



**forestry, fisheries
& the environment**

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

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NATIONAL ASSEMBLY

(For written reply)

QUESTION NO. 992 {NW1235E}

INTERNAL QUESTION PAPER NO. 11 of 2022

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Mr D W Bryant (DA) to ask the Minister of Forestry, Fisheries and the Environment:

- (1) In light of the hunting and export quota of 10 leopards for 2022 that was set on 25 February 2022, what are the details of the robust data generated by a sophisticated leopard monitoring programme, including but not limited to, the (a) scientific methodology used, (b) period for which the programme has been in operation, (c) number of localities surveyed, (d) nature and number of records submitted and (e) estimated number of leopards in each locality;
- (2) (a) how has it been established that the individual population was (i) stable and/or (ii) increasing and (b) what is the estimated total number of leopards in the Republic;
- (3) what are the reasons that a leopard hunting quota has been set when the existing Non-Detriment Findings of the Convention on International Trade in Endangered Species of Wildlife are outdated?

992. THE MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT REPLIES:

- (1)
 - (a) Leopard population density was estimated at sites in KwaZulu-Natal, Limpopo, Mpumalanga, and Northwest using camera-trap surveys coupled with spatial capture-recapture sampling. These sites were identified based on an existing habitat suitability map (determined using maximum entropy modelling; Swanepoel et al 2013), as well as recommendations from the

relevant conservation authorities. A mix of state- and province-run protected areas, private conservation areas and private conservancies were selected as survey sites because:

- (i) they were large enough to accurately estimate leopard population density; and
- (ii) stable land tenure is required to ensure continuity in the monitoring.

- (b) The leopard monitoring project was launched in KwaZulu-Natal and Limpopo in 2013. In 2016, the monitoring was expanded to Mpumalanga, Northwest and Gauteng.
- (c) A total of 32 sites have been surveyed since the commencement of the project.
- (d) Surveys in 2019 yielded 2650 photos of leopards representing 480 individual leopards.
- (e) Number of leopards at each survey site in 2019 ranged from 2 to 4 leopards where the densities were lowest to 35 to 46 leopards where densities were highest. Densities are expected to vary from year to year.

(2)

- (a) Multi state models were fitted to data collected at survey sites that had been monitored for more than two years to explore the outputs of different density models: constant density, year-specific densities, and a trend in density. All models included sex as a partially observed covariate on σ - sigma. The trend model was then used to calculate a multiplicative factor – a value of <1 indicative of a declining population and a value of >1 indicative of an increasing population. Populations were designated as declining where both the upper and lower estimates of this multiplicative factor were <1 (at a confidence level of 0.8). Populations were designated as stable or increasing where either or both the upper and lower estimates of this multiplicative factor were >1 (at a confidence level of 0.8).
- (b) Estimates of the size of the national population vary widely from at least upwards of 2,185 leopards. Based on maximum entropy models, Swanepoel, et al., (2013) estimated that approximately 20% (248,770 km²) of South Africa is suitable for leopard. Studies demonstrated varying densities across the survey sites, as determined by local conditions and varying impacts.

(3)

Quota determination is regarded by CITES Parties as an acceptable method of assessing non-detriment findings (NDF) in other words, a quota is widely regarded as an NDF. The leopard hunting quota is extremely cautious and risk averse. Not only is leopard hunting confined to areas where leopard populations are stable or increasing, but only male leopards seven (7) years of age or older may be hunted as an additional safeguard. Furthermore, an adaptive management approach has been adopted whereby hunting zones will be closed should the monitoring system detect any negative impacts to local leopard populations from either hunting or illegal offtakes.

The NDF published in 2015 identified a lack of monitoring and an arbitrary export quota as high-risk areas in relation to the management of leopard, both of which have since been addressed. Concerted efforts have been made to implement all the measures recommended in the 2015 NDF and the risk to the species is now very much reduced. A revised NDF will be published for public input soon.

Regards



MS B D CREECY, MP
MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

DATE: 01/04/2022