

## Improved manure management through increased utilization of manure including bio-slurry

### Implementation Details

Area: Vietnam  
Period: July 2015 to December 2015  
Goal: Capacity building, knowledge exchange, awareness creation



Leaking bio-slurry storage (at top left).

### Situation Analysis

The Biogas Program for the Animal Husbandry Sector of Vietnam (BP), initiated by SNV Netherlands Development Organization and developed in conjunction with the Department of Livestock Production (DLP) under the Ministry of Agriculture and Rural Development, is supporting the installation of biogas systems across Vietnam. The project has supported the construction of more than 145,000 digesters out of an estimated total of 500,000 digesters in Vietnam. Currently around 40% of the farm households use the bio-slurry as organic fertilizer. The others discharge it into rivers, ponds and sewers. User Surveys show that barriers to utilization of bio-slurry include limited knowledge about the value of bio-slurry and the distances from the digester to crop fields (application sites).

Through the Biogas Program, provincial and district government technicians receive training on the uses of bio-slurry. Bio-slurry is also part of the end user operation and maintenance training regarding bio-digesters. However, more extensive training is needed to further enhance the proper utilization of bio-slurry.

### Opportunity

With LMMC support, the opportunity arises to expand the current training curriculum on integrated manure management, specifically how to manage and make proper use of bio-slurry, and build awareness and knowledge among farmers and technicians.

### Objectives

SNV and BP develop and test a training module on integrated manure management of which, when successful, parts will be integrated in trainings for new technicians, biogas enterprises and farmers with and without a bio-digester. Training will be provided to 100 government extension workers, who will then share their knowledge with 4,000 farmers in 5 provinces. The overall goal is to optimally use bio-slurry as a fertilizer for crop growth and food security.

### Implemented Activities

OPC is in a preparatory phase.

### Upcoming Activities

- Training needs and barrier assessment to manure/bio-slurry use, including good practice examples, and preparing training materials on integrated manure management.
- Training of Trainers (ToT) on the benefits and methods of the use of manure including bio-slurry for government district and provincial technicians. These government technicians will in turn pass knowledge to farmer households through on-site schooling sessions where one household as a good example is selected and 20 other households are invited to get on-site training.

The training will include:

- (1) Creating awareness on the importance of manure management and the effects of manure and bio-slurry on its environment.
- (2) Increasing awareness and knowledge on the use of manure, specifically bio-slurry, and its income-generating benefits. It will be as concrete as possible, directly instructing what mixture ratios are necessary, and how to collect and apply it to crops.
- (3) Developing business models and providing micro entrepreneurship skills for farmers
- (4) Improving communication skills in knowledge transfer to farmers.

Impact assessment	Indicator	Value
<b>Geographical Impact</b> (effect of scale)	Affected farm enterprises	Regional
		▶ National
		Sub-national
<b>Socioeconomic Impact</b> (effectiveness of activities)	Improved food security (by more income or production)	High
		▶ Medium
		Small
<b>Impact on Climate Change</b> (effectiveness of activities)	Reduced SLCP (methane) emission	High
		Medium
		▶ Small
<b>Environmental Impact</b> (effectiveness of activities)	Reduced environmental pollution	▶ High
		Medium
		Small
<b>Stakeholder awareness</b> (effect of activities)	No. of addressed stakeholder entities	> 5
		▶ 3-4
		1-2
<b>Capacity building</b> (effect of activities)	No. of people addressed in the enabling environment	▶ > 150
		50-150
		< 50
<b>Policy development</b> (effect of activities)	No. of new or changed laws, rules etc.	> 2
		1-2
		▶ 0
<b>Levering Finance</b> (effect of activities)	Size of leveraged external investments	▶ Large
		Medium
		Not applicable

Implementers: SNV Netherlands Development Organization

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