Filtering Water in Ifakara, Tanzania
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Problem
Thousands of people in Tanzania have no access to filtered water, which has resulted in disease and death.

Background
- ~50,000 people
- Rural
- Attempts to provide clean water have failed
  - Management
  - Complexity
  - Lack of integration in to culture

Average Rainfall 1991-2015

Water Quality Data
<table>
<thead>
<tr>
<th>Ceramic Filtration Used</th>
<th>Colonies of Bacteria present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>3000 CFU/ 100mL</td>
</tr>
<tr>
<td>After</td>
<td>95% reduction of CFU’s</td>
</tr>
</tbody>
</table>

Approach
Propose Plan to Government → Install Gutters on Kilombero School → Implement Project Nationwide → Test Water Quality Before/After

Tanzania Population Pyramid 2016

Cost of Gutter System
- Price of PVC Gutters: $786.5
- Price of 100,000 liter tank: $6000
- Total Cost: $6786.5

Results
- Liters Filtered per Year: 1,125,032
- Liters Filtered per Person: 1168.8
- People Supplied per Year: 963

References