

Waste to Energy for Economic Development and Environment Health

Project Objective

The overall objective of this project is to reduce deforestation and greenhouse gas (GHG) emissions, at the same time providing a cost-effective and income generating fuel source.

In working towards the overall objective, this demonstration project aims to save approximately 60 tons of native forest wood from being cut down and used as domestic fuel wood, thus preventing 18.75 tons of carbon and particulates entering into the atmosphere.

Description

The project will demonstrate the efficiency of an alternative, readily available, and cost-effective fuel source as a means of environmental conservation – namely, solid fuel briquettes manufactured from agricultural and other waste. The use of such briquettes, at both domestic and small industry levels, will reduce the need for the residents of Pa Tueng (Chiangrai Province, Thailand) to take wood from the sub-district's natural forests.

To ensure the feasibility of the targets of this project, farmers and agricultural product processors are provided, at the same time, with alternative means of disposing waste. More specifically, the project will enable farmers and agricultural product processors to sell or send reusable waste to two Environmental Learning Centres (ELCs) for conversion into briquettes.

By the end of the project:

- 40 villages in Pa Tueng sub-district will know how to use the briquettes, and briquettes are being used as an alternative fuel source.
- 300 school children will be trained in Waste to Energy as an environmental safeguard.

Project Highlights

Project ID	: 3-T-005
Country	: Thailand
Lead Partner	: ActionAid International, Sweden
Partners	: Hill Area and Community Development Foundation (HADP)
Total Project Cost	: € 124,240
EEP Financing (% to total project cost)	: € 100,000 (80.49%)
Technical Focus	: Waste to Energy
Activity	: Demonstration Project
Duration	: 15 months (Sep 2011 - Nov 2012)

Marketing materials produced, such as posters, media packs, campaign materials, will have been produced and distributed.

Relevance to Country's Energy and Environment Policies

According to the Government's Tambon Council and Tambon Administrative Authority Act 1994 (paragraph 23/4), the Tambon Council must "protect, look after and maintain natural resources and the environment". This project supports this directive by linking the issue of deforestation with the energy-efficient use of agricultural waste as an alternative to fuel wood.

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Innovation and Knowledge Transfer

Learning: Traditional practitioners of charcoal making in Chiang Rai are aware that their product is illegal and brings damage to the environment. Buyers of traditionally made charcoal also know that it is a harmful and unsustainable practice. People who raid natural forests for timber and for fuel wood are aware that what they do is illegal. The introduction of charcoal made from agricultural waste, which is supported by the local Tambon authorities, does not carry any such social stigma. It is an innovation in fuel use that communities can easily and affordably adopt, and through the active marketing of the project's objectives, the learning will be widely disseminated. When combined, each of these elements will make it socially and morally difficult for communities to return to the use of charcoal and fuel wood at the end of the project period.

Innovation: The success of the project's outputs will result from the use of existing ELCs, into which new technology will be introduced and thereby extending their range of community services. The new services will relate to the collection and processing of agricultural waste, the manufacturing of briquettes, demonstrations around the use of briquettes, and environmental studies for local schools. These activities will bring more people into contact with the ELCs, and enable greater cooperation between the ELCs, the communities, local and provincial government authorities. Furthermore, the ELCs will become distribution centres for briquettes. At the end of the project period they will be in a position to continue providing a sustainable service to the communities.



Biomass briquettes



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