Bio-Sand Filtration

EWB-BU

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Project Summary:

The main objective of the BSF team is to supply and secure each household with a constant intake of clean water. In the most recent visit to Naluja, the travel team initiated the W.A.S.H (WAter Sanitation and Health) action plan. The W.A.S.H action plan is divided in two parts, the water filtration objective, and the sanitation and health objective. For BSF's purposes, focus will be on the water filtration division, but the group will be constantly communicating with other teams in the sanitation and health division. In the water filtration division, major objectives include identifying households to host development of the water filters, educating the general population on construction and maintenance of the filters, and the testing of and data collection of the water filters. Major priorities will be focused on education materials, as well as any potentially important aspects of the filters that may arise during data collection.

Project Goals:

1. Filter Prototyping

    a. With our previous filters, we have built them with the intent of obtaining effective filters that run into minimal problems.
    b. Since there are problems, we need to build a filter with the intent of coming up with effective methods of maintenance for the filters
2. Education Materials
    a. Poster materials
        i. Posters on construction and maintenance
        ii. Must be very easy to comprehend
    b. Improve design of filter
        i. Small amounts of leaking still present in best filters
    c. Maintenance Manual
        i. How to fix minor problems
        ii. How to empty bucket, clean, and refill with new materials
    d. Workshop/outreach materials
        i. Same structure as last year? (Workshop in main zone, outreach in outer)

Metrics:

1. Cost
    a. To EWB: Poster/ Manual Materials
    b. To community: cost of the materials for the filters not provided by EWB
    c. Minimal cost of maintenance: Coffee filter changes; time cost of cleaning
2. Lifespan
    a. The filters have an indefinite lifespan as long as materials are kept in maintenance (clean/new materials every yearish)
    b. the education materials / maintenance manual will spread knowledge which lasts as long the the community uses it
3. System Integration:
    a. fits into WASH by providing a sustainable domestic source of clean water
    b. Target: 5 or more filters built by the time EWB returns in August

Prospectus:

Phase one: analyze the issues with implementation and continued use of the filters
Phase two: Design education materials and maintenance manuals
Phase three: Monitor data collected and if needed adjust education/maintenance/ filter design
Phase Four: Prepare for Trip

Project Deliverables:

1. Maintenance Manual
2. Educational Materials
    a. Posters- construction, maintenance, positives of the filters
3. Workshop/outreach materials
4. Useful data on quality of filter water

Timeline:

1/31/16: Complete updated framework
2/13/16: Have filter built for maintenance purposes
3/01/16: Finish Construction manual for final edits and translation
3/19/16: (**Tollgate 1**): Have results from filter for maintenance
3/26/16: Complete construction manual poster
4/10/16: Finish Maintenance manual for edits and translation
4/25/16: (**Tollgate 2**): Final designs for posters (1 for Construction, 1 for Maintenance) and manuals and ready for printing

OVERALL: monitor filter data for any change in quality and address as needed
note add tollgate points; add more detail to timeline-every project; point to build filter and present results

IM 1 (Alex):

1. manual content a priority
2. constructing filter soon
3. little timeline adjustment needed
4. empowering members to have deliverables week-to-week; maximizes retention
5. coordination with technical leads

IM 1 (Jesse):

1. member turnout
2. prototyping to draw members
    a. six or seven attendees for fall prototyping
3. transitioning to technical lead role
4.