Assessment of livelihoods and push and pull factors affecting community interaction with Volcanoes National Park, Rwanda

David Berendes1,2, Jade Carboy2, Aaron Druck3, Deema Elchoufi4, Anna Hajduk2, Anita Kamhampati5, Rebecca Philipsborn7
1Laney Graduate School, Department of Environmental Health, Rollins School of Public Health; 2Nell Hodgson Woodruff School of Nursing; 3Department of Environmental Studies, Emory College of Arts and Sciences; 4Master’s of Development Practice Program, Laney Graduate School; 5Hubert Department of Global Health, Rollins School of Public Health; 6Department of Pediatrics, Emory University School of Medicine and Children’s Healthcare of Atlanta

Background
• The Bisate catchment area has a total population of about 20,000, the majority of the whom live from agriculture. It is illegal for members of the nearby community to go inside the VNP.
• The Dian Fossey Gorilla Fund International (DFGFI) is a major employer in the area with about 110 employees, including 64 trackers that research and follow the mountain gorillas.
• DFGFI interventions related to livelihoods have included collaboration with a local NGO to help the Batwa – a historically marginalized group that used to live in and around Volcanoes National Park; as well as providing support to the Bisate school and paying school fees of some local children.

Methods
• Survey of 365 households in all villages in the Bisate catchment area regarding livelihoods, health (including health-seeking behavior, access to healthcare, and knowledge of diseases such as diarrhea), and water, sanitation, and hygiene (WASH)
• Focus groups and key informant interviews conducted with village leaders, community members, CHWs, and trackers (those who go into the park for DFGFI and other organizations tracking gorillas)

Key Findings
Community interactions with Volcanoes National Park:
• There are push and pull factors that make people go inside the VNP
  - Push factors: malnutrition, lack of access to clean water, low income
  - Pull factors: VNP provides key resources at no cost
• Crop raiding by animals coming out of the forest and lack of adequate mechanism for compensation is a main concern
• Benefit from tourism mainly seen as income source for the country; opportunity to work as porters

Livelihoods and previous development interventions:
• Main income sources are potatoes and pyrethrum
• Land scarcity is a problem – 69.3% households own less than 1 hectare
• Most previous development interventions have been relatively small-scale livelihood projects
• Main concerns expressed by villagers and village leaders:
  - Declining soil fertility: lack of availability and cost of fertilizer
  - Hunger: food prices rising, lack of nutritious foods
  - Children not going to school due to lack of food in the household
  - Lack of electricity, good roads and high cost of health insurance

Next Steps and Recommendations
Short term for DFGFI:
• Integrate the Ecosystem Health and Community Development Program with the other programs, especially Ecosystem Education, to improve coordination of activities.
• Form task-force of DFGFI HQ and Rwanda colleagues to design EHCD program strategy including how to best partner with local development and conservation NGOs.

Long term for DFGFI in partnership with other local NGOs:
• Establish school feeding program in the Bisate school in order to reduce malnutrition of children and lessen food burden on families – which will likely lead to fewer people going into the VNP for meat.
• To benefit the most marginalized people living near the VNP and to reduce Park use - design and implement projects for the Batwa community such as integrating Batwa into tourism, literacy, pottery.
• Conduct formative research in the impact of fertilizer use on various crops especially potatoes; availability and price of fertilizers.
• Develop interventions to increase food availability, including expansion of kitchen garden program.

For the Government of Rwanda:
In order to increase villagers’ incomes and thus decrease reasons for people to go into the VNP for food and other resources:
• Invest in infrastructure around VNP, especially roads.
• Assess viability of growing pyrethrum to ensure that the most profitable crops are grown and that farmers maximize food availability.
• Ensure that farmers get adequately compensated for crop loss: this would likely lead to farmers being more sympathetic to conservation efforts as well as mitigate their income losses.

Section-Specific Goals
• Describe livelihood activities and challenges in the Bisate Catchment area
• Determine how and why people interact with the Volcanoes National Park
• Identify previous development work that has been done in the area

Table 1: Land ownership (% of HH survey respondents)

<table>
<thead>
<tr>
<th>Land ownership (% of HH survey respondents)</th>
<th>Land ownership (% of HH survey respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own and rent</td>
<td>Own only</td>
</tr>
<tr>
<td>Own only</td>
<td>Rent only</td>
</tr>
<tr>
<td>Unsure</td>
<td>Unsure</td>
</tr>
<tr>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>80</td>
<td>100</td>
</tr>
</tbody>
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Table 2: Push and Pull factors influencing whether people go inside Volcanoes National Park

<table>
<thead>
<tr>
<th>Reasons community members gave as to why some people go inside the VNP (focus group data)</th>
<th>Reasons given as to why people no longer go inside the VNP (focus group data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunger</td>
<td>Afraid of imprisonment</td>
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<tr>
<td>Lack of water</td>
<td>Afraid of rangers (could lead to imprisonment)</td>
</tr>
<tr>
<td>Poverty</td>
<td>Afraid of fines</td>
</tr>
<tr>
<td>Lack of wood to construct houses and/or latrines</td>
<td>Get water from water tanks built outside the VNP</td>
</tr>
<tr>
<td>Lack of firewood</td>
<td>Sensitization by the Rwandan Development Board</td>
</tr>
<tr>
<td>To go to the Democratic Republic of the Congo to buy cannabis and sell it in Rwanda</td>
<td>Former poachers being given jobs/community members working as porters inside VNP</td>
</tr>
<tr>
<td>To get medicine (honey may also be used as medicine)</td>
<td>“Now we become people like others” (The Batwa speaking about themselves)</td>
</tr>
</tbody>
</table>

Figure 1: Women signing IRB consent form with Rwandan moderator prior to focus group discussion

Figure 2: Batwa children showing signs of malnutrition in village where 3 FGDs discussion were held