In January 2009 27 teachers from 9 primary schools in communities neighboring Kibale National Park, Uganda were taken on field trips into 2 National Parks, Kibale National Park, a forest ecosystem and Queen Elizabeth National Park, a savanna ecosystem.

Data will continue to be collected and analyzed over the next 2 years but here we present our current results.

Summary

Taking teachers on the Field Trips described above resulted in:

1. A statistically significant improvement in ability to identify primates and other local wildlife.
2. A statistically significant improvement in general wildlife knowledge
3. A statistically significant improvement in attitudes to environmental protection measures.
4. A statistically significant increase in how confident they felt about attempting questions.
5. A statistically significant improvement in how they felt about their ability to teach environmental topics.
The impact of a previous experience with an environmental education programs showed, from data collected before the trips, that

1. Teachers who had had previously taken guided walks in KNP were significantly better at identifying local primates and had a significantly better general knowledge of environmental topic than teacher who had not
2. Teachers who came from schools that had participated in the WCU/GRASP great ape traveling exhibits were significantly better at identifying local primates than teachers from schools that had not.
3. This effect was additive with those teachers who had had both interventions scoring highest.
4. We could find no impact of other EE programs on knowledge or attitude but this may in part be due to small sample sizes.

The impact of the trips on the children is not yet obtainable as we are still entering data for the post-trip assessment. Preliminary data from drawing competitions before the trips show that their drawings reflected a knowledge of basic differences between forest and savannah habitats.

1. Children drew significantly more trees in their KNP drawings than in their savannah drawings.
2. Children drew significantly more primates in their KNP drawings than in their savannah ones.
3. Children drew significantly more elephants in their KNP drawings than in their savannah ones.
4. There was an effect of grade level, school, and grade*school on the total number of correct animals (i.e. in correct habitat) drawn by students (ANOVA). Younger grades drew fewer correct animals than older grades and pupils in some schools drew more correct animals than in others.

Preliminary conclusions from our data show that:

a) Taking teachers on field trips had a major impact, at least in the short term, on their knowledge of wildlife, their attitude to the environment and their confidence in teaching about it.

b) Based on pre-trip data from individuals who had experienced previous interventions the field trips would be expected to show an additive effect. Although the trend of our data supported this prediction, statistically the results were barely significant - perhaps because the sample size was small or because it takes time to see the full impact of the trips.

c) We are unable to tell if the trips had an impact on student knowledge 12 months later as the post-trip analysis is still being processed.

1 Research Goals and Objectives

**Goal 1:** To evaluate whether targeting the teachers by taking them on field trips to National Parks leads to greater motivation in the teaching of environmental education.

- Objective 1: To measure environmental knowledge in teachers before and after the trips.
- Objective 2: To measure teacher attitudes before and after the trips.
- Objective 3: To measure teacher effectiveness in class before and after the trips.

**Goal 2:** To determine whether improving teacher motivation will boost the impact of other conservation education programs in the schools.

- Objective 1: To measure attitudes to and knowledge of environmental issues in those teachers who have previously experienced the Wildlife Club/GRASP program.
Methods

a) School selection. The 9 primary schools selected were all within 5 km of the Kibale National Park boundary. (Appendix 1). 3 had active Roots and Shoots and 6 had participated in the Wildlife Clubs of Uganda/GRASP traveling Great Ape exhibit (Appendix 2).

b) Teacher selection. The principal from each school was selected. Other teachers were chosen based on interest in environmental issues, involvement in wildlife clubs and previous experience of environmental education courses. (Appendix 3)

c) Research Protocol
   a) Teachers attended an introductory seminar.
   b) Teachers took a 1-day trip to Kibale National Park (KNP) led by 2 Ugandan wildlife biologists and Uganda Wildlife Authority (UWA) rangers to trek wild chimpanzees.
   c) Teachers took a 2-day trip to Queen Elizabeth National Park (QENP) led by 2 Ugandan Wildlife Biologists and UWA rangers.
   d) Teachers attended a follow up seminar.
   e) Seminar 3 will be held in January 2010

d) Data Collection
   TEACHERS
   a) All teachers filled in a questionnaire before the first seminar
   b) All teacher filled in a second questionnaire before the second seminar
   c) All teachers will complete a third seminar in February 2010
   d) Teacher attendance data was collected from each school

CHILDREN
   a) 1800 children in Grades P4-P6 (Grades 3-5) in all 9 schools competed in a drawing competition in November 2009 before the first teacher seminar. They were asked to draw Kibale National Park and Queen Elizabeth National Park.
   b) A second round of competitions took place in October 2009
   c) A third round of competitions will be held in October 2010
Data analysis

- Data were analyzed using parametric and non-parametric tests since we had predicted before the intervention which group would have the larger mean we used a one-tailed P value where appropriate. Non-parametric and parametric ANOVA were used to compare 3 or more variables.

Results

a) That these trips will increase knowledge of local animals and the environment

Photo Identifications of 8 Ugandan Primates and 9 other local mammals:

- After the trips the teachers were significantly better at identifying local primates and local non-primate mammals than before trips.

  The mean score for primate IDs before the trips = 0.91
  The mean score for primate IDs after the trips = 4.26

  Wilcoxon matched pairs test, T=1, N=23, P < 0.0001 (two tailed)

  The mean score for other mammal IDs before the trip = 0.52
  The mean score for other mammal IDs after the trip = 1.519

  Wilcoxon match pairs test, t=2.11, N=27, P = 0.044 (two tailed)

General Environmental knowledge.

We tested a change in teacher knowledge using a range of general environment questions:

- After the trips the teachers were significantly better at answering correctly a series of general knowledge questions about the environment.

  The mean score for environmental knowledge before the trips = 29.4
  The mean score for environmental knowledge after the trips = 35.9

  Wilcoxon matched pairs test, T=13.5, N=24, P < 0.0001 (two-tailed)

b) That trips will change attitudes to conservation

- When asked a series of questions assessing attitude to policies that protect the environment teachers were significantly more likely to approve these policies after the trips.

  The mean score before the trips = 46.9
  The mean score after the trips = 53.9

  Wilcoxon matched-pairs test, T=22.5, N=24, P < 0.0001 (two tailed)

c) That trips will improve staff morale, confidence and attendance

i) Self-reported Interest and ability
• We asked the teachers to rank their interest and ability in teaching about the environment on a scale of 1-5 from *Have little or no interest* to *Very interested and able to teach it*. There was a significant increase in scores after the trip indicating an increase in confidence and interest.

Wilcoxon matched pairs test, \( T=30, N=19, P=0.007 \) (two tailed)

ii) Number of questions attempted
• We found that following the trips teachers were much more likely to attempt to answer photo ID questions even if they did not get them correct.

<table>
<thead>
<tr>
<th></th>
<th>Mean # attempted pre-trip</th>
<th>Mean # attempted pre -trip</th>
<th>T value</th>
<th>N</th>
<th>P (2 tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primate ID</td>
<td>5.0</td>
<td>7.1</td>
<td>8</td>
<td>24</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Mammal ID</td>
<td>5.3</td>
<td>7.8</td>
<td>3.5</td>
<td>22</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

iii) Attendance will improve
• We do not have enough data yet to measure this.

d) *That trips will change attitudes to the role of environmental education in the curriculum*

• 84% of the teachers said that school teachers were not consulted enough when environmental education programs were designed and almost all, 90% before the trips and 100% afterwards said that they should have more time in the curriculum to teach about the environment and conservation.
• Reasons for teaching EE in schools were ranked as follows.

<table>
<thead>
<tr>
<th>Reason for teaching about the Environment</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>So that everyone can make good decisions about how to protect the environment</td>
<td>1</td>
</tr>
<tr>
<td>So that everyone understands their place in life on earth</td>
<td>2</td>
</tr>
<tr>
<td>So that everyone knows the best way to use the environment to make money</td>
<td>3</td>
</tr>
<tr>
<td>So that your pupils can pass their exams</td>
<td>4</td>
</tr>
</tbody>
</table>

We asked teachers a series of questions relating to place of EE in the curriculum, ease of teaching about the environment etc

• There was no statistically significant change in total scores following the trips.
• However when we looked within the group we did find that principals were more likely to have a positive assessment in this category perhaps reflecting their deeper involvement with curricula concerns and the fact that they do not have to do the actual teaching.

Mean score of class teachers = 41.5
Mean score of principals = 44.3
Mann Whitney U test, \( U=112.5, N1=10, N2=16, P = 0.04 \)

f) *That the trips will influence behaviour*

There was not enough time between the 2 questionnaires to measure any changes in behaviour inside or outside the classroom; school was still on vacation. The 12-month follow up in February 2010 should begin to enable us to look at this question. Appendix 4 tables the responses to behaviour questions in pre-trip questionnaires.
g) *That these trips will change the emotional response of teachers to the environment*

To determine whether the trips changed the emotional response of teachers to the environment we asked them to check words that described chimpanzees, elephants, Kibale National Park and Queen Elizabeth National Park. Words on the list either had negative connotations eg fierce, dangerous, dark or positive ones eg intelligent, beautiful, loving etc.

We feel that we need to adjust the way we ask and score these questions for future studies to get clearer results but we did see an average positive change in emotional responses to elephants after the trips. We also saw a significant shift in attitude when they were asked whether the Ugandan government should be allowed to use ivory as a source of income.

**Wilcoxon matched-pairs test:** \( T=50.5, \ N=19, \ P=0.03 \)
h) *That the trips when added to other environmental education interventions will have an additive effect.*

To determine whether this was the case we compared primate photo identification scores. We chose this measure because it a) gave clear, easily computed results and b) would be the most likely of our categories to be influenced by the 2 environmental interventions that we looked at:

- Guided walks in Kibale National Park
- Experience of WCU/GRASP great ape trunks, which teach primate conservation focused on the great apes.

1) We compared the ability to identify primates from photos between teachers who said they had a) taken a guided walk in KNP and those who had not and b) taught in schools that had hosted the WCU/GRASP traveling exhibit on the great apes, and those who had not.

a) **Guided walks in KNP:** Teachers who had taken a guided walk in KNP were significantly better at identifying primates from photos than those who had not.

b) **WCU/GRASP trunks:** Teachers who came from schools, which had hosted the WCU/GRASP exhibit, were significantly better at identifying primates from photos than teachers from the other schools.

<table>
<thead>
<tr>
<th></th>
<th>Walks in KNP</th>
<th>No Walks</th>
<th>Great Ape Trunk</th>
<th>No Great Ape Trunk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.3</td>
<td>-0.5</td>
<td>1.6</td>
<td>-0.7</td>
</tr>
<tr>
<td>U statistic</td>
<td>25</td>
<td>43.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N1</td>
<td>17</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N2</td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>0.001</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We found no significant correlation between ability to identify primates from photos and other factors that we thought might have influenced their knowledge e.g. teaching qualifications, seniority, years of teaching experience or grade level taught.
2) We then asked if having experienced more than one of these interventions had an additive effect on scores?

We divide the teachers into 3 groups, Group A that had both taken walks in KNP and hosted the Great Ape Trunk, Group B that had done either one or the other and Group C that had done neither.

We found a significant increase in teachers able to identify primates from photos between groups A and C and between groups B and C.

![The impact of the Great Ape Trunk and guided walks in KNP on pre-trip primate identification scores](image)

3) We then asked if taking our trips had an equivalent additive effect on scores?

We looked at primate photo id scores before and after the trips in teachers who had hosted the Great Ape Trunks and compared them with teachers who had not. Those teachers who had also taken KNP walks were excluded.

We found that teachers who had experienced the GAT maintained their lead over those who had not following the trips, suggesting that we were seeing an additive effect, but the difference post-trip was only barely significant.
Teacher opinions

- We asked teachers to tell us
  a) What they felt was needed to make teaching about the environment better for them and their students
  b) How they felt about Kibale National Park

Pre-trip results can be seen in Appendix 6 but the predominant issues with teaching EE revolve around lack of training and resources and those concerning the pros and cons of National Parks are heavily weighted towards economic issues.

**i) That the trips will have an impact on the knowledge of the students in the schools**

The preliminary results presented here are from the pre-trip set of drawings in which knowledge of the environment was measured in 1364 children from grades P3-P6 at nine schools who were asked to draw a picture of Kibale Forest (forest ecosystem) and one of Queen Elizabeth National Park (savanna ecosystem).

### Participating students by school & grade level

<table>
<thead>
<tr>
<th>School</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>P6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iruhuura</td>
<td>66</td>
<td>78</td>
<td>44</td>
<td></td>
<td>188</td>
</tr>
<tr>
<td>Kanyawara</td>
<td>43</td>
<td>28</td>
<td>26</td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Kasisi</td>
<td>135</td>
<td>112</td>
<td>84</td>
<td></td>
<td>331</td>
</tr>
<tr>
<td>Kiamara</td>
<td>30</td>
<td>51</td>
<td>36</td>
<td></td>
<td>117</td>
</tr>
<tr>
<td>Kigarama</td>
<td>111</td>
<td>74</td>
<td>84</td>
<td></td>
<td>269</td>
</tr>
<tr>
<td>Kiko</td>
<td>40</td>
<td>38</td>
<td>36</td>
<td></td>
<td>114</td>
</tr>
<tr>
<td>Kiyoma</td>
<td>23</td>
<td>15</td>
<td>17</td>
<td>9</td>
<td>64</td>
</tr>
<tr>
<td>Nyabubale</td>
<td>11</td>
<td>20</td>
<td>16</td>
<td></td>
<td>47</td>
</tr>
<tr>
<td>Rweteera</td>
<td>65</td>
<td>42</td>
<td>30</td>
<td></td>
<td>137</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23</td>
<td>516</td>
<td>460</td>
<td>365</td>
<td>1364</td>
</tr>
</tbody>
</table>
Overall, student drawings reflected basic differences between the two habitats. Students drew more trees and primates in the Kibale drawings. They also drew more elephants in Kibale drawings despite the fact that there are more of these animals in savannas than in forests but since there are many elephant in Kibale Forest this result is not surprising. Lions also appeared more often in Kibale drawings probably explained by the extremely rare and much publicized presence, in the area in 2008, of an old male migrant from Queen Elizabeth NP who was eating local goats.

1. **Overall tree numbers**

Within-child comparison showed children drew significantly more trees in their KNP drawings than in their savannah drawings (paired t-test: $t = 21.7$, df = 1364, $p < 0.000$)

<table>
<thead>
<tr>
<th></th>
<th>KNP</th>
<th>Savannah</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE</td>
<td>4.77</td>
<td>2.2</td>
</tr>
<tr>
<td>SE</td>
<td>0.11</td>
<td>0.074</td>
</tr>
</tbody>
</table>

2. **Overall indicator animals**

(A) **Primates**

936 (69% of total) children included primates in their drawings; within-child comparison of these drawings showed children drew significantly more primates in their KNP drawings than in their savannah drawings (paired t-test: $t = 21.0$, df = 935, $p < 0.000$)

<table>
<thead>
<tr>
<th></th>
<th>KNP</th>
<th>Savannah</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE</td>
<td>1.77</td>
<td>0.63</td>
</tr>
<tr>
<td>SE</td>
<td>0.044</td>
<td>0.032</td>
</tr>
</tbody>
</table>
(B) Elephants
598 (44% of total) children included elephants in their drawings; within-child comparison of these drawings showed children drew significantly more elephants in their KNP drawings than in their savannah drawings (paired t-test: $t = 7.1$, df = 597, $p < 0.000$)

<table>
<thead>
<tr>
<th></th>
<th>KNP</th>
<th>Savannah</th>
<th>SE</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.64</td>
<td>0.38</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
</tr>
</tbody>
</table>

3. Total number correct animals per habitat
There was an effect of grade level, school, and grade*school on the total number of correct animals (i.e. in correct habitat) drawn by students (ANOVA). Younger grades drew fewer correct animals than older grades and pupils in some schools drew more correct animals than in others.

Mean number of correctly identified animals by grade.

Mean Number of correctly identified animals by school
* Kiko school tutored the children in what to draw which likely explains their high score.
Conclusion

Data collected and analyzed so far show that:

• Trips increased knowledge of the environment in teachers least in the short term. Trips also impacted attitudes to conservation policies in a positive way. While there was no change in how they viewed the place of EE in the curriculum, teachers did show an increased comfort and confidence in their attitude to teaching EE.

• The data show that multiple EE experiences can have an additive effect but we had only weak indications that this was happening following the trips. Until we have 12-month data we cannot tell whether this will change with a longer gap between trips and data collection.

• We were able to measure a change in emotional responses to elephant post-trips, which was mirrored by a decreased tolerance to the use of ivory as a financial resource. Conversely there was no change in emotional response to Kibale National Park or improvement in attitude towards the use of forest resources. While this approach needs improving and refining our data show it has the potential to gauge emotional responses to environmental topics.

• The preliminary results from the pre-trip drawing competitions showed us that this was a promising method of measuring environmental knowledge in our students. However the topics were too general for easy scoring and analysis and in future we would be more specific and directed in our questions.

• In order to feel confident and comfortable about teaching, EE teachers feel that they need both training to improve their knowledge and skills. In the classroom they need more EE specific resources such as books, films and posters to effectively pass this knowledge on to their student.

Appendix 1: Map of Kibale National Park showing position of target schools
## Appendix 2: School information

<table>
<thead>
<tr>
<th>School</th>
<th>Kasiisi</th>
<th>Kyanyawara</th>
<th>Kigarama</th>
<th>Kiko</th>
<th>Rweteera</th>
<th>Kiamara</th>
<th>Kiyoima</th>
<th>Iruhuura</th>
<th>Nyabubale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enrollment</strong></td>
<td>1240</td>
<td>428</td>
<td>805</td>
<td>635</td>
<td>650</td>
<td>628</td>
<td>628</td>
<td>780</td>
<td>302</td>
</tr>
<tr>
<td><strong># teachers on trip</strong></td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><strong>Roots and Shoots</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Great Ape Trunks</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>WLC Rating / 3</strong></td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1.67</td>
<td>2</td>
<td>2.3</td>
<td>3</td>
<td>2.25</td>
<td>2.5</td>
</tr>
</tbody>
</table>

---

= Kasiisi Project Schools

## Appendix 3: Teacher information

<table>
<thead>
<tr>
<th>Position in school</th>
<th>Head teacher</th>
<th>Class teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>36%</td>
<td>64%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching Qualification</th>
<th>Degree</th>
<th>Grade 5 diploma</th>
<th>Grade 3 certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12%</td>
<td>28%</td>
<td>60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># Years experience</th>
<th>&lt; 5</th>
<th>5-10</th>
<th>&gt;10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24%</td>
<td>20%</td>
<td>56%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjects taught</th>
<th>Math</th>
<th>Science</th>
<th>Agriculture</th>
<th>English</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48%</td>
<td>57%</td>
<td>35%</td>
<td>65%</td>
<td>52%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade taught</th>
<th>K-Grade 2</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
<th>Grade 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28%</td>
<td>21%</td>
<td>25%</td>
<td>46%</td>
<td>79%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Taken an EE course</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>66%</td>
<td>44%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Taken JGI</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12%</td>
<td>82%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Roots and Shoots in school</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRASP trunks</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position in WLC</th>
<th>Leader</th>
<th>Helper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Appendix 4: Measurements of teacher behaviour before the trips

- Cooking fuel
  
  Wood 96%
  Charcoal 25%
  Other 0%

- Source of Fuel
  
  Gather 45%
  Buy 37%
  Grow own 46%

- Fuel Efficient Stove or Charcoal burner
  
  Yes 33%
  No 67%

- How often do you talk about the environment and conservation when teaching?
  
  Sometimes 60%
  Often 40%

- Do you ever teach about the environment or conservation in subjects other than science and agriculture?
  
  Yes 83%
  No 17%
Appendix 6: Ways to make teaching about the environment better for teachers and students

a) Why it is good to use environmental topics to teach classes such as English and maths

![Bar chart](chart1.png)

b) Ways in which teachers can help protect the environment

![Bar chart](chart2.png)
c) Things that would make teaching about the environment more interesting for children

![Bar chart showing things that would make learning about the environment more interesting for children.]

- Adequate Learning Materials: 30%
- Field Trips for Students: 25%
- Practical and Relevant Information: 20%
- Wildlife Clubs: 15%
- Other: 10%

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d) Factors which discourage teachers from teaching about the environment

![Bar chart showing factors that discourage teachers from teaching about the environment.]

- Lack of knowledge: 35%
- Lack of skills needed to teach EE: 30%
- Lack of educational resources: 25%
- Poor attitude of students: 10%

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e) Changes that would make teaching about the environment better for teachers

![Bar chart showing changes that would make teaching about the environment better for teachers.]

- Field trips for students: 30%
- Teacher training courses: 25%
- Teaching materials specific to EE: 20%
- Activities where students are actively participated: 15%
- Embed EE in Curriculum and Exams: 10%
Benefits and disadvantages of National Parks

a) Ways that Uganda benefits from its National Parks

b) Ways in which people benefit from living around Kibale National Park
c) Ways in which people suffer from living around Kibale National Park