

HISTORY OF THE DOMINICAN REPUBLIC BIOSAND PROJECT, 1998-2004

The Dominican Republic BioSand filter project began in 1998, when Dr. Tollefson read an article in the Herald about the Samaritan's Purse BioSand filter project in Nicaragua. She flew to Calgary from Vancouver, met Dr. Manz at his warehouse, and made the decision that this appeared to be the best technology available (cost, effectiveness, sustainability) in the world for household water treatment. Dr. Tollefson then asked Rotarians from the Rotary Club of Calgary Chinook to travel with her to the Dominican Republic, for the purpose of evaluating the possibility of doing a matching grant for this and other projects. At the time, Dr. Tollefson was working under the wing of University Hill United Church in Vancouver, and her program was called Add Your Light.

In July, 1999, Norman Myden, Fred Jessee and Norm Moro, from Calgary Chinook, visited the D.R. and met Rotarians from four different Clubs, which has resulted in five matching grants since then. In October, 2000, a training workshop was held, co-funded by Calgary Chinook, the Rotary Foundation, Add Your Light, and the Canadian Embassy. Dr. Manz, of Davnor Industries, flew in for one week to teach 14 Dominicans how to make filters ("filter technicians"). The candidates were selected by local Rotary Clubs, after a list of criteria were given to them. Dr. Tollefson taught the health portion of the workshop and a Peace Corps volunteer, Patricia Brown, taught the marketing portion. The goal of the workshop was to bring the BioSand technology to the Dominican Republic, and to assist Dominicans in starting small businesses selling the filter.

From October, 2000, until January, 2002, Dr. Tollefson and the Add Your Light sponsors were the sole financial donors in support of the technicians, with one exception, as follows. At the suggestion of Dr. Tollefson, the Institute for Development of the Northwest (INDENOR) and the filter technicians, known as the Association of Filter Makers (AFAFIL), applied to the Canadian Embassy for a grant through the Canada Fund for Local Initiatives. This resulted in funds for 150 filters, managed by INDENOR. Beneficiaries paid 80% of the filter price over time, and this money was recycled into a second phase of filter production. In January, 2003, the Rotary Club of Calgary Chinook obtained funds from a Matching Grant to provide 600 water filters in the Dajabon region, and that project has just finished.

Dr. Tollefson traveled to the D.R. every 3 months, and worked with all 14 technicians, attempting to help them start small businesses. Eventually, ten technicians left or were asked to leave the program for the following reasons: poor quality of workmanship, refusal to follow-up on filter installations, poor attitudes around selling filters (some technicians wanted continual donations and refused to market filters for themselves).

This time period was extremely difficult. The technicians all lived in different towns, with 13 in the northwest and one on the east coast. The cost to evaluate the technicians and their work repeatedly, in terms of time, travel, and heated negotiation, and to finally have to ask some of them to drop out and give back their molds, was enormous (concrete is poured into steel molds to make filters). However, to have permitted some of them to continue making filters would have destroyed the reputation of the filter, and hence

ability of the others to sell. There are still two technicians who refuse to give up their molds, in hopes that someday they will get a contract.

By January, 2002, four technicians had proven themselves capable of running small businesses and supervising employees. Approximately 1000 filters had been donated or sold directly at that point (this is a rough estimate). Each of these four technicians was funded by Add Your Light to build substantive filter workshops, an investment of ~\$50,000 CAD in construction costs alone. Each technician also re-invested their profits back into their own workshops, buying equipment, trucks, etc. They formed the Association of Filter Makers (AFAFIL). Gradually, twelve of the fourteen original steel molds were retrieved for use by the four technicians, so they could each make three filters per day. The goal was to have ten molds per technician, with a capacity of 40 filters per day, 800 filters per month.

A decision was made not to train more technicians for the time being, given the time and financial investment it had already taken to achieve high quality workmanship and four active businesses. Dr. Tollefson and the AFAFIL technicians had learned that, as hard as it is to train a top-notch technician, it is even harder to get rid of a bad one. *Instead, the focus was put on 1) a high “mold to technician” ratio, to increase output potential from any single technician, 2) employees supervised closely by the four technicians, to maintain quality control, and 3) community educators who could supervise filter projects in their locales.*

In January, 2002, Dr. Tollefson had been asked to meet Jim and Sue Bodenner, of the Rotary Club of Rockford, Michigan, in Puerto Plata, in order to act as guide and translator to see a matching grant project in Mao (a nursing home). Since there was some time free, Dr. Tollefson asked the Bodenners and Robert Hildreth, of the Rotary Club of Puerto Plata, Isabel de Torres, to take an hour to see a BioSand filter in Puerto Plata. That day was a crucial turning point, from which everything began to change. The residents of the Bodenner’s Bishop Hills retirement home donated \$400 to purchase filters to implement a pilot testing in Puerto Plata. Robert Hildreth was impressed and installed ten filters for his employee’s and others homes where they could receive constant feedback. The Bodenners returned to Michigan and raised \$10,500 for 172 filters, which were made and installed in late 2002 and the beginning of 2003. Meanwhile, the technicians continued to manufacture and sell filters on their own as well.

By the fall of 2002, it was clear that this program was growing quickly enough that a new level of organizational structure needed to be added, in order to take it to a national level in a way that would maintain 1) high quality of filter construction and 2) appropriate usage by the filter owners. Rtn. Bob Hildreth and Jan Tollefson developed the idea of training “community facilitators”, who would teach hygiene and sanitation principles, and who could supervise and trouble-shoot the filters in their own communities. Bob organized a course in Puerto Plata for Dominicans from several NGOs. Jan Tollefson and two of the technicians, Jose Rivas and Juan Bencosme, taught this first “facilitators” course in January, 2003. The Bodenners returned with a group of Rotarians from five

different Clubs to visit the project, and they traveled to Mao to see Juan Bencosme's filter workshop.

Bob Hildreth held a meeting in Puerto Plata that was attended by the CDC and Rotary District leadership. The latter made a three year commitment towards the project. Bob also approached the Peace Corps of the Dominican Republic in March of 2003, because of lessons learned in the distribution in Puerto Plata. The Peace Corps had a national presence, both in the D.R. and Haiti.

It was decided to expand the course, so that facilitators would actually do the installations of filters in their communities. This would decrease the price required by the technicians, and increase the sense of ownership of the filter program by the community. *The Peace Corps of the Dominican Republic signed a letter of commitment in June of 2003 to join forces with the program, which was renamed the Hispaniola Children's Safe Water Project.*

In October, 2003, eight Peace Corps (D.R.) volunteers (PCVs) were trained by Dr. Tollefson as community facilitators, and in November, 2003, another 20 volunteers were trained (19 living in D.R., one in Haiti). In January, 2004, eight PCVs from Haiti were trained, after news of the course and Rotary funding spread to them. In addition, two Haitian NGO leaders, as well as a Dominican doctor, nurse, community leader, and civil engineer, were trained. The Bodenners returned in February, 2004, with a group of 25 Rotarians in March, 2004, as their fundraising and promotional campaign grew.

To date, seven Peace Corps volunteers (PCVs) have active filter programs going in their communities, four more will receive filters shortly, and all of the Dominican and Haitian facilitators are on the short-list to receive filters in the next month. Facilitator courses for new PCVs will be run every three months for at least two more years to seed the technology throughout the D.R. *Already 25 more facilitators, from sites all over the Dominican Republic, are signed up to be trained in July, 2004.*

Two Haiti PCVs, who were recently evacuated from Haiti, are also being assisted as they now independently return to Haiti to start filter programs at their sites. The program hopes to also support some of the current Haitian technicians, who need more supervision, guidance, and funding. These technicians were trained by Clean Water for Haiti, and there is also an independent group of technicians at the Hospital Albert Schweitzer in Haiti (a program started by the Rotary Club of Calgary South, and focused in the Artibonite Valley). If the Peace Corps return to Haiti, the program will continue to train these volunteers, so that they can set up programs at their sites.

Thus, a total of 42 BioSand filter facilitators have been trained, and approximately half already have or will shortly have water/health programs, including the BSF technology, in their communities. We expect the program to expand exponentially in the near future. We estimate that there were 3000 filters in the country by January, 2003, with another 2500 being funded by Rotary in 2004, and hopefully another 4000 funded in 2005.

Once the communities get to know the filter, through these seeding projects, the hope is that they will begin to order more filters from the technicians directly. Developing financing options will be a major focus over the next year, and a forum on this topic for all facilitators is in planning stages. As demand grows, and more technicians are needed, we believe they will self-select out of the group of facilitators, with full knowledge of the realities of the program. Then the AFAFIL technicians will train them and follow-up on them.

In support of this national strategy are Rotary Clubs from the United States, Canada, and the Dominican Republic. Three TRF matching grants have been submitted in Rotary Year 2003-2004. There are over 50 Rotary Clubs already donating funds towards this project, with the goal of raising \$100,000 USD this year, and the leadership coming from the Bodenners and the Rotary District 6290 in Michigan. We are starting an initiative in Southern Alberta to raise a similar amount.

The past D.G. (Rotary District 4060 D.R.), current DG, DGE, and DG Nominee have all endorsed this project. President Elect Rotary International, Mr. Glenn Estess, attended the District Conference in Puerto Plata, May 7-9, and was apparently very impressed with the program. Mr. Estess requested Bob contact Rotarian Ron Denham who is heading up Rotary International's committee for water issues and initial contact has been made.

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www.addyourlight.org

Calgary, Alberta, Canada

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Checked and edited for accuracy by Robert Hildreth,
Past-President, Rotary Club of Puerto Plata, Isabel de Torres

**Since this letter was initially written, a disastrous flood occurred in Jimani, Dominican Republic, and hundreds of people lost their lives and homes. We have responded with 400 water filters, all made by the four technicians, and being installed and supervised by the technicians and several trained Peace Corps facilitators who have volunteered their services.