

Implementation systems

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Background

- Pig farming is an important industry in Vietnam with the quantity of pigs ranked 2nd in Asia after China. As a result, the treatment for a large amount of pig manure has become a challenge.
- 40% of pig manure is discharged directly into ponds, rivers, sewages without proper treatment. The rest of pig manure is treated by biogas (30%) and by lagoon (30%); however, there are many challenges regarding the quality of waste water from those treatment.
- Improper treatment of manure has led to unsanitary conditions of living environments such as water pollution, odor... and GHG emission sources (CH₄ emissions from anaerobic digestion).

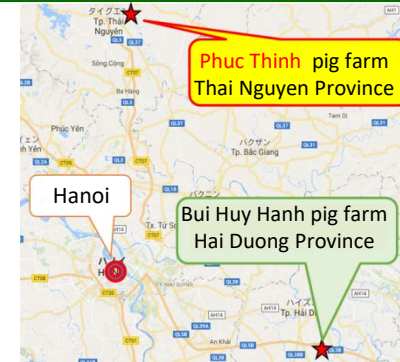
Project Outline

With the purpose to promote the Hybrid subsurface flow wetland system as Asian Water Environment Improvement Model project, we conducted periodic check of water quality improvement effect etc., verification, FS survey and made a business plan.



Location

- Phuc Thinh pig farm, Thai Nguyen Province, Vietnam
- Bui Huy Hanh pig farm, Hai Duong Province, Vietnam



Outline of Technology

- 'Hybrid subsurface flow constructed wetland system' is developed under cooperation of industry, academia and government in Japan.
- The feature of this technology is space-saving, low-cost (initial investment and running cost) and energy-saving.



Expected results and business prospects

- As expected result, it aims to contribute to the improvement of water quality and circulation of resource and energy, reduction of GHG emission, improvement of living environment and the sustainable development of livestock industry,
- Our target is livestock wastewater treatment in Vietnam, which highly demanded now. In the future, we plan to expand to organic waste water from food processing plants, etc. and to other Asian countries.
- Through demonstration projects by facility repair, we encourage local government agencies and many business operators to recognize our technology to receive new orders.