WRC2023

9th - 11th Sept 2023

BERLIN, GERMANY

jointly organised by

Leibniz Institute for Zoo and Wildlife Research
IN THE FORSCHUNGSVERBUND BERLIN E.V.

EAZA
EUROPEAN ASSOCIATION OF ZOOS AND AQUARIA

WWF

Proceedings

This project is co-financed by the European Regional Development Fund (ERDF) funded as part of the Union's response to the COVID-19 pandemic.

EUROPEAN UNION
European Regional Development Fund

kindly supported by

ZOO LEIPZIG
On nature's trail.

Wildlife Research and Conservation 2023

Conference proceedings

9th to 11th September 2023, Berlin, Germany

Edited by

Sylvia Ortmann, Rahel Sollmann, Bettina Wachter, Andreas Wilting

Organised by

Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW)
Alfred-Kowalke-Straße 17
10315 Berlin
Germany

www.leibniz-izw.de

European Association of Zoos and Aquaria (EAZA)
Executive Office
PO Box 20164
1000 HD Amsterdam
The Netherlands

www.eaza.net

WWF Germany
Reinhardtstr. 18
10117 Berlin
Germany

www.wwf.de

Published by
Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW)
Alfred-Kowalke-Str. 17, 10315 Berlin, Germany

This project is co-financed by the European Regional Development Fund (ERDF)
funded as part of the Union's response to the COVID-19 pandemic.

EUROPEAN UNION
European Regional Development Fund

Setting and layout: Stefanie Lenz, Layla Mpinou, Josepha Prügel, Kathleen Röllig

Cover photo: Cheetah (*Acinonyx jubatus*), © Jan Zwilling

Long-term impacts of conservation interventions on landscape-level hunting dynamics in the African rainforest

VIANNY RODEL NGUIMDO VOUFFO[1,2]*, EKWOGE ABWE [2,3], BETHAN MORGAN[2,3,4], MARCEL KETCHEN[2], DANIEL MFOSSA[2], ABWE ABWE [2], NELSON EKOLE BETOBE[2], FIONA MAISELS[4,5], ROBIN WHYTOCK[2,4], JOHANNES KAMP[1], NIKO BALKENHOL[6], MATTHIAS WALTERT[1]& MAHMOOD SOOFI[1]

[1]Department of Conservation Biology, University of Göttingen, Bürgestrasse 50, 37073 Göttingen, GERMANY
[2]Cameroon Biodiversity Association, B.P. 12903 Bonanjo, Douala, CAMEROON
[3]San Diego Zoo Wildlife Alliance, 15600 San Pasqual Valley Road, Escondido, CA 92027, USA
[4]Faculty of Natural Sciences, University of Stirling, FK9 4LA, UK
[5]Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, NY 10460, USA
[6]Department of Wildlife Sciences, University of Göttingen, Buesgenweg 3, 37077 Göttingen, GERMANY

*Corresponding author: vnguimd@uni-goettingen.de

Bushmeat hunting is increasingly depleting African rainforest wildlife and conservationists are investing important resources to tackle it. However, the cryptic nature of hunting and the lack of long-term monitoring resources make it difficult to understand the effectiveness of conservation approaches. The Ebo landscape, Cameroon represents an ideal site to study the long-term effects of conservation interventions on hunting. It is unprotected despite its recognition as biodiversity hotspot and has driven conservation attention over the past decades aiming at initiating community-led conservation focusing on great apes. In this research, we used long-term landscape-wide hunting data collected over the past 15 years (2008-2022) along parallel reconnaissance lines placed 4 km apart. We overlaid 4×4 km² grid cells and used hierarchical modelling approaches to assess spatiotemporal changes in hunting intensity. We assessed how this affects wildlife (e.g., primates, duikers), and is influenced by conservation interventions in surrounding villages. Preliminary results suggest that hunting has occurred in the entire forest, using multiple techniques (wire snares and firearms), with no safe refuge left for wildlife. The prevalence of most wildlife species was negatively associated with indirect hunting signs, but increased with direct hunter encounters, suggesting that wildlife abundance drives hunters' movement. Chimpanzees showed more resilience, since they are the focus of conservation programmes. There was a slight spatial variation in hunting pressure which can be due to uneven conservation interventions in surrounding communities. Sudden changes in hunting were observed, certainly related to changes in conservation strategies and economic conditions. Overall, hunting intensity increased during the period, reflecting the little importance of law enforcement in conservation strategies and increasing demand for bushmeat in neighbouring cities.
This study provides evidence to improve conservation interventions and highlights the need for holistic approaches for hunting mitigation.

This research is made possible by support from San Diego Zoo Wildlife Alliance.