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OF WILD FAUNA AND FLORA



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BOTSWANA LEOPARD MANAGEMENT AND ACTION PLAN 2023-2028

1. This document is submitted by Botswana¹ in relation to document CoP19 Doc. 51, *Quotas for leopard (Panthera pardus) hunting trophies*.
2. During the process to implement Decision 18.165, Botswana informed the Animals Committee of its intentions to develop a National Leopard Management and Action Plan. This Plan is now being developed as the *Botswana Leopard Management and Action Plan 2023–2028* through a bottom-up, multi-stakeholder and very consultative process. This Management and Action Plan is at its final stages awaiting approval by the country's executives, and an official launch is scheduled for February/March 2023, following a validation workshop held in May 2022. It will be one of the first country-wide Management and Action Plans developed for leopard in the world.
3. The primary objective of the 5-year Botswana Leopard Management and Action Plan is to sustainably manage the national leopard population in the country as part of the national, regional and international biodiversity conservation strategy, based on effective population monitoring, and ensuring coexistence and sustainable utilization. At the conclusion of the 5 years, we plan to have:
 - i. a robust monitoring system that combines at least six different types of complementary and combined information: **(a)** presence-only data that can be used to assess leopard distribution e.g. spoor surveys, **(b)** detection/non-detection data that can be used in an occupancy modelling framework to assess change in occupancy and drivers of change, **(c)** systematic and robust leopard population density estimate surveys at a local scale e.g. camera trap surveys (baited and un-baited, to compare methodologies) **(d)** analysis of data on 'problem animal' incidents and controlled hunting including effort and harvest composition, **(e)** citizen science e.g., through tourist photographs and reported sightings and **(f)** Management Oriented Monitoring Systems (MOMS);
 - ii. pilot research programs on leopard ecology and conflict mitigation in previously unstudied areas;
 - iii. a digital system for data input via smartphone for conflict, mortality and controlled hunting;
 - iv. an extensive outreach program that engages commercial farmers, communities, schools and government officials on leopard management and conservation efforts.

¹ The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author(s).

4. The plan is based on a Logical Framework format. To achieve the targets set for managing Botswana's leopards, five key components have been identified, following other species plans in the region and general guidelines on species conservation planning (IUCN-SSC, 2017):
 - Biological monitoring and management
 - Protection and Law Enforcement
 - Social, economic and cultural framework
 - Building conservation capacity
 - Coordination, collaboration and program management

These key components are also the 5 Action Plans which are an integral part of the *Botswana Leopard Management and Action Plan 2023–2028*.

5. The Vision, Goal and Targets of the Management and Action Plan are the following:

VISION: Leopards conserved and managed sustainably for their aesthetic, cultural and ecological values and the socio-economic development of Botswana.

GOAL: (Immediate objective or purpose): To secure viable leopard populations across different land uses, whilst mitigating their negative impacts and enhancing their value for the benefit of people through sustainable use.

TARGETS:

- a. To generate an accurate range map and best possible population estimates for Botswana.
 - b. To introduce and assess the implementation of various conflict mitigation strategies.
 - c. To implement a hunting program that uses best practices for minimal population disruption and best population management practices for leopard conservation.
 - d. To build capacity for Botswana in the study, management and conservation of leopards.
 - e. To share current leopard status to stakeholders, specifically commercial livestock farms, farms and cattle posts, about leopard ecology, management and conservation.
 - f. To implement the Leopard Management and Action Plan with feedback on set benchmarks for adaptive management.
 - g. To be a model for responsible leopard management and utilization through tourism, controlled hunting and coexistence.
6. The Management and Action Plan also includes recommendations on a monitoring system for the species and for regulated hunting, aimed at improving the collection and use of a series of data crucial for the implementation of the adaptive management system currently in force. Tools such as Management Oriented Monitoring System (MOMS), Problem Animal Control (PAC) datasets, aerial surveys for prey species, and traditional knowledge, are used to set leopard quotas.
 7. In addition, in accordance with a set of Government Guidelines, leopard hunts are done by a professional hunter (PH) in the presence of a Department of Wildlife and National Parks (DWNP) Escort Guide, to ensure precision of age, size and gender of leopards hunted. Only males are to be hunted, and hunting of females and young penalized; in this regard, a skull measurements database is in place that shows consistent hunting of adult male leopards demonstrating adherence to set standards. Moreover, there has been an almost ten-year period from 2012 to 2021 without leopard hunts, which had allowed the populations to grow, as evidenced by the increase in the number of human-wildlife conflict cases involving leopards.
 8. Leopards are widespread throughout Botswana (Van der Weyde *et al.*, 2021), likely covering more than 90% of the country, a far higher percentage than in any other country in the world (Stein *et al.*, 2020; Winterbach *et al.*, 2020). The 2020 IUCN Red List assessment for leopard

(Stein *et al.*, 2020) corrected in part the distribution of leopard presented in Jacobson *et al.* (2016), by placing “possibly extant” and “possibly extinct” in the same shaded area. However, that may reflect a lack of systematic surveys rather than the real absence of leopards. In fact, in those areas, there is evidence of leopard existence through sightings, camera trap photos, spoor and conflict animal records, although the paucity of data cannot yet ascertain the extent of the range of the species in the country.

9. Taking into account that leopards appear to be very successful at adapting to altered natural habitat and settled environments (Nowell & Jackson, 1996), we can conservatively estimate a precautionary leopard range in Botswana of approx. 90% of the 580,000 km² of the country, although in variable densities (Winterbach *et al.*, 2020). To that extent, the country has leopards even in the outskirts of Gaborone, the capital city of Botswana. Current aerial surveys indicate that the natural small antelope prey base of leopards is at satisfactory levels throughout the country.
10. In 2022, Botswana started a survey to systematically investigate the geographic distribution of leopards in Botswana, and ascertain densities in sample areas through intensive, (spatial) capture–mark–recapture (CMR/SECR) studies, aided by camera trapping. Botswana is one of the few countries, after Namibia, to do a national survey of leopards in Africa. The national leopard survey will involve rural communities and other relevant stakeholders so as to factor in their aspirations. Botswana is about to finish the first phase of the leopard survey in the northern part of the country and soon it would roll out to other areas.
11. Botswana remains willing and available to share lessons learnt regarding the process of national leopard quota setting, design and implementation of national leopard surveys, as well as coordinating the development of a bottom-up and consultative National Leopard Management and Plan, all designed to ensure that national actions are not only non-detrimental to the survival of leopards in the wild, but that leopard populations are actually enhanced.

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