

The Commercialisation and Scale Up Success of Improved Cookstoves in Sri Lanka

This article is compiled by GVEP-International from two sources² provided by Practical Action Consulting, UK

Improved cookstoves in Sri Lanka: Achieving scale

Sri Lanka's success with the commercialisation of improved cookstoves (ICS) and in particular the 'Anagi' stove has been continuing since the inception of the first programme in the 1970s. It is estimated that 3 million Anagi stoves have been commercially produced and marketed throughout the country since 1991. An extensive commercial network drives the distribution of approximately 300,000 stoves annually. If used without insulation, the lifetime of an Anagi stove is about 1 year and with insulation, 3 years or more.

The market chain is well established. Approximately 185 trained potters spread over 14 districts manufacture the Anagi stove. Distributors and wholesale buyers visit production centres to buy the stoves in bulk, thereby guaranteeing the producers a regular and guaranteed market. The stoves are then distributed to retail shops throughout the country; to distances of over 200km. Small producers often sell their products locally.

With a population of over 20 million (World Bank estimate 2008), and with more than 70% using fuel wood for cooking, mostly due to economic reasons, the need for efficient stoves is ever present³.



Anagi Stove

The first two decades: Product development and mass distribution

During the first half of the 1970s, to counteract rapid deforestation and fuel wood use, many institutions developed various types of energy efficient cookstoves. The key ones were the Industrial Development Board (IDB), Ceylon Industrial and Scientific Research Institute (CISIR) and Sarvodaya (an NGO) supported by the Intermediate Technology Development Group (ITDG), now called Practical Action. Various products were designed, tested and piloted with small scale distribution. Table 1 provides a list of the various models developed.

² Amarasekara R.M and Atukorala Karunatissa. *Historical Timeline from Subsidy to Commercialisation of Improved Cookstoves: The Path Leading to Sustainable Stove Development and Commercialisation Activities in Sri Lanka*. Integrated Development Association (IDEA), Kandy, Sri Lanka; and Nissanka, Ramani. 2009. *Scale-Up and Commercialisation of Improved Cookstoves in Sri Lanka: The Anagi Experience*. Working Paper. Prepared for PISCES by Practical Action Consulting

³ Practical Action Consulting. 2009. *Bioenergy in Sri Lanka: Resources, Applications and Initiatives*.

Table 1: Stove Models Designed by Various Institutions

Year	Stove Models Designed	By Whom
1952	Herl Chula- mud/chimney	Social Workers
1972	Two pot brick and cement	Industrial Development Board (IDB)
1978	Two pot pottery with chimney	Ceylon Industrial & Scientific Research Institute (CISIR)
1978 to 1983	Lorena, Dian Desa/ Chimney & chimneyless stoves, Sarvodaya 2 piece pottery liner	Sarvodaya/ ITDG
1983	Single pot/clay/ grate stove	CISIR
1986	Anagi two pot clay stove	CEB/ ITDG
1987	1988 Large Institutional Stoves/brick/ iron grate/chimney	CEB/ Hoffmann Consultants

Source: Amarasekara and Atukorala

By the mid 1980s, the state owned Ceylon Electricity Board (CEB) had entered the ICS space and prompted a shift towards a new phase of development. The CEB strategy was to find the best product before distributing it on mass. They selected the two pot mud insulated ICS with a pottery liner developed by Sarvodaya as field studies had shown that it was better received and more socially acceptable than the others. Between 1985 and 1991, with support and subsidy from government and donor agencies, mainly the Dutch Ministry of Foreign Affairs (DGIS), over 400,000 ICS were disseminated within 12 districts. In addition the services of government personnel were used to assist with the project promotion. The programme was extended into urban areas, produced in tile factories (formal sector) and sold commercially through the existing private sector networks of middlemen and retail outlets.

In 1986, the CEB and ITDG modified the product into a two pot single piece clay stove naming it the *Anagi*, meaning 'excellent'. The stove which was targeting an urban market, could be bought directly from the vendor without the need for any installation, could cook food much faster and had a lifetime of up to 3 years. It could cater for a family of six members, including their cooking habits. About 70,000 stoves were produced and sold within the project period of two years. However the CEB initiative lacked longevity and was terminated in the late 1980s. Nevertheless its work was fundamental in laying a foundation for the future as well as sowing the seeds for commercialisation.

The next two decades: Scaling Up the 'Anagi'

In 1991, the non governmental organisation Integrated Development Association (IDEA) began a rural programme with financial and technical support from ITDG and several donors, with the freedom, mandate and commitment to focus solely on the ICS. The initial success of the *Anagi* in urban areas prompted promoters to select it as the sole product for commercialisation in rural areas. Later, the Asian Cookstove Programme (ARECOP) supported the programmes extension into remote areas where access to commercial networks was limited.

The Anagi works with a variety of biomass products; medium sized hard or soft wood and other loose biomass residues such as coconut shells, fronds and leaves, all of which

are easily obtained from home gardens or can be purchased commercially. The success of the stove prompted IDEA to continue the work of scaling up the commercialisation process despite several difficulties that were experienced.

How was commercialisation of the Anagi achieved?

The achievements of the commercialisation of *the Anagi* are not due to any one single factor. Below are a few of the key factors that led to it becoming one of the greatest global successes in ICS commercialisation.

State and donor support critical.

In their report, authors Amarasekara and Atukorala write, 'It should be noted that without local and foreign donors the commercialisation of ICS might have been a dream. From the very beginning both state agencies and foreign donors gave sufficient attention to ICS program. The commitment of the donor community resulted in the materialisation of ICS commercialisation'. The Sri Lankan Government's Ministry of Power & Energy (MPE) and Ministry of Environment and Ministry of Plantation were key players. Donors ranged from DGIS (Dutch), NORAD, SIDA, ODA (currently the DFID), ITDG and ARECOP. In addition, the RWEDP/FAO Bangkok provided valuable technical assistance and international exposure for ICS activities in Sri Lanka. Their support enabled continuous activities regardless of the implementing institute or organisation at the time, keeping up the momentum necessary to reach commercialisation and scale.

Uninterrupted linkages of activities

For four decades large scale ICS programmes connected one with the other in terms of timescale. Activities relating to promotion, dissemination, distribution, potter training, networking and market development were carried out without interruption. The most common linkage was the continued facilitating presence of IDEA, detailed below.

Focus on product and a longstanding promoting institution

As mentioned above, a product that was easily adapted, locally manufactured, supplied and branded was key to the commercialisation process. In addition, the shift from government organisations to NGOs such as IDEA enabled a more sustainable programme to develop, one that was deeply committed to the ICS cause, and not based on political orientations or unstable financial cycles. Throughout the last 18 years IDEA has provided a link to sustain ICS activities throughout the country during periods when there would otherwise have been a vacuum. In addition, by maintaining links with similarly-focused international organisations, IDEA was able to develop the quality of their services and maintain and increase their reach.

Subsidy for initial phase/s key for testing products and demand

The manner in which the ICS programme was implemented was an influential factor in the programmes success. An initial subsidised programme allowed people to 'try before they buy', leading to an increased awareness of the benefits of using ICS which in turn allowed low income families to be sure before investing out of their own pockets. This led to an easier transition in the psyches of potential customers when the programme became more commercially orientated. Also, targeting an urban market first, created a product which poorer, more rural communities could aspire to obtain.

Focus on the social aspects

One of the reasons for IDEA's success was the extensive focus on the social aspects of the improved cook stove programme; improving cooking conditions under which women cooked, creating additional incomes for families, improving cooking convenience as well as all of the traditional environmental concerns. Over a thirty year period the ICS evolved from being simply an efficient cooking tool to a mechanism for tackling a variety of important social issues.

Assisting large scale producers

The provision of assistance to large clusters of potters living in close proximity was more effective than training individual potters. This strategy achieved scale by lowering the cost of production and enabling a large number of dealers to visit the potters' villages to buy stoves. Today, the two villages of Kumbukgate and Nungamuwa, produce nearly 50 percent of the total production. Sustained efforts and assistance to these producers up to the point that they became self sufficient, was a major factor in the success of ICS commercialisation. It must be noted that this had the additional impact of demoralising small scale competitors whose production costs were higher, unless they were able to sustain themselves by meeting local demand.

A further study is thought to be necessary to more accurately assess how the *Anagi* stove contributes to reductions in indoor air pollution, wood consumption and carbon emissions but in the meantime, sales continue to rise in the Sri Lankan markets.