workshop to train 10 stove technicians are planned for July 1985.

The lack of quality control of the pottery liners is a major drawback for the expansion of the programme. This needs looking into the methods of production and perhaps modifying the traditional techniques used and encouraging the use of moulds & presses in the production process.

Capacity of potters to cater for a large demand is not possible without improving the kiln capacity, drying & storing space and methods of firing.

It may also be necessary to contemplate alternative forms of production such as more centralised & capital intensive manufacturing.

Urban Programme

A major pilot programme for dissemination will be launched this year in the urban areas. Methodologies used in this programme will be different from that of the rural programme. The operational objectives of the programme are :

(1). Evaluation to Select Designs Acceptable to Urban Dwellers.

At present two types of pottery stoves are being evaluated in collaboration with the Urban Development Authority (U.D.A). One type is a single pot pottery stove with a grate developed by the Ceylon Industrial & Scientific Research Institute (CISIR). The other is a single pot pottery stove without a grate developed by the Industrial Development Board (I.D.B). Both designs are suitable for large scale pottery production.

(2). Setting up of a Stove Production Unit near Colombo.

The following options are available.

(a).A new factory to be set up near Colombo. This would necessiate in large capital investments on machinery and equipment, land & buildings and training of personnel. Although a up to date production unit using modern techniques could be set up, this may not be an approptiate option due to heavy capital costs involved.

(b).Up-gradding of a few Small Scale pottery production units to take up stove manufacture. Although the cost of production could be kept low there may not be consistency in the quality of stoves produced.

(c).A joint venture with an existing tile or brick making factory. This has many advantages since large investments are not required. Existing machinery and equipment could be used with minor modification & also using the same staff. More-

over since many of these factories do not operate on full capacity, Manufacturing of stoves as a by product can be cost effective. However since the brick and tile industries look for large profits, and if same level of profit is expected from stove manufacture, the price of stoves may not be realistic and will not reflect the interaction of market forces. Two factories are already identified, one a privately owned, and the other a government owned, who are keen to collaborate in the stove programme.

(3). Market Analysis:

Market analysis needs investigation into current cooking practices & habits, consumer expectation & preferences.

(4). Establishment of Distribution Network and Market Mechanisms.

This needs investigation into the distribution activities of similar items, transport facilities from the producer to the consumer. Promotional & publicity campaigns are also necessary.

The end objectives is to develop an infrastructure in which stove producers could market their products through the established net work without the intervention of an outside agency.