Project Update: January 2021

In the previous update of April 2020, we highlighted on the project background, explained how data was collected, presented preliminary results and reported on awareness raising activities. In the current update, we present project results on:

- Demographic characteristics of households.
- Socio-economic characteristics of households.
- Primate and other mammal species inhabiting Ntakata forest.
- The nature and extent of human-primate conflict around Ntakata forest.
- Local community attitude towards primate conservation.
- Human threats to primate conservation and their habitat demographic characteristics of households.

We conducted a total of 170 semi-structured questionnaires in four villages (Table 1). Female respondents accounted for 68.2% and males accounted for 31.8%. Most of respondents were between 25 and 34 years of age (36.5%). Three-quarters of all the respondents received formal education (i.e., primary education (n = 115), secondary education (n = 13) and tertiary education (n =1)). Out of 170 respondents, 94 (55.29%) were originally born in their respective villages whereas 76 (44.71%) moved to the villages for different reasons. The reasons for people to move into these villages include marriage (especially for female respondents) which accounted for 50% of 76 respondents that moved, access to farming land accounted for 47.37% of 76 respondents, starting a business accounted for 9.21% of 76 respondents, employment accounted for 6.58% of 76 respondents, and easy access to grazing land accounted for 1.32% of 76 respondents

Table 1: Demographic characteristics of households in the four villages around Ntakata

Characteristics	Description	Ikubulu (n = 41)	Lubalisi (n = 25)	Lugonesi (n = 34)	Mgambazi (n = 70)	Total	%
Sex	Male	9	10	6	29	54	31.8
	Female	32	15	28	41	116	68.2
Age	15-24	13	4	3	8	28	16.5
	25-34	14	7	16	25	62	36.5
	35-44	7	8	7	18	40	23.5
	45-54	6	2	5	9	22	12.9
	55+	1	4	3	10	18	10.6
Education	No formal education	13	6	6	16	41	24.1
	Primary education	25	17	23	50	115	67.6
	Secondary education	3	2	4	4	13	7.7
	Tertiary education	0	0	1	0	1	0.6
Household size	Mean ($\bar{x}$)	4	6	7	6	NA	NA

Socio-economic characteristics of households

The majority of the respondents (151 out of 170 or 88.8%) engaged in subsistence farming. The remaining 19 respondents (11.2%) engaged in small business (n = 15), fishing (n = 3), and causal works (n =1). Out of 151 respondents that practiced subsistence farming, only 103 exclusively practised crop farming while 48 combined crop farming with other occupations, including livestock keeping (n = 8), small business (n = 32), masonry (n = 3), carpentry (n= 2), and fishing (n = 3). Crops cultivated in the villages included maize, beans, cassava, sweet potatoes, Irish potatoes, banana, groundnuts, pea, sunflower, pumpkin, paddy, palms, and sugar cane. In Lugonesi village within Mwese ward, local communities are also engaging in growing coffee, fruit trees (e.g., avocados) and planting timber trees like pines and eucalyptus.

Primate and other mammal species inhabiting Ntakata forest

Out of 170 respondents, 150 responded positively to the question targeting to understand primate species inhabiting Ntakata forest. Twenty respondents had no idea of the primate species that are inhabiting the forest. Based on the responses, six primate species occur in Ntakata forest (Fig. 1). The majority of respondents confirmed the presence of vervet monkey and the frequency declined to confirming the presence of chimpanzee in the forest. Apart from primates, other mammal species are also occurring in the forest. The mentioned mammal species to occur in the forest include African elephant, buffalo, leopard, bushbuck, bush pig, common duiker, hyena, waterbuck, and other small terrestrial mammals.

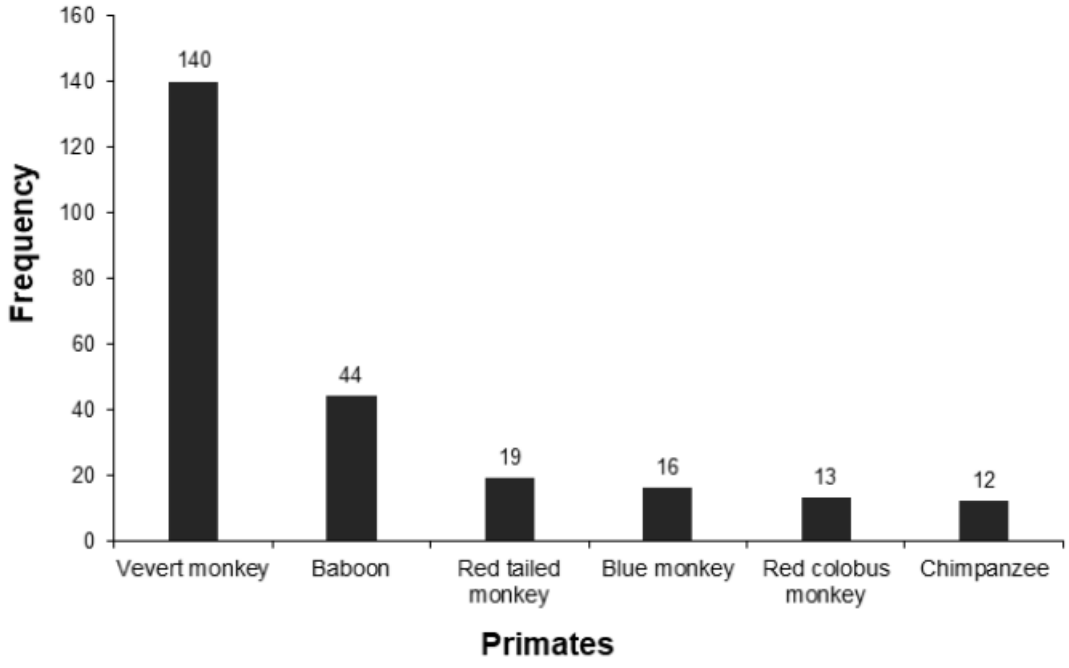

Figure 1: Primate species inhabiting Ntakata forest (frequency indicate the number of different respondents that confirmed the presence of a particular primate species).

The nature and extent of human-primate conflict around Ntakata Forest

Responding to a question if there is any problem associated with primates; out of 170 respondents, 143 (84.12%) replied with a "YES" and 27 (15.88%) replied with a "NO". All of 143 respondents who replied with a "YES", mentioned crop destruction as the main problem caused by primates. Arranged in term of frequency of mentioning from different respondents, maize, beans, and cassava appear to be the most vulnerable crops destroyed by primates. Maize was the main crop claimed to be destroyed severely by primates followed by beans, cassava, while other crops appear to be less susceptible (Table 2). Other crops include sweet potatoes, banana, sugarcane, groundnuts and palms. It was also revealed that cultivated crops are mostly destroyed by primates during the wet season. Nevertheless, some respondents claimed that crop destruction by primates had no specific season as it occurs at any time of the year. Very few respondents pointed out that crop destruction occurs specifically during dry season (Fig. 2).

Table 2: The cause and status of human-primate conflict in the villages around Ntakata forest

Question	Response	Ikubulu	Lubalisi	Lugonesi	Mgambazi	Total	%
Do you experience problems associated with primates?	No	20	3	2	2	27	15.88
	Yes	21	22	32	68	143	84.12
What is the experienced problem?	Crop destruction	21	22	32	68	143	100.00
What crops are mainly destroyed?	Cassava	3	7	8	32	50	34.96
	Maize	21	22	32	67	142	99.30
	Beans	15	17	23	52	107	74.83
	Others	3	2	2	15	22	15.38

Based on the fact that human-primate conflict occurs in the villages around Ntakata forest, we were interested to know if there is any effort made by the local communities to protect their crops from being destroyed by primates. We also wanted to know if there is any long-term solution thought to control the conflict already in their place. On responding to the concern, respondents outlined different actions they usually execute to protect their crops, also, as a retaliation to primates destroying their crops. They highlighted that they guard their farms and usually use dogs to chase and scare primates from reaching their farms. They also use spears, stones, make noise using drums and make loud voices to scare the primates from reaching their farms.

In the course of protecting their crops, it was revealed that sometimes the community members have to kill primates. According to the respondents, local communities believe that by killing the destructive primate species they reduce the number of destructive animals and thus protecting their crops. Besides, respondents pointed out that there are other reasons for killing primates. The reasons include killing for traditional activities for example making of local medicines. Surprisingly, 22

respondents accounting for 12.94% of all the respondents highlighted that killing of primates to some of their community members is for protein source. That is, there are some people within their communities that uses primates as source of protein.

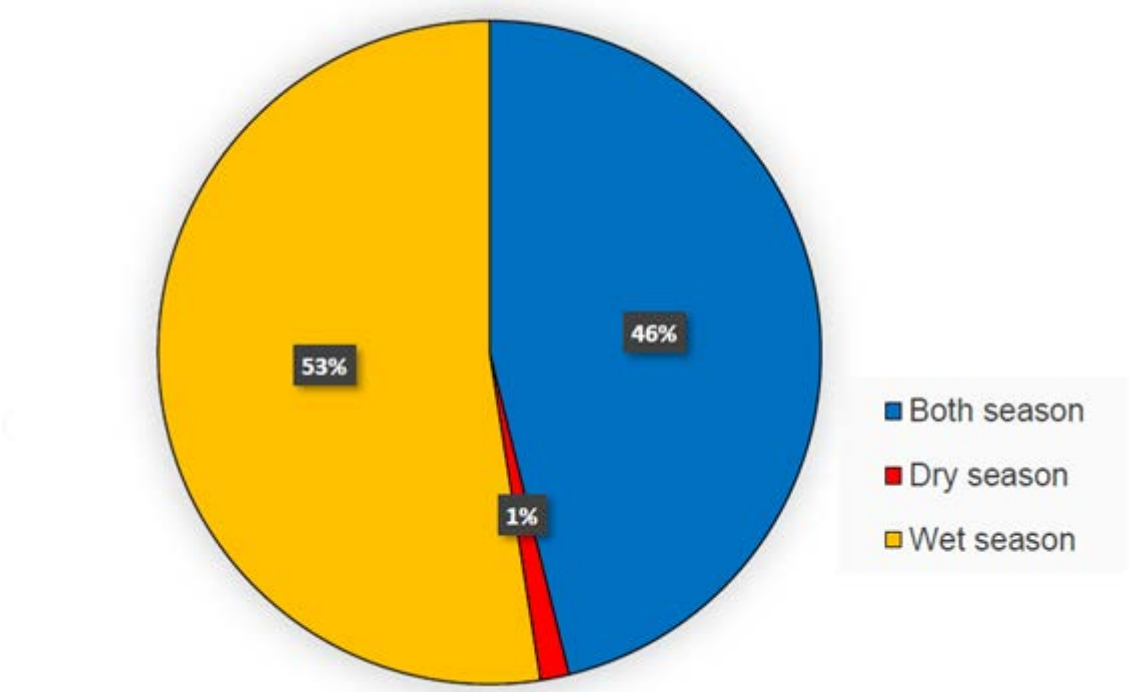

Figure 2: A pie chart showing proportion of respondents on season in which crops are mostly destroyed by primates around Ntakata forest.

Local community attitude towards primate conservation

Responses from all the surveyed households indicate that some people in the communities have positive attitudes towards primate conservation despite their destructive nature on crops, while others have negative attitude. Out of the 170 respondents, 78 (45.88%) were positive to conservation of primates whereas 92 (54.22%) were negative to conservation of primates across the region. Each side (i.e., respondents with positive attitude and respondents with negative attitude towards primate conservation) had reasons for the revealed attitude (Table 3).

Human threats to primate conservation and their habitat

Taking into account interpretations of the households we interviewed, we found that agriculture is the main income generating activity across the region. Local communities depend heavily on agriculture for their livelihoods. However, this income generating activity (i.e., agriculture) poses a serious threat to primate and forest conservation. Of 170 respondents, 156 (91.76%) have access to farming land while 14 (8.24%) have not. The means of access to farming land according to those who have access to land ranged from clearing the village forest, purchasing, inheriting, borrowing and renting. When asked the respondents if their farms are close to Ntakata forest, 47(30.13%) respondents out of 156 who have access to land replied with a "YES". When asked if they have plans to expand their farms, 73 (46.79%) responded with a "YES". Thus, in our opinion we consider unsustainable subsistence farming as a potential threat to conservation of primate and the forest bearing in mind that human

population sizes keep increasing with time a situation that will elicit more demand for arable land across the region.

Table 3: Attitude of respondents towards primate conservation and their habitat around Ntakata

Question	Response	Ikubulu	Lubalisi	Lugonesi	Mgambazi	Total	%
Are you willing to conserve primates	No	26	13	19	34	92	54.12
	Yes	15	12	15	36	78	45.88
What are the reasons for not be willing to conserve primates	They are destructive animals	10	8	14	20	52	56.52
	Their conservation has no benefit	7	1	2	3	13	14.13
	By conserving them we will lose our land for farming	9	4	3	11	27	29.35
What are the reasons for be willing to conserve primates	Conservation has several benefits	8	9	10	18	45	57.69
	Primates like other animals deserve to live	4	1	5	12	22	28.21
	To support government initiatives to conserve biodiversity	3	2	0	6	11	14.10

From the household respondents, we did not capture the aspect of livestock keeping in relation to forest conservation. This is because the majority of the households in the surveyed area are not livestock keepers, and those who keeps livestock it's just in small numbers. Normally those who keep livestock in big numbers keep moving from one place to another in search for pastures. Though we did not capture the aspects of livestock keeping from the household respondents, from the key informant interview we were told that livestock grazing is another threat to conservation of primate and the forest across the area. It was pointed out that there are people from far who come with their livestock in Ntakata forest for grazing and that livestock grazing in the forest is a serious threat as it changes the habitat through changing soil properties and removal of vegetation. High grazing pressure modifies plant diversity by decreasing the abundance of palatable herbaceous species. It can also cause degradation of forest understory and reduce tree regeneration. Simply, intensive livestock grazing in a forest reduce the number of grasses a situation that promote soil erosion during rain.

Figure 3: A picture of the project member with key informants at Mgambazi village during data collection.

Impending project activities:

a) Filling out and submitting an evaluation form (i.e., final report) to the Rufford Foundation.
b) Finalising a manuscript and submit to a peer-reviewed journal.