



National Biodigester Programme (NBP)

Medium Scale Biodigester Innovation for Smart Environment (MBI-SE)

Project Factsheet 2016

Grant for Climate Change Research and Innovation



BACKGROUND

Cambodia's greenhouse gas (GHG) emissions are rising and the agriculture sector is estimated to produce 80% of national carbon-dioxide equivalent (CO₂-eq) emissions. Also, Cambodia suffers from poor supplies and high costs of energy.

Nevertheless, Cambodia has large technical potential for domestic biodigesters up to 890,000 households and several hundred for medium and large scale commercial biodigesters. Biodigesters contribute to greenhouse gases (GHG) emission reduction via capturing the methane CH₄ from animal manure conversion into biogas for energy. However, commercial biodigesters have not been promoted yet in Cambodia due to various reasons including, 1) lack of viable technologies for commercial biogas, 2) lack of awareness raising among farm owners to invest, 3) lack of human resource and institutional capacity, 4) lack of access to the financing, and 5) lack of awareness on climate change mitigation.

This project responds to the Royal Government of Cambodia's priorities, to expand low-cost energy production, especially from new and clean renewable energy sources.

OVERALL OBJECTIVE

Viable medium-scale biodigester technologies contributing to climate change mitigation.

SPECIFIC OBJECTIVES

- ▶ The viable innovated medium scale biodigester technology is in place for applying to animal farms contributing to GHG emission reduction.
- ▶ Livelihood of beneficiaries and farmers improved through the use of bioslurry compost in integrated farming system.

APPROACH

The main partners are Kampong Speu department of agriculture, particularly its provincial biodigester programme office (PBPO) and the pig farms owners. NBP is the main implementer to carry out main activities: 1) Review and develop feasibility models of medium scale biodigester technology. 2) Select 3 potential farms to pilot the new technology of medium scale biodigester. 3) Review and equip appropriate technology of generator using biogas to each piloted Biodigester plants. 4) Conduct proper monitoring to piloted plant and generator. 5) Strengthen the capacity of technicians, Biodigester Construction Companies (BCC) by conducting training course on pilot plants. 6) Conduct potential farm owners exchange visits.

Provincial Biodigester Programme Office (PBPO) will be the direct implementer in the province by joining with NBP to identify potential farms for piloting medium scale biodigesters and develop compost stores as well as integrated farming system for best practices with proper use of bio-slurry to adapt with climate resilience. The Kampong Speu provincial department of agriculture and CP company in close cooperation with the provincial authorities plan to scale up the application of medium scale biodigesters to 90% of all pig farms in the period 2016-2018.

OUTPUTS AND KEY ACTIVITIES

Results	Key Activities
Appropriate medium scale Biodigester plant technologies piloted.	3 Biodigester plants with 02 different feasibility technologies constructed by connecting with 3 electricity generators.
Trained technical skills and knowledge of innovated medium scale Biodigester.	15 PBPO_KSP's technical supervisors and BCCs
	60 potential animal farm owners conducted exchange visits.
Bio slurry compost stores constructed with proper functioning compost processing and monitoring.	3 slurry compost stores constructed and functioning
Skills and knowledge of bio slurry compost production trained to farmers.	Compost producing training on-site to key farmers
Comprehensive experiment of integrated farming system implemented for effective use of bio slurry compost.	3 comprehensive model farmers conducted with effective applied bio-slurry on integrated farming systems. 3 bio-slurry farmer field schools with at least 45 key farmers participated through weekly practicing.
	One provincial dissemination workshop organized

KNOWLEDGE PRODUCTS

- ▶ Biodigester plant drawing
- ▶ Construction manual
- ▶ Poster, leaflet and training manual

PROJECT INFORMATION

Timeframe:	July 2016 - June 2018 2 years	Current Partners:	Kampong Speu Department of Agriculture
Total Budget:	USD 161 702 (From CCA USD 81000)	Location:	Kampong Speu Province
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Funded by:



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