

Improved Cookstove Programme Lao PDR



Welcome to the Lao kitchen!



The Challenge

Especially in urban and peri-urban areas of Lao PDR, the use of portable, bucket shaped cookstoves for charcoal and wood are very common. The cookstoves that are currently found on the market differ greatly in shape and designs, and certainly in quality, fuel use and durability. Testing results of the baseline and Improved Cookstove (ICS) show significant differences. The table below gives an overview of the most common stoves you may find in shops around:



Name	Improved Cookstove	Tao Payat	Tao Dam	Tao Cement
Efficiency	39%	32%	28%	24%
Estimated savings	N/A	18%	28%	39%

Not only the efficiency is much better, but also the durability of the ICS much longer. The stove retails for around 3 Euro, and the price of the ICS will stay in the range of 4 to 5 Euros. Many people are willing and able to make such an additional investment, as the savings in charcoal can easily mount to 2 Euro per month!

The main challenges the project faces is to build production to produce large numbers of stoves that adhere to the quality standards.

Objective

The overall objective of the Improved Cook Stoves (ICS) project is to contribute towards poverty alleviation in Lao PDR through the development of a sustainable consumption and production chain of fuel efficient ICS which will reduce the use of wood and charcoal and lower greenhouse gas emission. The specific objectives include:

1. 15 small and medium enterprise (SME) stove producers to sustainably produce 100,000 ICS
2. 150 SME retailers successfully promote the ICS
3. Lao Women's Union assumes its role as an effective promotional partner
4. Access to the clean and fuel efficient ICS is improved
5. Five testing agencies are operational
6. National standard of stoves is endorsed
7. Multi-stakeholder partnership is established

Target groups

The project addresses the stakeholders in the cook stoves value chain in a concerted effort that lead to improved access to efficient stoves for charcoal and wood. The supply, demand and enabling environment are aimed for along the following target groups:

- 15 local stove producers
- 150 retailers
- 100,000 families
- Ministry of Science and Technology of Lao PDR
- Lao Women's Union
- Institute of Renewable Energy Promotion
- Banks, ACLEDA

Activities/Strategy

The programme envisions a multi-stakeholder public/private partnership that will enable geographical scale-up and strives to improve the cookstove value chain in major parts of the country.

The programme includes the following activities:

1. To improve supply of Improved Cookstoves:

- a. Capacity development of new and existing producers
 - i. Training and on the spot coaching
 - ii. Quality assurance inspections
 - iii. Exchange visits
- b. New production tools that increase speed and quality
 - i. Moulds and templates
 - ii. Improved kilns
 - iii. Clay tests
- c. Business plans that give insight into how to make viable investments
 - i. Insight in costs and benefits
 - ii. Identify key constrains
 - iii. Define financial needs
- d. Access to finance to allow the producers to expand their business
 - i. Facilitate meetings with banks
 - ii. Help to comply to formal requirements
 - iii. Lobby for soft loan conditions

2. To increase demand of ICS:

- a. Mass media
 - i. TV spots and documentary
 - ii. Radio

- iii. Facebook and Twitter
 - b. Real live demonstrations by Lao Women's' Union
 - c. Lottery among ICS users
 - d. Visible labelling of the stoves
3. To develop enabling environments by:
- a. Biannual multi stakeholder meetings
 - b. Set up producers association
 - c. Verifiable quality standards
 - d. Lobby for favourable policies for ICS

Replication strategy

The project builds further on earlier initiatives in Laos and on similar programmes and initiatives in the region and around the world. The Improved Cookstove type available in Lao PDR today is closely based on the design that was first developed in Thailand over 25 years ago with the assistance of USAID, resulting in the so called Improved Charcoal Bucket Stove (ICBS). In 1997, the FAO funded a program to introduce the ICBS from Thailand in Laos. This was implemented jointly by the Thai Department for Alternative Energy Development (DEDE) and Participatory Development Training Center (PADETC), a Lao NGO. They trained 10 people in Laos to produce the ICBS and in 2003 further training and promotion activities in one southern province was provided.

The project taps not only former successes from the past, but also builds on experiences elsewhere. Close consultation arrangements with GERES were established who operate a similar programme in Cambodia. Their programme has successfully disseminated 2 million stoves that are quite similar to the Tao Payat stove type.

The programme is well embedded in the international discourse because SNV Netherlands Development Organisation is as founding member well positioned in the Global Alliance of Clean Cookstoves, a global initiative hosted by the UN Foundation. Through this network experiences are exchanged and ensure the compliance of up to date testing protocols, gender issues and promotion strategies.

On the national level the project expands on the basis of its work in Savannakhet. The project has now replicated its operations to four other, most populated provinces in Lao PDR.

The ideas on post-project replication and continuation of the market are based on a franchise model, allowing producers and retailers to use the logo when adhering to the standards. It is aimed for that producers have sufficient self-organising capacities to maintain agreed prices, quality and logo.

Outstanding financial needs that cannot be borne by an increase in price, may (in part) come from the Lao government, international aid and/or carbon finance mechanisms, which are being developed with the social carbon developer Nexus.

Results

In 2013 the programme was able to build further on its expertise gained over the years 2011-2012 and set up two additional ICS offices, carried out recruitment and trained new staff.

One new test laboratory has been put in place, cooperation agreements have been signed with Lao Women's Union and the Ministry of Science and Technology.

A highlight was the lively multi stakeholder meeting at the Lao Women Unions' office in Vientiane, with 75 people, out of which 29 women.

External testing reports gave further confidence on the quality of the stove and a baseline survey among users showed very positive feedback.

The quantitative results over 2013 of the Action can be summarized as follows:

1. Producers:
 - a. 15 producers trained
 - b. 11 producers activated
 - c. 6,670 stoves produced
 - d. 5 trainings were provided with 131 participants, 57 female
 - e. Six 1,000 USD loans have been approved
2. Retailers:
 - a. 77 retailers (75 owned by women, 2 by men) have been equipped with Improved Cook Stoves:
 - b. 4 retailer trainings were provided with 116 participants (75 female, 41 male)
3. Promotion:
 - a. 14 training workshops and coaching sessions held by the Lao Women's' Union

Impacts at a Glance

IMPACT AREA	What has been achieved?
Economic Impact	<ul style="list-style-type: none"> • Money saved by Lao households in 2013: 2 Euro savings/month*6months*6,760 Improved Cook Stoves (ICS) = 81,120 Euro • Turnover green economy at retail level: 6,760 ICS*4.5 Euro = 30,420 Euro • Stove producers have business plans in place, increase their position with access to finance adding up to better prospects. • The project has increased production speed and productivity by introducing moulds and better kiln management.
Environmental Impact	<ul style="list-style-type: none"> • Improved efficiency of wood and charcoal stoves for domestic cooking reduces pressure on the environment for biomass sources. • Before households used 1.14 Kg charcoal per day. After the introduction of the ICS they use 0.81 Kg per day. Net Savings of 29%
Social Impact	<ul style="list-style-type: none"> • The latest research insights show that stoves need to be extremely efficient to have positive health impact. This cannot be expected from the ICS.
Climate Benefits	<ul style="list-style-type: none"> • Reduction of GHG emissions in tons per stove is approximately 1 tons of CO₂-eq per year. The reduction of fuels that relate to greenhouse gases is an estimated 100,000 tons CO₂-eq for the time from 2013-2016.
Green Finance	<ul style="list-style-type: none"> • 15 stove producers have benefitted from the accessibility of finance, six loans have been approved. • Total amount of Green Finance leveraged for SMEs: six loans of 1,000 USD each. • With support of the project ACLEDA agreed to offer loans for stove producers.
Target group engagement	<ul style="list-style-type: none"> • SMEs engaged in project activities includes 15 producers and 150 retailers through capacity building by on the spot coaching, group trainings, multi stakeholder meetings, exchange visit with Cambodia and peer exchanges • 10 additional stakeholders involved including government bodies such as Lao Women's' Union, Ministry of Energy and Mines, Ministry of Science and Technology, Inter-ministerial Taskforce on Cookstoves • A producer association was established to agree on price, quality and promotion. • Five articles in Vientiane Times and Loa newspaper were published, 14 stove demonstrations were held at festivals and markets.
Policy development	<ul style="list-style-type: none"> • Actively participated in the Inter-ministerial taskforce for cookstoves and advocated for development of the cookstove sector. • Proposed design as Lao standard (in development) and established stove laboratories allowing to validate standards.
Europe-Asia cooperation	<ul style="list-style-type: none"> • Organized one European-Asian event and a EU-Asia studies tour in 2013 • During 2013 participated in the Nexus member meeting in Singapore, the ADB bioenergy project meeting in Hanoi, the WB inter-ministerial taskforce meetings Vientiane SNV Asia internal meeting Renewable Energy Bangkok, the SNV/ADB/Endev biogas workshop in Hanoi and the GACC Regional Testing and Knowledge Development project (exchange with GERES Cambodia) • Types of SCP knowledge, methodologies or experiences shared or transferred include exchange of progress reports to GACC, peer review stove testing reports from Aprovecho, Nexus and GERES

Quote from the Project Manager

We agree to the further use of this quote for dissemination.

Amphone Souvannalath – ARMI/NORMAI

“We consider the Improved Cook Stoves project as a very challenging one, not only due to our ambitious goal of producing 100,000 stoves within four years, but also to raise awareness and encourage people to care about climate change.

Since the very beginning we worked to involve the Lao Women Union and the Department of Science and Technology in each of the target provinces (Vientiane Capital, Savannakhet and Champassak province) and have since been rewarded by the incredible ownership they now have over the project. The producers and retailers have shown commitment in promoting this simple, but effective method to reduce greenhouse gas emissions. The users have become more confident in the efficiency of the stove and through word of mouth are flocking to the retailers that can’t keep up with the demand!

After one year we feel we have the expertise and experience to improve even more in 2014 and beyond. We believe that Improved Cookstoves will be recognized and accepted in society and become part of every household in Laos!”

Quote Story of Change

Ms Bouaphan, 34 years old, from Ban Nalao, Vientiane Capital

This Lao mother has been using her ICS for nine months. Ms. Bouaphan uses it twice per day to cook their meals. Her old stove was a traditional *tao dam*.

“Before, we used one bag of charcoal and two bags of wood per month. Now we need only one bag of charcoal, which saves us 45000 Kip”, says Ms Bouaphan. “The stove keeps the temperature longer. I only put in charcoal one time, with the old stove I had to add more continuously. The improved stove also only smokes in the beginning when you light the coal, the old one smoked continuously. The water boils very fast, which saves charcoal. I recommended the stove to all my neighbours.”

Objective:

The overall objective is to contribute towards poverty alleviation in Lao PDR through the development of a sustainable consumption and production chain of fuel efficient Improved Cook Stoves (ICS) which will reduce the use of wood and charcoal and lower greenhouse gas emission.

Funding:

EU co-financing 2013-2016:	€ 1,923,170
Oxfam 2013-2016:	€ 192,000

Other co-funding arrangements	
BMF 2013-2014:	€ 165,000
SNV 2013:	€ 150,000

Duration:

February 2013 to January 2017

Partners:

Applicant	Name: Oxfam Novib EuropeAid ID: NL-2007-CRS-2711154571 Nationality: Netherlands Date of establishment: 23 March 1956 Legal status: non-profit organisation
Partner 1	Name: SNV-Netherlands Development Organisation EuropeAid ID: NL-2008-GDT-2501697861 Nationality: Netherlands Date of establishment: 16 May 1965 Legal status: non-profit organisation
Partner2	Name: NORMAI, non profit association for rural mobilisation and improvement EuropeAid ID: LA-2012-DCW-1603547183 Nationality: Laotian Date of establishment: 15 November 2006. Legal status: non profit association

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