

Bolivian-Canadian Clean Water Network

Cooperation Boliviana– Canadiense para Agua Limpia (COBAGUAL)

MORE THAN JUST A DROP IN THE BUCKET...

BCC Water Network Quick Facts:

- Founded on February 28, 2007 in Ascension de Guarayos - In Bolivia's Amazon Basin
- Currently has a team of 4 Bolivian paid staff, one Bolivian volunteer and two Canadian volunteers and a Calgary-based volunteer Board of Directors
- Present focus is on implementing BioSand Filters (BSF) and providing basic hygiene training
- Employs a participatory development model, where filter users help construct their filters rather than pay for them to address need of the poorest
- Currently 155 filters installed and over 1000 people with clean water

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Going with the Flow

The months since our first newsletter have gone by in a blur. Thanks to being invited to give a series of presentations at different venues, we have been fortunate enough to be able to share our experience and details of our project with a number of individuals who each have brought their own set of experiences, questions and suggestions. These exchanges of ideas have invariably given us a profound boost in keeping the work going. So thanks to all of you who have supported our initiatives!

A special thanks must go to Mike Lafleur, Laura Thomas, Pete Thompson and Ron Lentz from the Centre for Affordable Water and Sanitation Technology (CAWST) who have invited us to speak at the last few Project Implementer's courses in Calgary. Each course has been great since it allowed us to share how some of our difficulties getting a project going came to be and more importantly, how they can be avoided by future implementers so that they can



hopefully have a smoother start to their projects than we experienced with ours. We were especially surprised and touched when following our presentation at the October CAWST Training course, a participant named Grant Belau, grabbed a container off the display wall and encouraged everyone to donate \$20. We were just so surprised and felt a little like we were being filmed on some Candid Camera-type show...a feeling that was further magnified when Bill Skinner, another participant doubled the total of the spontaneous donation. Wow!

On the flip side, our continued work in coordinating with our team in Bolivia brings challenges that admittedly frustrate us and humble us at the same time. The reliability of technology in Canada is a walk in the park in comparison to communicating with Ascension in spite of unreliable phone lines, power outages, and problems at the internet café. Despite these barriers, the project continues to progress well thanks to our solid team in Bolivia, with each person bringing great ideas for advancing the goals of the organization.

Project Update

In response to demands from neighbourhood presidents and members of the community, the employees of COBAGUAL have focused their efforts in three of the poorest neighbourhoods of the town; Residencial, San Antonio and San Juan, installing a total of 73 filters in these communities. Being on the outskirts of town and far from established infrastructure, these neighbourhoods have no access to tap water whatsoever. Furthermore, many families do not even have shallow wells, since in this corner of Ascensión the tough granitic bedrock of the Brazilian shield rests very close to the ground's surface, making it almost impossible to dig in many areas.

Results of follow-up visits have generally been positive, with many families reporting sharp declines, or even a cessation of stomach pains and diarrhea-related illness. The visits have also been a learning experience for the organization, showing us areas in which we need to improve. One unexpected finding was that the metal wire that we used to use as a diffuser plate handle had rusted in older filters, leaving, according to the users, an unappealing metallic taste in their water. This

finding prompted a mini-project to replace the metal wire with plastic fishing line in more than 125 filters. Follow-up visits have also shown that some users have not quite grasped the concept of settling particles out of their water before filtering (if their water is turbid) or using safe storage containers to keep their filtered water clean. As a result of these visits, more emphasis will be placed on safe storage of water, and on the importance of pre-settling water before filtering to ensure that the filters do not get clogged as often. These learning experiences highlight the importance of follow-up visits to ensure that we learn and improve as much as possible through the course of the pilot project. All in all, the response in the community has been positive and word of our project is continuing to spread. As of today the employees have installed a total of 155 filters.

On the home front, we've been extremely lucky to receive a series of generous

donations while we continue our fundraising efforts. We've also taken concrete steps towards incorporating as not-for-profit organization, including finalizing our society bylaws in our first Board of Directors meeting on November 28th.



The Need for Clean Water in Ascension



Recently obtained municipal government statistics (from a year 2000 study) reveal that less than 25% of the population of Ascensión (Approximately 12 602 in 2000) had access to chlorinated tap water. To make matters worse

for the 9000+ people drinking water from shallow wells, springs, and surface water, only 10% of the town had flush toilets. The rest of the population had access to shallow latrines (70%) or no sanitation facility at all (20%). Given that these shallow latrines have no liners and are dug into the same shallow aquifer that provides

well water for the population, the need for action to provide some form of drinking water treatment is clear. While the municipal water network has been expanded since the year 2000, it is so prohibitively expensive that even in neighbourhoods with established water distribution infrastructure, the majority of the people have no way of accessing it. Moreover, immigration into the town has caused new neighbourhoods to spring up that have no tap water coverage yet. Not surprisingly, the small rural communities that form a part of the municipality of Ascensión are not fairing much better. Three of the larger communities had a piped water system in the year 2000, which once again, did not reach

everyone. The remaining 78.4% of the rural population got their drinking water from shallow springs or rivers with no treatment whatsoever. The prevalence of ranching and the general lack of sanitation facilities in the region make these sources less than ideal. As a result, water-related diarrhea and parasite infections were reported as the most common illnesses in these communities. In the municipality as a whole, it was estimated that almost 4% of children die of diarrhea or stomach ailments before they reach the age of 5. The vast majority of these deaths would be prevented with simple hygiene practices and improved drinking water.

Technology Focus: Straining Water Through a Cloth

While the focus of our project is on the BioSand Filter (BSF), our team teaches on a number of simple, affordable and locally available technologies that families can use to treat water in their homes. We learned about these treatment options through CAVST and will feature a different one in every upcoming newsletter.

One simple technology that some families in Ascension were already using prior to introducing the BSF, was straining water through a

cloth. Using a cloth eliminates visible contaminants to water, such as leaves, insects

and garbage. Straining water through a very fine cloth, however, has also been used in certain parts of the world to reduce water contamination from microorganisms. A study completed in Bangladesh by Dr.

Rita Cowell of the National Science Foundation found correlations between cholera outbreaks in rural villages and the filtration of water through a sari cloth. The villagers folded the cloth 8 times

and, leaving it with a pore size of about 20 micrometers. This was not small enough to filter out the cholera bacteria themselves, but



it did filter out the larger plankton to which the cholera were stuck. In a study of 64 villages, the ones that filtered their water through sari cloth had a 50% lower incidence of cholera infection than the ones that did not. Since locally available cloths in Ascension are not as fine as a Bangladeshi sari cloth, we teach families to use straining as a pre-treatment to help prevent their filters from being clogged by sediments and debris rather than a stand-alone solution.

Meet the Palachays

At the time of writing, the BCC Water Network had helped 155 families in Ascension de Guarayos to gain access to clean drinking water. One of these families was that of Rigoberto and Fermina Palachay, who along with their six children: Victor Hugo, Adriana, Tatiana, Andre, Luciany, and Yon Elias received a BioSand Filter on June 11th of this year.

This family had immigrated to Ascension some years ago and had settled in the neighbourhood of Santa Rosa, near the town's centre. They were forced to drink water from a shallow well since they did not have the money to pay for the chlorinated tap water that was available to some in their neighbourhood. At first the Palachays did not notice any problems with their health as a result of their drinking

water. However, as the population grew and the area around their home became more crowded, their water became contaminated leading them to suffer from diarrhea, vomiting, stomach aches and pain in their lower intestines. It was for this reason that they were very interested in participating in CO-BAGUAL's water-treatment and hygiene training workshop and then coming to the worksite to help build their filter.

It took some time for the Palachay family to become accustomed to drinking water from their filter, but they have come to enjoy it and now use filtered water not just for drinking, but also for cooking, washing dishes, and sometimes bathing.

When Roberto Salas Vera, one of our Community Stewards, returned to the family for a follow-up visit a few weeks

after they had received their filter and hygiene training, they no longer complained of the above-mentioned health problems. Now more than five months of using their filter, they continue to appreciate the security it brings them.



In Loving Memory of Edie Porter



Edie, grandmother of Trevor Hirsche, passed away peacefully on November 25th, 2007.

She was one of our earliest and strongest cheerleaders, always curious about our progress from our first days in Bolivia before the BCC Water Network was founded, and became one of our major donors when we finally got things established.

Her kindness and passion for social causes will continue to inspire us as we move forward.

She is dearly missed as a grandmother and as a friend.

We would also like to give special thanks to those who made a donation in her honour following a service celebrating her life on November 30th.

Thank you to our latest donors!

Joanne and Roy Topley • Elaine and Brian Russell • Reta Welk • Kay Kovacik • Jack and Bev Cargill • Gary and Shirley Hirsche • Keith and Jan Hirsche • Graduates of the October 2007 Centre for Affordable Water and Sanitation Technology (CAWST) Project Implementer's Course: Grant Belau • Joe Judge • Abha Manchanda • Faith McClennon • Ron Newson • John Robertson • Alan Sitter • Bill Skinner • Rolf Stengl • David Wiens

And thank you again to our early donors!

Please note that if you are interested in donating, cheques should be made out to COBAGUAL

We sincerely hope you enjoyed this newsletter. You can expect the next one out in late April. In the meantime, if you have any questions or suggestions regarding the project or our newsletter, please do not hesitate to contact us.

To access electronic versions of our newsletters online, please visit www.el-blog-boliviano.blogspot.com

Thank you once again for your continued support!

Sincerely,

Janaki Jayanthan and Trevor Hirsche

Co-directors, Bolivian-Canadian Clean Water Network

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