

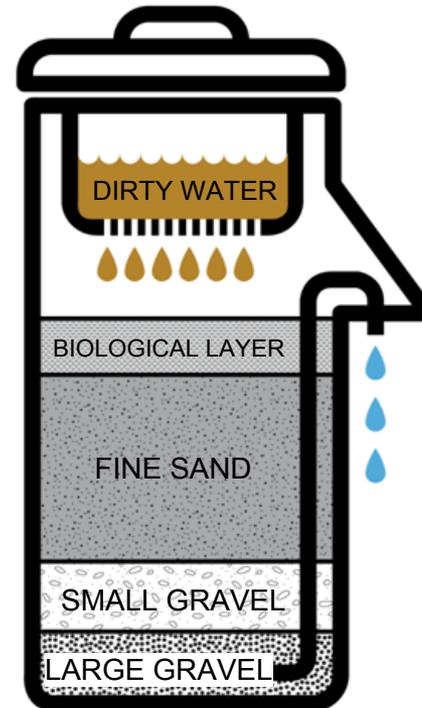
The Water Crisis

Globally, almost 1 billion people lack access to clean drinking water. Every 21 seconds a child dies from diarrhea, mainly due to poor sanitation and unsafe drinking water. Perhaps more frustrating than the sheer magnitude of this crisis is the fact that the technology exists to end it. There are many solutions available to purify drinking water, yet millions die each year from dirty water.

At OHorizons, we believe the problem is not technology or resources, but rather distribution and scale. Many water projects today focus on technologies and solutions involving complicated, expensive machinery that require foreign parts, constant maintenance, and external technical assistance. We, however, think that empowering communities through open-source, low-tech solutions will yield large scale, lasting change. Through simple, affordable technologies, beneficiaries can become active change agents rather than passive bystanders; getting clean water themselves, instead of relying on outside technical or financial resources.

The BioSand Filter

The BioSand Filter (BSF) is a simple and affordable low-tech solution to bring clean drinking water to people who need it most. Using sand, gravel, and natural biological processes, the BSF filters out pathogens using no electricity or complicated parts. It can be made with 100% locally available materials and requires little maintenance over time. If used properly, a BSF can provide a family with clean water for life.



The Concrete BSF: A low-tech solution to the water crisis

- Affordable \$25-65
- Easy to use: just pour dirty water into the filter
- Easy to maintain
- Durable
- No electricity or moving parts
- Made with local materials

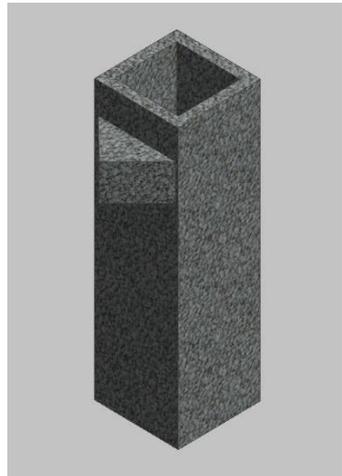
Clean Water for Life in 4 Steps!



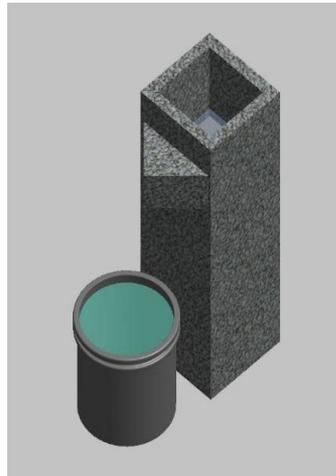
Step 1: Construct and assemble the Wood Mold



Step 2: Mix and pour concrete into the Mold, let it sit overnight



Step 3: De-mold the BSF and prepare filter media



Step 4: Install filter media and operate BSF

The Wood Mold for Concrete BioSand Filters: *Solving the Distribution and Access Problem*

Concrete BioSand Filters have traditionally been cast in a steel mold. These molds are not only expensive and heavy, but they require a skilled welder and access to specialized tools and electricity. This limits the scale and distribution of BSFs, particularly in remote, rural areas.

Our Wood Mold can be made by anyone, even if they have no construction experience, with simple tools and our highly visual construction manual. By simplifying the process of making BSFs, we hope to proliferate this low-tech solution and empower communities to gain access to clean water.

The Wood Mold:

- Durable (~50 filters/mold)
- Cheap (~\$50-80/mold)
- Lightweight (~ 60 lbs)
- Locally-Sourced Materials (all materials purchased in-country and easily replaced)
- Easy to use (no special skills or previous construction experience required)
- Can be made off-grid

Results of our pilots so far

Bangladesh

4 Staff member trained



5 Wood Molds



50 Biosand filters constructed



250 People given access to clean drinking water



Ecuador

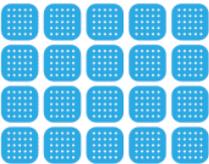
5 Staff member trained



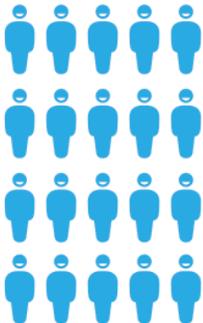
5 Wood Molds



200 Biosand filters constructed



1K People given access to clean drinking water



Mali

4 Illiterate staff members trained



3 Wood Molds



20 Biosand filters constructed



75 People given access to clean drinking water

