

## **BUSHMEAT EXPLOITATION IN THE MAKIRA FOREST LANDSCAPE, MADAGASCAR**



### **INTRODUCTION**

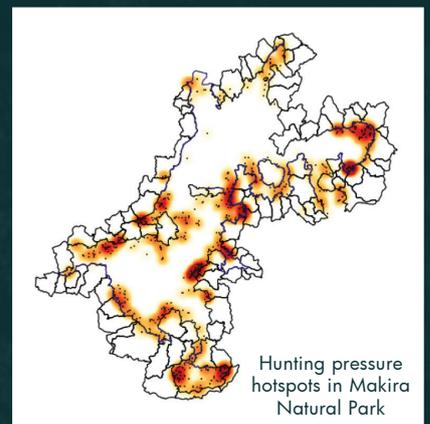
Madagascar is one of the hottest of the world's biodiversity hotspots but also one of the least developed countries in the world. The country faces a poverty rate of more than 80 percent and has some of the highest rates of stunting and child malnutrition in the world. In a context where 75 percent of the populations are rural and dependent on natural resources to meet their subsistence needs, a particularly precarious link exists between human beings and the biodiverse forests of Madagascar.

Managed by the Wildlife Conservation Society, Makira Natural Park is the largest terrestrial Category II protected area in Madagascar, protecting 372,470 hectares of biodiverse forests. This protected area is home to both the largest diversity of lemurs in the country and the largest intact stands of low and mid-altitude humid forest in Madagascar. The 90,000 people living around Makira Natural Park are highly reliant on the natural resources the park was formed to protect. Legal and illegal hunting are widespread in Makira and this area has been a focus of bushmeat research over the last decade.

Local people frequently hunt within Makira Natural Park. Despite the fact that households prefer to eat domestic animals, 95 percent of the households living around Makira eat bushmeat regularly. They hunt wild pigs, tenrecs, lemurs, birds, carnivores, and frugivorous bats. Hunting is carried out using traps, dogs, sling shots, nets, and increasingly guns. Those who are more likely to hunt are the poor local people, those who do not have access to reliable sources food, and whose children are malnourished.

Hunting is focused on endemic and highly vulnerable species. Three-quarters of wildlife-biomass hunted in and around Makira Natural Park consist of species classified as threatened or critically endangered by the IUCN. The population dynamics of hunted species including endemic and endangered species of lemurs, birds, and carnivores cannot sustain this magnitude of illegal hunting.

Bushmeat is extremely important, economically and nutritionally, for the rural households of Makira. The value of the bushmeat an average household eats during a single year is equivalent to 57 percent of their annual income. Further, in remote villages in northeastern Madagascar, as much as 75 percent of animal-source foods, 1 percent of protein, and 14 percent of



iron comes from forest animals and a loss of access to this wild meat would lead to a 29 percent increase in anemia among children and tripling the rates of child anemia in the poorest of households. The subsequent reduction of essential micronutrients within the diet would increase the rates of diseases and severe social consequences if there are no preventative initiatives to develop alternative sources of micronutrients in parallel with the enforcement activities to control illegal hunting. Even in remote villages, wild meat is eaten more often by the poorest households, whereas 42 percent of them depend on bushmeat in these villages, only 27 percent of wealthier households do.

The vast majority of hunting in Makira is subsistence hunting. In recent studies 98 percent of the bushmeat consumed was directly hunted by local villagers for their own subsistence needs. Contrary to the situation in mainland Africa, there has been traditionally very little commercialization of bushmeat in the Makira region.

However, there is worrying evidence that this is changing. Small-scale commercially organized gun-hunting is increasing in the northeast region. Lemurs are hunted by and for the wealthy elite in Maroantsetra and Antalaha both as a leisure activity and to supply unique meats to these growing urban areas. Current research is investigating the drivers of this phenomenon, but it is considered likely that an influx of ready cash into the region due to the legal vanilla and clove, and illegal rosewood markets is, at least in part, driving this change.

Hunting appears to be increasing in Makira Natural Park. The number of lemur traps and snares detected increased by 30 percent in the last 12 months and we are finding more and more larger-scale lalys - lemur traps which require the clearing of a large corridor - and poaching camps within the forest with increased organization hunting efforts and animal catch, including the use of dogs. The resulting feral dog population has reduced the endemic carnivore populations in the region both directly through predation and competition, and indirectly through disease transmission.

Unfortunately, the supply of wildlife in Makira cannot fulfill the demand of a growing and highly food insecure local population. This is a recipe for both a conservation and public health disaster. Yet currently, few micronutrient-rich alternatives to wild meats are available in adequate supply and many are highly volatile; 79 percent of chickens in the region die from Newcastle disease each year. When crops or livestock fail, villagers fall back on the exploitation of open-access natural resources to provide an adequate diet for themselves and their families.

## WCS'S GOAL AND ACTIONS:

The project aims to ensure the future of the Makira Forest Landscape in reducing unsustainable hunting and maintaining the food security and health of the people living there.

## OBJECTIVES AND ACTIVITIES:

- Increase access to reliable, affordable, safe alternative sources of meat within the most remote villages
- Improve overall food security so that the poorest households in these villages are resilient to food-shocks without the need to rely on sustainable harvesting
- Swiftly stem gun hunting within Makira Natural Park during its infancy, preventing the development of a commercial luxury or urban marketplace
- Improve control and surveillance methods with local communities
- Raise awareness about the long term benefits of transitioning from bushmeat to sustainable sources of meat that improve not only conservation outcomes but also the lives and health of the local people

### Location:

Makira Natural Park

### Project partners:

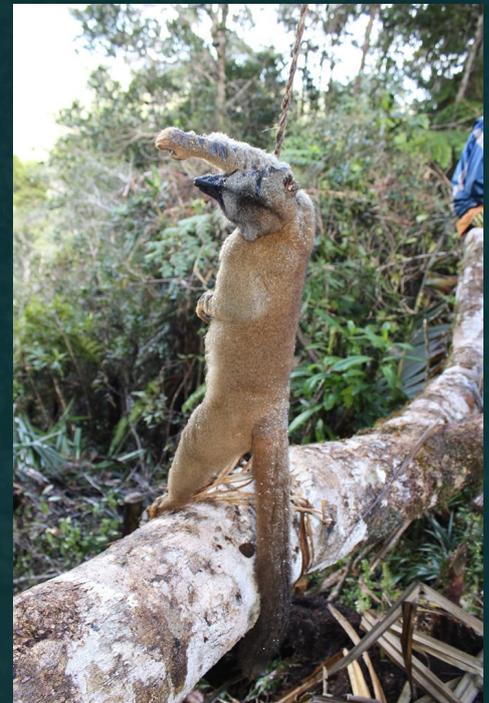
The Ministry of Environment, Ecology and Forests, Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), Center for International Forestry Research (CIFOR), 73 community associations

### Supporters and main donors:

European Union, Food and Agriculture Organization (FAO)

### Targeted species:

Lemurs



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