

Community-Scale Water Treatment Systems in the Dominican Republic

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The “Water Supply in Developing Countries” course at Purdue provides a unique learning-environment that couples student leadership and international development experiences. Lack of access to safe drinking water burdens population health in developing countries, and our group of interdisciplinary undergraduate and graduate students are working to address this in the Dominican Republic by implementing sustainable water treatment systems. We chose to install our first system at a primary school in the community of Las Canas. Through iterative design changes and collaboration with community stakeholders, we completed a system that currently serves 300 students and school faculty with the capacity to provide safe drinking water for the entire community. Through the iteration process in Las Canas, we refined the system implementation allowing us to install another system in the community of Los Peladeros. In addition to our strategies from the first installation, water quality monitoring protocols were developed to empower the system operators to continually evaluate the water and ensure its safety. Los Peladeros also readily adopted the WASH educational curriculum for their students and provided substantial feedback on how to improve the materials. Additionally, we are in the process of implementing a community baseline survey, which will serve as a comparison point for demographics, water and sanitation habits, and overall health within the community. Our overall strategy will now allow for evaluation of the system and implementation process successes, highlight areas for potential improvement, and provide a chronology of health outcomes over time in the communities with which we partner.