Integrating Conservation, Health, Water, Sanitation and Hygiene (WASH) to Support Families, Fisheries and Forests

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Project Description:
Tuungane is a Swahili word for “Let’s Unite”. It unites The Nature Conservancy, Pathfinder International, district governments, and local communities into an integrated project that simultaneously addresses complex issues of population, health and environment (PHE).

The project empower communities to create healthier families, forests, and fisheries in the Greater Mahale Ecosystem, in Western Tanzania.
Project Goal:
Conserve the Greater Mahale Ecosystem as a diverse, functioning ecosystem sustaining healthy and resilient human and natural communities.
Why work in the Greater Mahale Ecosystem?

- Over 250 species of endemic fish
- Home to 93% of Tanzania’s chimpanzees
- 17% of the freshwater in the world
- Primary source of income & protein for local people

Why work in the Greater Mahale Ecosystem?
Threats to Conservation and Human Well Being

- Majority of the region unprotected - 75% of the chimpanzees living in general land
- Inadequate access to primary and sexual/reproductive health services
- Rapidly growing population (4.8% per year) and 50% of population under 15 yrs
- Few economic opportunities and families that survive on less than USD 150 per annum
- Unsustainable farming and fishing practices
- Weak local governance and low literacy rates
- Climate change

Photo credit: Pathfinder International
Tuungane Focus:

• Families
• Fisheries
• Forests

Photo credit: Pathfinder International
Theory of Change (Tuungane Project)

Main Activities

- Establish and strengthen model HHs
- PHE communication (IEC, drama group)
- Establish and strengthen COCBAs
- School activities (adolescent girls focus)
- Influence regional and national frameworks

Intermediate Results

- Contraception prevalence rate on par with rest of rural Tanzania
- BMUs are regulating fishers locally
- Near-shore fish spawning and nursery areas protected
- Village forest reserves provide a sustainable supply of forest products
- GME chimp population stable or growing

Ultimate outcomes

- Improved sexual, reproductive and primary health
- National and regional cooperation reduces illegal fishing
- BMUs are regulating fishers locally
- National and regional cooperation reduces illegal fishing

Model households demonstrate desirable behaviors and act as peer educators

- Sustainable m an. of village forest reserves
- Establish district forest reserves
- Promote climate smart agriculture
- Natures-based enterprises for forest protection
- Influence regional and national frameworks

Families
- Build capacity of CHW and HF workers
- Essential maternal and FP supplies to HFs
- Conduct FP outreach in communities
- Create FP comms materials
- Work with first-time parents
- Advocate for priority of FP/RH services
- Establish youth-friendly services
- Support CHMT in conducting supervision

Forests
- BMUs registered with govt and operational
- Enterprises for Collab, Fisheries Man. Areas
- Catch Assessment Survey for fisheries
- Establish fish breeding areas and monitoring
- Ecological assess. of long-term mon. sites
- National and regional fisheries coordination

Integration
- Model households demonstrate desirable behaviors and act as peer educators

Fisheries
- National and regional fisheries coordination

School activities (adolescent girls focus)
- Influence regional and national frameworks

Healthier families

- Healthier fisheries

Healthier forests and chimps

Integration
- Establish and strengthen model HHs
- PHE communication (IEC, drama group)
- Establish and strengthen COCBAs
- School activities (adolescent girls focus)
- Influence regional and national frameworks
Water, Sanitation and Hygiene (WASH)

- 2.5 billion people – without basic sanitation facilities
- 750 million people lack access to safe, clean drinking water
- ~2,300 people die every day from diarrhea
- Was part of the Millennium Development Goals (MDGs)
- Now Goal 6 of Sustainable Development Goals (SDGs)
Goals of WASH - Health

Benefits of improved sanitation:

• Reduce risk of diarrhea
• Reduce spread of intestinal worms, schistosomiasis and trachoma
• Reduce severity and impact of malnutrition
• Promote dignity, boost safety, particularly among women and girls
• Promote school attendance
Goals of WASH - Environment

• Strengthen fisheries management and improve governance through support to Beach Management Units
• Promote sustainable fisheries by reducing illegal fishing and protecting fish breeding sites
• Improve forest management through conservation agriculture training
• Reduce sedimentation through tree planting and climate-smart agricultural practices
WASH Theory of Change

**IF** we improve sanitation and hygiene and decrease the disease burden from water-related pathogens,

**THEN** we increase the time people have for other vital tasks, enabling children to have better school attendance, enabling economic improvement, and improving overall well-being specifically for children and women.

**AND** we create healthier aquatic and terrestrial ecosystems, mitigate climate change, promote more sustainable water management practices, safeguard health of wildlife and aid the development of a sense of stewardship to protect ecosystems and natural resources.

![Photo credit: Pathfinder International](image-url)
WASH activities

• Prevention
  • Tippy taps with soap
  • Dish drying racks
  • Compost piles
  • Boil water

• Improved information
  • Outreach

• Improved environments
  • Latrines
  • Dish washing far from shore
  • Farming at distance from shore

Photo credit: Pathfinder International
Conservation activities

- Fisheries
  - Support to Beach Management Units
  - Reduce illegal fishing and identify fish breeding sites

- Forests
  - Conservation agriculture training and tree planting
## Results: Latrines

### Household differences in latrines (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Improved latrine (with slab)</th>
<th>Pit latrine without slab</th>
<th>No facility</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unshared</td>
<td>Shared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 unweighted</td>
<td>31</td>
<td>5</td>
<td>62</td>
<td>2</td>
</tr>
<tr>
<td>2011 weighted</td>
<td>33</td>
<td>5</td>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>2016</td>
<td>19</td>
<td>4</td>
<td>72</td>
<td>5</td>
</tr>
</tbody>
</table>
## Results: Access to clean drinking water

Households with access to an improved source of drinking water – restricted sample (%)

<table>
<thead>
<tr>
<th></th>
<th>Improved source Dry season</th>
<th>Improved source Wet season</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 unweighted</td>
<td>17</td>
<td>22</td>
<td>335</td>
</tr>
<tr>
<td>2011 weighted</td>
<td>17</td>
<td>23</td>
<td>335</td>
</tr>
<tr>
<td>2016</td>
<td>14</td>
<td>46</td>
<td>415</td>
</tr>
</tbody>
</table>
## Results: Handwashing

### Hand washing facilities (2016 only)

<table>
<thead>
<tr>
<th>Village</th>
<th>No hand washing place</th>
<th>Has water</th>
<th>Has soap/sand/ash</th>
<th>Has water and soap/sand/ash</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Igalula</td>
<td>27</td>
<td>72</td>
<td>42</td>
<td>40</td>
<td>127</td>
</tr>
<tr>
<td>Rukoma</td>
<td>15</td>
<td>83</td>
<td>50</td>
<td>47</td>
<td>145</td>
</tr>
<tr>
<td>Ikubulu</td>
<td>35</td>
<td>63</td>
<td>39</td>
<td>37</td>
<td>57</td>
</tr>
<tr>
<td>Buingu</td>
<td>31</td>
<td>65</td>
<td>42</td>
<td>38</td>
<td>142</td>
</tr>
<tr>
<td>Nkonkwa</td>
<td>3</td>
<td>97</td>
<td>70</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td>Katumbi</td>
<td>7</td>
<td>92</td>
<td>72</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>Kalilani</td>
<td>3</td>
<td>97</td>
<td>49</td>
<td>49</td>
<td>35</td>
</tr>
<tr>
<td>Kalya</td>
<td>9</td>
<td>90</td>
<td>49</td>
<td>47</td>
<td>150</td>
</tr>
<tr>
<td>Kashagulu</td>
<td>11</td>
<td>87</td>
<td>41</td>
<td>39</td>
<td>135</td>
</tr>
<tr>
<td>Sibwesa</td>
<td>17</td>
<td>81</td>
<td>51</td>
<td>49</td>
<td>88</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>17</strong></td>
<td><strong>81</strong></td>
<td><strong>49</strong></td>
<td><strong>46</strong></td>
<td><strong>1,010</strong></td>
</tr>
</tbody>
</table>
Results: Supporting sustainable fisheries

15 community fish breeding sites now protect 3,286 acres

Household perception of fish catch increased significantly since 2011

Statistical test: Wald F=2.932; p=0.09
Results: Improving forest management and promoting conservation agriculture

40% of trained farmers have adopted improved agricultural practices

More people agree that deforestation causes siltation in local water sources

Photo credit: Ami Vitale
Conclusions

- Reduced prevalence rate diarrhoea (56% in 2011 to 49% in 2016)
- Increased perception of fish catch (9% in 2011 to 33% in 2016)
- Increased understanding that deforestation causes siltation (50% in 2011 to 68% in 2016)

Challenges

- Few people have access to improved water source
- Still need to allow for significant time to gather water each day
- Difficult for people to construct and maintain latrines
- Not all latrines and handwashing stations are used
Recommendations and Future Activities

• Emphasize engagement on community-based information, including education on WASH and the role of community health workers (CHW) and champions
• Engage health community staff and strengthen the links between the Health Facility and the community
• Support communities with livelihoods interventions
• Connect with experts or other organizations that specialize in WASH
• Increase engagement with local government on benefits of improved access to water
• Continue improving adoption of climate-smart agriculture
• Conduct education and outreach on the linkage between siltation and fish populations in Lake Tanganyika
• Focus on environmental education in schools