



# Integrated Energy Solutions in Agro-Farming Pilot Phase in Shrimp Farming

## Project Rationale

- Decentralized renewable energy systems and energy efficiency improvements are usually promoted independently, notably in the agro-farming sector in Mekong countries.
- The project proposed a holistic approach to improve the efficiency of the energy supply and energy use in shrimp farms by combining solar PV systems and energy efficient (EE) pump sets.
- The objective of the project (2011 – 2012) was to reduce farmers' diesel consumption, therefore not only reducing GHG emissions but also improving the farmers' economic situation.

## Development and implementation of pilot project

The pilot project was located in Pranburi district (member of Sam Roi Yod Cooperation), Prachuap Kiri Khan Province, Thailand.

The selected farm has several ponds of which pond number 1 was used for the project. The pond included 5 aerators. The pilot project consisted of:

- Built electric power supply in alternating current (AC) 2.2 kW, 3-phase
- Installed 2.2 kW solar PVs system, able to supply continuously 10 hours / day
- Motor improvement: high efficiency motor-gear and 2.2 kW, 3-phase

## Project Partners



Pilot Project, Prachuap Kiri Khan Province, Thailand

Results indicated a reduction of energy costs of 20-30% as compared to the baseline scenario (diesel for energy supply and low efficiency motor).

## Development of Financing Model

The financing model was designed primarily for the participating shrimp farms. The model was made user-friendly and versatile enough for easy use in other agricultural sectors and/or by ESCOs.

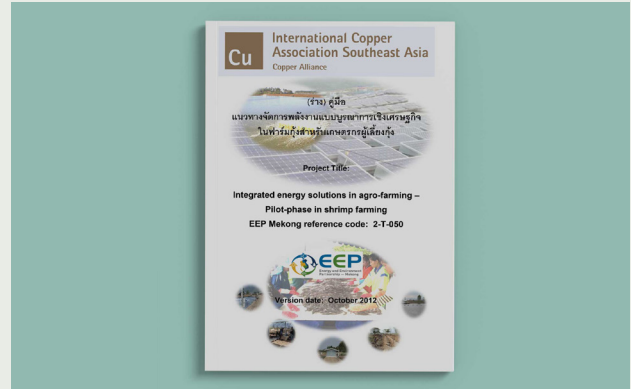
## Project Impact and Sustainability

- 120 Members of FOSCOT (Federation of Shrimp Cooperatives of Thailand) expressed willingness to follow the model promoted (joint adoption of solar PV and High Efficiency Motors)
- The pilot project was reconverted as a training facility for FOSCOT members (over 1,000 members)

### Dissemination of Project Outcomes



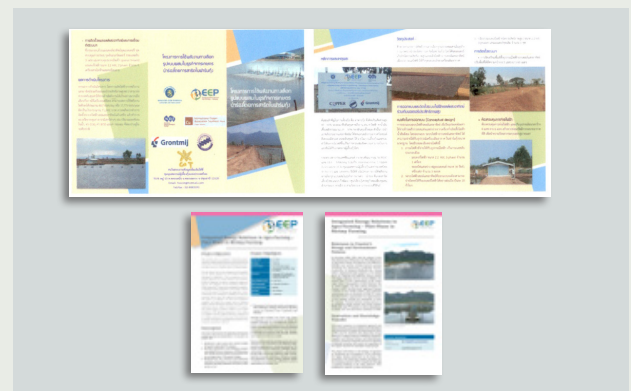
Poster



Guidebook for Farmers



Educational Video for Farmers, via CD-Rom and uploaded to Youtube



Leaflet and Flyers



Information panel at the entrance of the pilot site



Training visit at the pilot site