

Executive Summary

Opportunity

People living in rural and semi-urban communities in Northern Nicaragua drink contaminated water on a daily basis and struggle with the effects on their health. ASDENIC is in a unique position to create a social enterprise within its organization to provide sustainable clean water solutions to the communities it already serves, and beyond. By distributing and/or manufacturing affordable, effective household water filters, this enterprise could fill an important need through a financially self-sustaining model.

Research Activities

We conducted 70 semi-structured interviews with potential beneficiaries in six communities: Daraili, Bramadero, Buena Vista, El Pegador, Condega, and Las Sabanas. Additionally, we administered 37 written surveys of 20 questions each and conducted two focus groups with a total of 10 participants, all in rural communities. We met with 15 key informants from local water nonprofits, local governmental organizations, and ASDENIC employees to gather contextual knowledge on the history and infrastructure of water purification efforts. All activities were conducted in Spanish. We took 24 water samples from public and private water taps in rural, peri-urban, and urban areas to test levels of bacterial contamination. In addition, comprehensive water analysis tests funded by Miller Center were conducted, prior to our arrival. These tests assessed bacteriological, material, and chemical contaminants at regional water sources. Our interviews, surveys, meetings, and tests provide a blend of qualitative and quantitative data on the current drinking water situation from environmental, economic, and public health perspectives.

Key Findings

There is a need. On average, 90% of water tests conducted in rural communities in private and public faucets showed levels of coliform that exceeded WHO guidelines for acceptable drinking water. In addition, the vast majority of participants we interviewed expressed concern about the quality of their drinking water with a smaller, yet still significant portion reporting that someone in their family was currently experiencing diarrheal issues related to their water.

There is a market. A majority of individuals we interviewed stated they would be willing to pay for a filter that would provide cleaner water but currently this type of product is not accessible to them.

Research Deliverables

Our first deliverable is a comprehensive report of our findings to inform ASDENIC on proposed next steps towards creating a water social enterprise. This report includes: an analysis of the drinking water market condition in the Segovia region in Northern Nicaragua; a detailed needs assessment, including a water quality report; and, recommendations to ASDENIC based on our key findings. The proposal section outlines the strategy we recommend, while the remainder of the report describes different paths to reach the social enterprise potential.

Our second deliverable is a replication template for the Miller Center for similar research projects in other areas. This report will serve as a toolkit for future partners or fellows to learn from our experiences in the field and in writing our first deliverable.

Recommendations

We recommend that ASDENIC create a subsidiary under the name AguaNic. The first step for AguaNic would be to launch a pilot program to test the market and inform next steps. If this market-sensing effort produces the results anticipated, we suggest that ASDENIC begin selling in-home ceramic filters. To distribute the filters, we recommend either a pop-up or mobile store that gives access to both semi-urban and rural communities. AguaNic would support outreach, sales, and post-sale customer services as well. Community safe-drinking water committees (CAPs) could take a variety of roles from community financiers to health promoters. Payments can be modeled after several options designed for expensive items in the US market, including layaway and down payments.

