



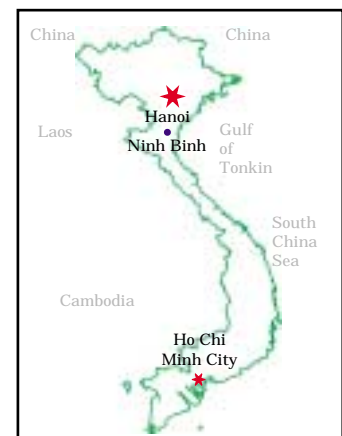
Thang Thanh Village, Ninh Binh Province

GENERAL INFORMATION

Thang Thanh village had Green Productivity (GP) implemented during 2000 and 2001 under the GP Integrated Community Development Program.

Thang Thanh village in Truong Yen commune is located in the old capital city. It is home to the historic Temple of Dinh Le King. Thang Thanh is in the west Hoa Lu district, approximately 93 km south of Hanoi, and the Sao Khe River runs through this village.

Some characteristics of the village are as follows:



Thang Thanh Village, Ninh Binh Province

Population: 1050 people within 205 households.
Main production activities
Cultivation: 60% of the village's total income Other: breeding pigs, poultry, developing tourism, and extracting limestone

The average area cultivated by an individual is about 400 m². The productivity, however, is very low (5.4-5.6 tons/ha/year of rice). Villagers can increase their income and thus improve their quality of life by breeding pigs and poultry, developing tourism, and extracting limestone for export.

MAIN ISSUES

- Poor water quality was the predominant problem for people within Thang Thanh village. Thang Thanh had neither water drainage nor a regular water supply system. The main source of



potable water is rain and groundwater from a well. In the dry season, the well often dried up, resulting in water scarcity for domestic and drinking needs. In the wet season, polluted floodwater entered the well and contaminated the drinking water.

- The sewage management system was inadequate. There were few septic tanks in the village; rather concrete containers were used to store sewage. Once full, the contents of these containers were used as compost in fields and household vegetable gardens.
- The village lacked solid waste collection system. The villagers often disposed of their waste in their gardens, rivers, or ponds.
- Households used wood excessively in their traditional stoves for cooking.
- The farmers depended heavily on chemical fertilizers for their fields. The average application rate was about 20 kg of phosphate fertilizer, 3 kg of potassium fertilizer, and 8-10 kg of nitrogenous fertilizer/crop/360 m². The amount of chemical fertilizers applied was continuously increasing. The soil is acidic.
- The use of pesticides was not according to the guidelines provided by the manufacturers. Some households applied pesticides themselves without the control of the cooperative. The cooperative is responsible for cultivation activities in the village. Bottles that contained chemicals were not being correctly disposed of and were often left in mountain caves.

GP OPTIONS

- (1) Set up village-specific environmental regulations and educate the villagers on environmental management including wastewater treatment, potable water, and environmental regulations.
- (2) Construct a water supply plant capable of providing 2.4 m³/hour of drinking water. This plant will be capable of supplying potable groundwater for 50 households.
- (3) Construct septic tanks, biogas plants, and composting pits to treat sewage.
- (4) Construct a wastewater treatment system in each household. This will prevent polluted wastewater from being discharged directly into ponds or streams.
- (5) Set up a solid waste collection and management system.
- (6) Construct energy-efficient stoves to reduce energy consumption and air pollution.
- (7) Apply integrated pest management (IPM) to cultivated areas to reduce the reliance on chemical fertilizers and pesticides.

IMPLEMENTATION AND RESULTS

- The villagers established regulations for environmental protection. They were informed of these regulations through radio, newspapers, and posters and also at festivals.
- A competition was organized for GP. Hundreds of people from the Hoa Lu district attended. This helped increase environmental awareness among the villagers.
- Training courses on GP methodology were organized that were attended by over 200 people.

- A water supply plant was installed to pump and filter groundwater for potable purposes. This supply plant is capable of supplying potable water for 50 households. In addition, a water treatment plant was established for households too far from the water supply plant. This plant provides households with simple filtration systems capable of making their water suitable for drinking as per the 505/BYT Potable Water Quality Standard (Ministry of Health).
- Four wastewater treatment systems were constructed within different households.
- Five biogas plants and a compost pit (2 m³) were constructed. EMONY, a biological product used to increase the speed of composting and to reduce odors, was added to the biogas plants and the compost pit. Three two-compartment latrines and four one-compartment latrines were also built.
- Thirty-one dustbins were distributed throughout the village and a landfill was constructed.
- Eleven energy-saving stoves were built.
- Initial results indicated that the introduction of IPM reduced pesticide and fertilizer use in the field.



Construction of Biogas Plant



Solid Waste Collection Bins

“

SPE-GPDE-98-2058 has contributed to the socio-economic development of our society. This project is the appropriate approach, which contributes to sustainable development.

”

Dr. Nguyen Huu Thien, General Director,
Directorate for Standards and Quality