

Section Sciences et Ingénierie de l'environnement Design Project 2015 (semestre de printemps)

Proposition n°39

Design of a household water treatment and storage (HWTS) device in Nepal

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Descriptif du projet

In rural Nepal, Helvetas Swiss Intercooperation (HSI) is installing gravity-fed piped water supplies to support domestic and productive needs. Whereas the quality of water at the source and point of collection has been shown to be generally good, water stored within containers in the home has been shown to have high levels of fecal contamination. This project will draw on data collected in November-December 2014 regarding the microbial quality of drinking water from “source to sip” and households’ water management behavior within communities served by HSI piped water projects. Using these data sources, the student will devise a household water treatment and storage (HWTS) device that is appropriate for the study site context.

Objectifs

(1) To critically evaluate the available data regarding water quality (especially in the home), household management strategies, perceptions and norms regarding water and health, and (if available) qualitative information regarding the local market context. (2) To recommend a general strategy for protecting rural household members from consuming fecally contaminated drinking water. (3) To design an intervention for a household water treatment device and/or storage unit (either as a blueprint or if funds are available, a basic prototype).