Project : **PROPOSED DOMESTIC WASTEWATER TREATMENT FACILITY (2nd , 3rd and 4th phase)**
Location : **BARANGAY OLD SAGAY, SAGAY CITY, NEGROS OCCIDENTAL, PHILIPPINES**
Data given by Arch. Ubaldo Ramos, Board of Trustee , iHome WV

Historical Background

The Philippine government, like many other governments worldwide, recognize the adverse effects of environmental degradation and the health risks that are directly attributable to pollution. The Philippine government however is perennially saddled with budgetary constraints and important infrastructure to mitigate pollution-related problems are often side-lined in order to provide what it believes are the more pressing needs of the people. This is particularly true with many housing projects for Typhoon Yolanda victims and those who must be relocated from the hazard zones. Proper site development work in the proposed site is put aside to prioritize the construction of houses.

IHome Western Visayas, Inc. want to include in its housing projects an inexpensive wastewater treatment system on-site so effluent from 6 to 10 households can be treated before it is discharged to the environment. More than 800 houses will soon be built in the proposed pilot site and a water pollution disaster is likely to occur not only in the immediate neighbourhood if nothing is done; in the proposed relocation site is a water pumping station for the domestic water supply of the whole barangay.

The IHome-WV Wastewater Treatment System

The Ist phase wastewater treatment facility that we have constructed and now serving 8 households is generally based on schematic diagrams by the Bremen Overseas Research and Development Association (BORDA), an NGO based in Germany and disseminated by its partners in the Basic Needs Services (BNS) Network. Attached is a page from their brochure extolling the benefits of their Decentralized Wastewater Treatment Solution (DEWATS). Our system is also designed to gain the same benefits.

Our proposed 2nd , 3rd and 4th - phase wastewater treatment system that would benefit another 10 -40 households is estimated to cost One hundred fifty thousand to two hundred thousand pesos (Php150,000-200,000) of each phase, to construct, inclusive of labor, materials and overhead for construction supervision. It will use locally available materials and can be easily duplicated; it is based on the technical approach principle advocated by BORDA. Also attached is a schematic diagram of our system. And the main septic tank will be connected to main pipeline that would serve as ground irrigation to supply water to the vegetable garden of the village that is now processed to be provided by our partner in mission the Red Horse Company from Netherlands. This team is also a partner in mission of Rotary Club of Zevenbergen.

Thank you and with our prayers for the success of this partnership.

Sgd.
EXCEL PABALINAS
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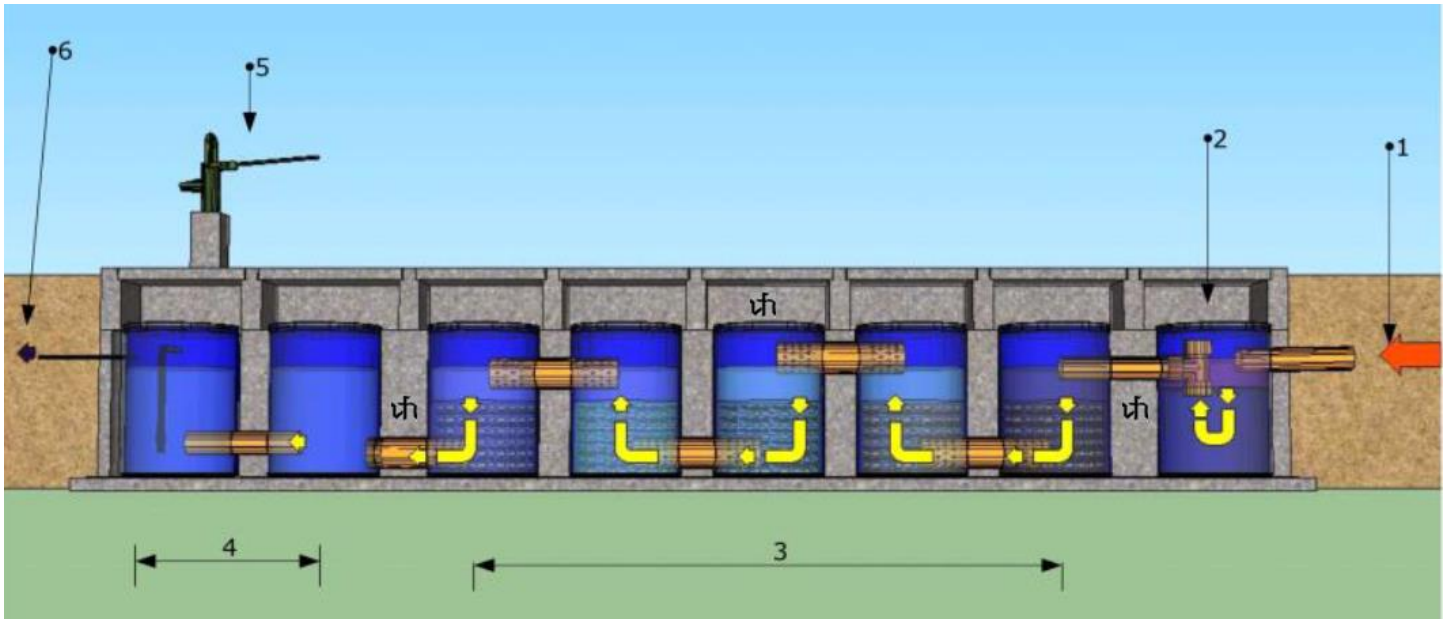
The IHome-WV Wastewater Treatment System for Domestic Sewage

Each of our housing units are equipped with septic tanks for primary sedimentation, sludge retention and primary scum separation. The effluent from the septic tank is discharged to a PVC sewer pipe directly connected to the septic tank's outlet pipe. The sewer pipe (**1**) is then connected to the secondary scum separator of the system (**2**). Scum deposit can be cleaned manually through a manhole directly on top of this chamber. The effluent is then filtered through gravel and charcoal (**3**) to remove water-borne solid particles and odour. The filtered wastewater is then stored in two chambers (**4**) where it can be pumped-out (**5**) to water the garden located a distance away from the system. A PVC fitting is attached to one of these chambers to allow chemical treatment if the need should occur. An overflow pipe (**6**) is also connected to the storage chambers. The overflow "grey" water will be used as part of a drip-irrigation system for a garden located near the wastewater treatment system in lieu of a soakaway system.



Schematic Diagram of IHome-WV Wastewater Treatment System.

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Benefits of a Wastewater Treatment System (from the brochure of BORDA)

Benefits of DEWATS

- Establishing of multi-stakeholder networks to combat water pollution
- Building up implementation capacity on various levels
- Providing treatment for both, domestic and industrial waste-water at affordable price
- Fulfillment of discharge standards and environmental laws
- Wastewater pollution reduced by up to 90%
- Providing treatment for waste-water flows up to 1000 m^3 / day
- Reliable and long lasting appli-cations
- Tolerant towards inflow and load fluctuation
- Materials/ inputs used for construction are locally available
- Minimal maintenance and long de-sludging intervals
- Low operation and maintenance costs

- Resource efficiency and non dependence on energy
- Resource recovery through wastewater re-use and biogas generation

Better Lives through Better Homes

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