

Project Update: February 2018

Project inception and study design

Our project is ongoing in two sectors neighbouring the bamboo zone of Nyungwe National Park which is the natural habitat of the vulnerable Hamlyn's monkey *Cercopithecus hamlyni*. We received the funds for this research on 19th July 2017 and started the fieldwork on 24th July. We first made site reconnaissance and some preparations including prior contacts and discussion with local collaborators. Such local collaborators include local authorities and park workers at the site. As we set our lodge in Ruheru sector, we met the authorities there first, and then we traveled on different days to Busanze and Nyabimata sectors for contact and information.

Our project has two permanent workers in the field, namely a project assistant and a local facilitator. The former, Felix Niyonzima, is MSc holder in Biodiversity Conservation and is well experienced for the work and the latter is a person from the local community who is among volunteering focal people linking the park and communities. I included three students from Biology Department in the University of Rwanda to be funded by our project. They received these topics which I discussed with them and are their final research projects for completion of BSc level: 1) Assessing conservation efforts and actions on the Hamlyn's monkey and the bamboo habitat in Nyungwe National Park, 2) Impact and efficiency evaluation of the incentive strategies to reduce illegal bamboo collection threatening the Hamlyn' monkey in Nyungwe National Park, and 3) Status of current threats to the Hamlyn's monkey and the bamboo habitat in Nyungwe National Park. Two of those students were also hosted for internship.

Some slight changes occurred in the project field design due to the situation we encountered in the field and the discussion we held with our collaborators (RDB and WCS) who are overlooking the project sites regarding education and awareness to the community regarding the bamboo issue. We decided that we leave out one sector called Nyabimata, and consider only Ruheru and Busanze sectors. We selected three cells in Ruheru sector and two cells in Busanze sector considering the prevalence of concerns about bamboo. In each cell we selected all villages; all of them had five villages except one in Busanze sectors that had six. In each village six households were selected at random based on records of households kept in cell's offices, we had in total 156 households interviewed.

Preliminary results

About conservation efforts and actions

The results indicate that about five cooperatives and three scholarly clubs are concerned with Nyungwe protection and awareness about bamboo protection in Ruheru sector while only three cooperatives had a link with Nyungwe and environmental protection in Busanze sector. We realised that illegal bamboo use is more prevalent in Busanze sector than in Ruheru based on information and direct observations, while fewer community groups in Busanze are active in the protection of

Nyungwe. Bamboo in Busanze is mostly seen as bamboo products that are being traded to the local markets, mainly baskets and ceiling mats (figure 1). However we can also find new houses with bamboo roofs also in Ruheru sector (figure 2).



Figures 1 and 2 (Photo by Methode)

Most interviewed people were subsistence farmers and their level of education was low, mainly ranging at the primary school level, while a significant number includes those who even did not attend primary school. We interviewed chiefs of households if we found them at their homes, but most of the time we missed men and interviewed their wives. Interview data to representatives of households indicated that most people are less aware of bamboo activities that took place to address the case of its illegal collection. Most people reported that they knew how illegal bamboo harvest is an issue for the park's management, given the efforts put in place by park's authorities for that cause. They revealed that most people who need bamboo are poor and depend on it for subsistence, even if some others refuse to abandon for reasons of sticking to traditions. Almost all people claimed that they needed bamboo in their woodlots, but could not know how to grow them better than in the past if they do not have training on proper handling and monitoring to ensure the success as most past attempts were unsuccessful. Some people could also say that improvement of their livelihoods and development opportunities could make them definitely abandon bamboo use for better alternatives.

Status and perception of incentives

We witnessed in places we passed by that most past attempts to propagate bamboo failed, while the almost only bamboo thriving better is the one that was in place before such actions intended to reduce illegal bamboo use. Incentive mechanisms initiated at the site included small cash benefit that was given to people in one cell of Ruheru in around 2010 by Redirect project, which resulted in helping those people know about the park. However they did not follow up with their role in protecting the park since the end of the Redirect project. Another case of incentives is the provision of funding to local people's projects under the revenue sharing programme. Such projects included mainly different attempts of bamboo propagation both in Ruheru and Busanze sectors.

Apart from bamboo cultivation there are other cooperatives which were given funding for projects that improve people's livelihoods while motivating them to protect the park, such as agricultural production and honey beekeeping. We evaluated particularly the status of bamboo that was cultivated and offered as incentives for supplying the needs of bamboo to people. We made different surveys both on public and private lands. We first found that the bamboo that was planted at vast areas near the buffer zone close to the Nyungwe's bamboo habitat had vanished and only could be found some few bushy and dried up parts of bamboo (figures 3 & 4). Another case is the one where even in the fields where bamboo was planted by the bamboo providers did not even thrive (figure 5, 6), but some clumps of bamboo in private lands that were cultivated by people without purpose of Park's protection survive better (figure 7), yet we realised that such people's bamboo is less used when we evaluated the number and age of bamboo cuts.



Figures 3 and 4 (Photo by Methode)



Figures 5, 6 and 7 (Photo by Methode)

Status of threats to the Nyungwe bamboo habitat and *C. hamlyni*

We collected data on the threats inside the bamboo habitat of Nyungwe National Park. We recorded different characteristics of the habitat and the threats we found there by considering different plots of 20 x 20 m. In total we sampled 30 plots that were completed in 6 different days. We found that the most characteristic threat in the bamboo habitat was illegal bamboo cutting. For the bamboo that is harvested from the forest, we realised that most of bamboo parts are left inside the forest, which causes seeing many piles of bamboo disturbing the natural habitat (figure 8), and bamboo culms are cut selectively and improperly as you can see some bamboo cut at the level of breast height (figure 9). Near the bamboo habitat and inside are found other forms of threats, but which are not frequent, including firewood collection, logging, snares, and grazing (figure 10).



Figures 8, 9 and 10 (Photo by Theogene)

We also found that bamboo shoots are not common in the habitat and that bamboo drying out is very common. We think that the reasons underlying such observations remain for further examination. We also realised the presence of some stretches of intact bamboo but in general the habitat is much disturbed by human trails passing throughout the bamboo forest. Other facts are that Hamlyn's monkeys are not easily detectable even in their habitat; we could only know their presence once when we felt them moving fast nearby during all time we traveled in the bamboo area. It is also important to note that the place had long been suspected for insecurity, and such suspicions have long hampered the monitoring of the habitat.