Transfer of the Cape Mountain Zebra *Equus zebra zebra* from Appendix I to Appendix II

Proponent: South Africa

Summary: The Cape Mountain Zebra *Equus zebra zebra* is one of two subspecies of the Mountain Zebra *Equus zebra.* It is endemic to South Africa where it is found in the Western, Eastern and Northern Cape provinces. It has been in Appendix I since 1975. The second subspecies, Hartmann's Mountain Zebra *Equus zebra hartmannae*, occurs in Namibia and South Africa. It was included in Appendix II in 1979.

Hunting of the Cape Mountain Zebra and habitat loss resulted in the population being reduced to around 80 individuals in the 1950s. Conservation measures since then involving reintroductions, almost all originating from Mountain Zebra National Park, have led to an increase in numbers and distribution. As of August 2015 the population was estimated to be at least 4791 individuals in at least 75 subpopulations well distributed over the historical range, which comprised around 180,000km^2. It is estimated that 55-70% of the population was mature[1]. Many of the subpopulations are small (37% have 20 or fewer animals), only 11% have over 100 individuals. The population has increased steadily at 8-9% per year since the early 1990s and there are no records of any significant population declines since the 1950s. The taxon has a low reproductive rate and individuals are long-lived.

The major concern regarding the Cape Mountain Zebra at present is the loss of genetic diversity because active meta-population management is not currently practised. However, the low genetic variation within individual populations is offset by moderate variation in the national population. There have been reports of hybridization with other zebras[2].

Approximately 70% of the population occurs in secure state-owned protected areas, the remainder being privately-owned. The movement of the Cape Mountain Zebra is restricted by fences and it is dependent on translocation (e.g. by game farmers) for dispersal. The future growth potential of formally protected source populations is constrained by the availability of state-owned land, which will likely reach its carrying capacity by 2020. To maintain current rates of population increase will either require extending the available land or founding new source populations in areas where suitable land is available[3].

The utilization of the Cape Mountain Zebra is controlled under national and provincial legislation. This includes a permit system regulated by the National Environmental Management: Biodiversity Act (NEMBA), and the Threatened or Protected Species (TOPS) Regulations. Permit holders are required to give annual feedback to the Issuing Authority on compliance with permit conditions, which provides a means of monitoring effectiveness.

Illegal translocations and poaching of the Cape Mountain Zebra occur on a limited scale but there is reportedly no illegal offtake at present from any of the national parks where it occurs[4,5]. Cases of the Cape Mountain Zebra being hunted, sold or exported as Hartmann's Mountain Zebra have been reported[4]. There is currently limited reported (assumed legal) international trade. Trade reported by South Africa in 2000 to 2014 included nine trophies and seven skins.

Conditional to the transfer of Cape Mountain Zebra from Appendix I to Appendix II, South Africa proposes to implement a combination of active adaptive harvest management and management strategy evaluation to set a hunting quota for the Cape Mountain Zebra. It is argued that introduction of a hunting quota will have a beneficial effect by providing incentives for private owners to invest in the Cape Mountain Zebras, increasing the possibility that new subpopulations will be established. Initial responses from the private sector indicate that this is the case.

The quota will be determined through a population viability analysis that considers genetic diversity within the population. The implementation of the quota will be monitored through a research project. As safeguards, a national Biodiversity Management Plan (BMP) for the species will be adopted and feedback will be required from permit holders in terms of TOPS. The BMP was being finalized[6] at the time of writing with plans to make it available as a CITES CoP17 Information Document.

An individual-based simulation tool has been developed to evaluate the impacts of life-stage and sex-specific hunting quotas and translocation strategies for populations over several years. An initial trial use of a population simulation model was applied using the available count data for eight protected populations[7]. The

simulation model will further be used to assess the viability of each hunting quota proposed by private sector owners of the Cape Mountain Zebra who had expressed interest in making use of a hunting quota.

Some concerns have been expressed regarding the efficacy of TOPS reporting as a management tool. The Scientific Authority (SA) of South Africa noted in 2015[4] that the effects of harvest, which included both translocation and hunting, were not monitored and there was often a lack of knowledge of what happens on the ground. Furthermore, budgetary and human resource capacity gaps may limit the efficacy of the harvest management and permitting system. It is also unclear whether the simulation tool intended to be used in setting quotas integrates the Cape Mountain Zebra population viability assessment data, important for management in the context of the potential loss of genetic diversity.

There is reported international trade in Hartman's Mountain Zebra. According to the CITES Trade Database, between 2000 and 2014, direct exports included 22,334 skins (96% from Namibia) and 9755 trophies (91% from Namibia and 8% from South Africa).

The Cape Mountain Zebra is classified in the IUCN Red List as Vulnerable (2008). The Red List of Mammals of South Africa, Swaziland and Lesotho[1] assessed the Cape Mountain Zebra as Least Concern, and the update of the global assessment is underway[8].

Analysis: The Cape Mountain Zebra does not have a restricted distribution. Its population is still relatively small but is increasing and not regarded as under threat, although in the long term loss of genetic diversity may be a concern. The subspecies does not appear to meet the biological criteria for inclusion in Appendix I.

For a transfer from Appendix I to Appendix II the precautionary measures in Annex 4 of the Resolution should be met. These can be met in various ways, including the Parties being satisfied with the range State's implementation of the Convention, particularly Article IV, and with its enforcement controls and compliance with the Convention, or if an integral part of the amendment proposal is an export quota or other special measure approved by the CoP, based on management measures described in the Supporting Statement, provided that effective enforcement controls are in place.

In this case the use of a system to set hunting quotas may be considered as a special measure. The Supporting Statement describes the approach that would be used and indicates that a Biodiversity Management Plan for the species will be adopted. It is not clear to what extent the plan addresses the long-term issue of potential loss of genetic diversity. At present 70% of the population is in protected areas where no hunting takes place. This would not change in the event of a transfer to Appendix II.

The current inclusion of the Cape Mountain Zebra in Appendix I is inconsistent with recommendations for split-listing set out in Annex 3 of *Res. Conf. 9.24. (Rev. CoP16)*, which advise that split-listings of a species in more than one Appendix should be avoided and that when split-listings occur they should be on the basis of national or regional populations rather than subspecies. Were it to be transferred to Appendix II, the entire species *Equus zebra* would be in Appendix II, consistent with the terms of this Resolution.

References:

Information not referenced in the Summary section is from the Supporting Statement.

[1] Hrabar, H., Birss, C., Peinke, D., King, S., Novellie, P., Kerley, G. and Child, M. (2015) *A Conservation Assessment of Equus zebra ssp. zebra.* In: M.F. Child, E. Do Linh San, D. Raimondo, H. Davies-Mostert and L. Roxburgh (eds) *The Red List of Mammals of South Africa, Swaziland and Lesotho.* South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa.

[2] Winker, H. (2016a) *Time-series analysis of long-term established Mountain Zebras within protected areas (1985-2015) with implications for IUCN Red Listing*. SANBI Technical Report SANBI/BAM/STATS/2016/MZ/H1, 7th of March 2016, Kirstenbosch, South Africa.

[3] Winker, H. (2016b) *Incorporating carrying capacity limits into forward projection of source populations of Cape Mountain Zebra.* SANBI Technical Report SANBI/BAM/STATS /2016/MZ/H1S2, 16th of March 2016, Kirstenbosch, South Africa.

[4] Scientific Authority of South Africa. (2015) *Non-detriment finding for Equus zebra zebra (Cape Mountain Zebra).* Issued by the CITES Scientific Authority, South Africa. May 2015.

[5] CITES Trade Database http://trade.cites.org/.

[6] Pfab, M. (2016) *In litt.* to the IUCN/TRAFFIC Analyses Team, Cambridge, UK.

[7] Winker, H. (2016c) *Development of a population simulation model for Cape Mountain Zebra towards formal evaluation of management strategies.* SANBI Technical Report SANBI/BAM/STATS/2016/MZ/H2, 9th of March 2016, Kirstenbosch, South Africa.

[8] King, S. (2016) *In litt.* to the IUCN/TRAFFIC Analyses Team, Cambridge, UK.