HUNTING FOR SUSTAINABILITY IN AFRICAN RAINFORESTS:BUSHMEAT AND HUNTER-GATHERERS

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Building on my dissertation field research in the Central African Republic, recently I have collaborated with researchers working across central African rainforests to compile and publish information on bushmeat and hunting. These researchers represent an array of institutions including CENAREST (Gabon), University of Buea (Cameroon), Imo State University (Nigeria), University of Pretoria (South Africa), CIFOR, TRAFFIC, UNEP, AWF, WCS, WWF, ZSL, FFI, Duke, JMU, Manchester Metropolitan University, Oxford, and other European and Japanese Universities.

The West and Central African Bushmeat database (www.offtake.org) was created in 2015 (Taylor et al. 2015) with the aim of synthesizing all quantitative bushmeat studies in the region (275 sites across 11 countries, spanning three decades of research), and providing a resource for analyzing trends in bushmeat harvest, consumption and trade at the national and regional level. In order to track changes in hunting consumption or offtakes over time, a more systematically-selected and

regularly-monitored set of sites would be desirable, spanning a range of current depletion levels and contextual socioeconomic circumstances in both regions. Bushmeat researchers and policymakers should develop indicators that are robust and practical to collect for measuring bushmeat use and sustainability in order to inform national and regional policy on bushmeat hunting. Unsustainable hunting threatens both biodiversity and local livelihoods.

Two other compilation efforts focus on hunter-gatherers in Congo basin forests. Although numerous alternative terms to "Pygmy" have been used to refer the rainforest hunter-gatherers of the Congo Basin, none have been agreed upon by academics or the people themselves to replace it. Pygmy groups consider themselves, and are judged by their farming neighbours, as the aboriginal people of the Central African forests. They identify closely with the forest, and depend to varying degrees on hunting and gathering wild products from the rainforest ecosystem. Recent legislation in some countries has recognized the rights of "autochthones" (indigenous or first peoples). However, despite such provisions under law, in all countries where Pygmies are found, they are increasingly marginalized, and threatened by disease, displacement, forced sedentarization, and deforestation (Olivero et al. 2016).

The first effort compared data on game harvests from 60 Pygmy and non-Pygmy settlements in the Congo Basin forests, finding that the non-Pygmy population may be responsible for 27 times more animals harvested than the Pygmy population. Non-Pygmy hunters take a wider range of species, twice as many animals per square kilometer, a larger proportion of species with low population growth rates, and sell more bushmeat for profit. The intense competition that may arise from the more widespread commercial hunting

by non-Pygmies is a far more important constraint and source of conflict than are protected areas (which may restrict use rights) for Pygmies (Fa et al 2016).

The second effort compiled locational data and population sizes for 654 Pygmy camps and settlements across five countries. In spatial distribution models, highly favorable areas for Pygmies were significantly explained by presence of tropical forests, and by lower human pressure variables. We estimate a total Pygmy population of around 920,000 Pygmies (over 60% in DRC) within favorable forest areas in Central Africa. Fragmentation of the existing Pygmy populations, alongside pressure from extractive industries and sometimes conflict with conservation areas, endanger their future. There is an urgent need to inform policies that can mitigate against future external threats to these indigenous peoples' culture and lifestyles (Olivero et al. 2016).

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