



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. 2814 {NW3334E}

INTERNAL QUESTION PAPER NO. 32 of 2021

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Ms A M M Weber (DA) to ask the Minister of Forestry, Fisheries and the Environment:

- (1) How have rhino numbers in the Kruger National Park declined by a net 720 animals from 3 529 according to the 2019-20 annual report to 2 809 in the 2020-21 annual report as only 245 were attributed to poaching in the 2020-21 annual report;
- (2) If the normal birth rate of rhinos is 6% expressed as $3\,529 \times 6\% = 212$ and natural death rate is $3\% = 106$ there is an unexplained decline in the rhino population of 581 rhinos which is reflected in the calculation as $3\,529 + 212 - 245 - 106 = 2809$?

2814. THE MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT REPLIES:

1. SANParks is of the view that the rhinoceros populations in the Kruger National Park (KNP) did not decline by 720 in the 2020/2021 financial year. With respect to annual rhinoceros population counts, annual census figures are given with confidence limits (CLs), which state that there is a 95% probability that the actual number of animals counted fall between the upper and lower confidence intervals. For public reporting, the median figures are given as an indicative figure. There is still a 5% probability that the real number is outside the upper or lower CLs. For consecutive reporting years, it is possible for the lower CL of the preceding year to overlap with the upper CL of the subsequent year. If there is an overlap, it is possible that no real decline took place, even if the median figure is lower in the subsequent year, as is the case

with the 2018 and 2019 census figures. However, when the lower and upper CLs do not overlap, as is the case with the census figures for 2019 and 2020, there is a real decline. It is not possible to attach a specific number to that decline as we are working within CLs, but also due to the challenges associated with rhinoceros counting over such a large area.

The value of game censuses lies in the population trends shown over time and not in the specific numbers counted owing to the number of variables involved. The rhinoceros population has clearly been in decline since 2010 and that trend is continuing. In a vast area such as the KNP, it is not possible to know the exact numbers of animals due to the many variables that impact game surveys.

2. The counting of rhinoceros in an area the size of the KNP is not an exact science and errors in counting, which create uncertainty, include –
 - availability bias (rhinoceros under trees are not seen);
 - observer bias (rhinoceros missed in the open);
 - detectability bias (rhinoceros further away missed); and
 - sampling error (for example, rhinoceros counted twice/not counted).

The growth rate is also variable owing to environmental and biological factors, including synchronisation of births after the last drought. Rhinoceros do not calve annually due to a 16-month gestation period. Other biological factors impacting births and natural deaths, such as drought impacts, predation on calves, cow fecundity (fertility), and intraspecific fighting between rhinoceros.

Regards



MS B D CREECY, MP

MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

DATE: 22 December 2021