



May 17, 2007

RE: Consideration of Scientific Evidence in Setting CITES Export Quotas for Leopard

Dear CITES Delegate:

At the upcoming 14<sup>th</sup> Meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP14), to be held 3-15 June 2007 in The Hague, Netherlands, the Parties will consider two proposals, from Uganda and Mozambique, to establish or increase export quotas for leopard (*Panthera pardus*). The purpose of this letter is to call to your attention to problems with the scientific basis of the evidence presented in both these proposals.

The leopard is on CITES Appendix I, but specimens are traded as hunting trophies or skins for personal use under export quotas established by the CoP in accordance with Resolution Conf. 9.21 (Rev. CoP13). This Resolution states that **proposals for quotas must provide “supporting information including details of the scientific basis for the proposed quota”**. The export quotas are contained in Resolution Conf. 10.14 (Rev. CoP13) which permits up to 2560 leopard skins and trophies to be exported annually from eleven countries.

**SSN urges the CoP to demand scientific rigor when considering the establishment of annual export quotas.** There has been a tendency for CoPs to approve proposals to establish or increase annual export quotas for CITES Appendix I species without proper scrutiny of their scientific basis as required under Resolution Conf. 9.21 (Rev. CoP 13). For example, at CoP13, Parties approved a proposal by South Africa to double its annual leopard export quota from 75 to 150. A few months after the CoP, the South African government put the increase on hold because they determined, retrospectively, that the proposal requesting the increase was based on faulty scientific information.

The two leopard quota proposals for consideration at CoP14 are:

- Proposal 14.3, by Uganda, to transfer its population from Appendix I to Appendix II with an annotation: “1) for the exclusive purpose of sport hunting for trophies and skins for personal use, to be exported as personal effects; and 2) with an annual export quota of 50 leopards for the whole country”; and
- Document 37.1, by Mozambique, to increase leopard export quota for Mozambique from 60 to 120.

SSN urges Parties to consider the following information regarding the scientific basis of these proposals:

**BOTH PROPOSALS REFER TO A MODEL FOR ESTIMATING LEOPARD POPULATION SIZE THAT HAS BEEN DISCREDITED IN THE SCIENTIFIC LITERATURE**

Both Proposal 14.3 and Document 37.1 refer to a model for estimating leopard populations in sub-Saharan Africa based on habitat availability and rainfall (Martin and de Meulenaer 1988). However, **the Martin and de Meulenaer (1988) model has been discredited as a scientific basis for estimating leopard populations and should not be utilized to set annual export quotas.**

The IUCN Red List of Threatened Species (IUCN/SSC Cat Specialist Group, 2002) states,

*“based on estimates of density and geographic range (Nowell and Jackson, 1996), the leopard's total effective population size is estimated at greater than 50,000 mature breeding individuals, but with a declining trend due to persecution and degradation of its habitat and prey base.”*



In stark contrast, the Martin and de Meulenaer (1988) model provides an indirect estimate of 714,000 leopards, which felid experts have said is “generally considered to be an overestimate” (Nowell and Jackson, 1996). Indeed, according to Nowell and Jackson (1996), the model has been criticized for

*“failure to account adequately for persecution and reduction of wild prey as factors lowering leopard density” and the questionable “universality of the correlation of leopard density and rainfall... a variable representing prey density should be incorporated into the regression linking leopard density to rainfall”, and “while the link between herbivore density and rainfall may be generally valid, a herbivore biomass increase does not necessarily equate to increased leopard prey biomass. The herbivore biomass could be in the form of very large species (elephant, buffalo, hippopotamus) or herd-forming species (zebra and wildebeest), which provide little food for leopards.”*

Nowell and Jackson (1996) also provide information on how the model grossly overestimates the actual numbers of leopards as determined by field studies:

*“The rainfall/density regression used by Martin and de Meulenaer (1988) suggest that Zaire would hold some 33% of sub-Saharan African leopards, a figure resulting from presumed very high densities in tropical rain forest (up to 40 leopards, including young and transients, per 100 km<sup>2</sup>). However, Baily (1993) is among several authorities who have argued that since terrestrial mammalian prey biomass is lower in rain forest than in savannah environments, as the bulk of productivity is locked up in the tree canopy, therefore leopard density should be correspondingly lower... D. Jenny (in litt. 1994) provides a preliminary estimate of five adult leopards in his 80 km<sup>2</sup> study area in Tai NP, or 6.25 leopards per 100 km<sup>2</sup>. J. Hart (in litt. 1994) offers a preliminary estimate of one adult leopard per 8-12 km<sup>2</sup> in Zaire’s Ituri forest, or 8.3-12.5 leopards per 100 km<sup>2</sup>. These estimates are considerably lower than the 40 leopards per 100 km<sup>2</sup> suggested by Martin and de Meulenaer’s rainfall/density regression.”*

Regarding the Martin and de Meulenaer (1988) model, Norton (1990) warned,

*“Results of ecological studies on leopards in the Cape Province, South Africa, carried out by the Chief Directorate: Nature and Environmental Conservation, suggest that some of the assumptions on which the population estimates are based are highly suspect, and that the population figures may be unrealistically high. The recommendations for leopard conservation and management should therefore be viewed with caution, especially hunting quotas based on a proportional offtake from the “estimated total” population.”*

### **UGANDA’S PROPOSAL 14.3 DOES NOT CONFORM TO THE FORMAT OF RESOLUTION CONF. 9.24 (Rev. CoP13)**

Proposal 14.3 is a proposal to amend the Appendices, but does not conform to the proposal format given in Resolution Conf. 9.24 (Rev. CoP13), Annex 6 (Format for proposals to amend the Appendices). Consequently, the proposal does not contain information (such as habitat trends, population size, population trends, geographic trends) necessary to evaluate whether criteria for transferring the Uganda population of leopard from Appendix I to Appendix II are satisfied. Also, in accordance with Resolution Conf. 9.24 (Rev. CoP12), split-listing of a species should be avoided in view of the enforcement problems it creates.

### **UGANDA’S PROPOSAL 14.3 PROVIDES NO SCIENTIFIC BASIS FOR THE PROPOSED EXPORT QUOTA**

It has been suggested that Proposal 14.3 may be considered as though it were a proposal to establish an annual export quota for 50 leopards for Uganda under Resolutions Conf. 9.21 (Rev. CoP13) and 10.24 (Rev. CoP13). However, under Resolution Conf. 9.21 (Rev. CoP13), establishment of export quotas requires the proponent to provide the scientific basis for the proposed quota to the CoP. **Proposal 14.3 does not provide any information whatsoever on the scientific basis for the proposed annual export quota.** The proposal provides no scientific information on leopard population sizes or trends in Uganda, nor information on monitoring or management of leopard populations in the country. It therefore fails to meet the requirements set out in Resolution Conf. 9.21 (Rev. CoP 13).

## **MOZAMBIQUE'S DOCUMENT 37.1 PROVIDES A DISCREDITED SCIENTIFIC BASIS FOR THE PROPOSED DOUBLING OF ITS EXPORT QUOTA**

In Document 37.1 Mozambique proposes to double its leopard annual export quota from 60 to 120. Under Resolution Conf. 9.21 (Rev. CoP13), Mozambique must provide the CoP with a scientific basis for the proposed increase in the quota. Document 37.1 states, however, that “*little research has been conducted into the status, distribution or ecology of the leopard in Mozambique*” and that there are “*no detailed field studies*”. In order to estimate population size, Document 37.1 applies the discredited Martin and de Meulenaer (1988) model to Mozambique, using conservative estimates of the percent of the country containing suitable leopard habitat and the average annual rainfall, and concludes that “*it is probable that the leopard population of Mozambique exceeds 20,000*.” Document 37.1 further states, based on a questionable conclusion in Martin and de Meulenaer (1988) that a potential sustainable harvest is 5% of the population outside protected areas, that a population of this size could support an annual harvest of around 1,000. The Martin and de Meulenaer (1988) model **does not provide a sound scientific basis for the doubling of Mozambique's annual leopard export quota**. Document 37.1 estimates populations of leopards in areas where hunting occurs based solely on the availability of leopard habitat, thus using even less information than that required by Martin and de Meulenaar (1988). In addition, Document 37.1 fails to provide information on leopard population trends, or the effect of the existing export quota on leopard populations.

## **MOZAMBIQUE EXCEEDED ITS EXPORT QUOTA IN 2005**

Document 37.1 states that in 2000-2005, Mozambique exported (respectively) 45, 24, 21, 27, 46, and 57 leopards. However, according to reports by importing countries contained in the UNEP/WCMC CITES Trade Database (2007), Mozambique exported the following number of trophies in those same years: 35, 27, 19, 27, 54 and 80, figures that exceed the numbers recorded by Mozambique for 2001, 2004 and 2005. According to the data in the UNEP/WCMC CITES Trade Database, Mozambique exceeded the quota of 60 animals agreed to by CITES in 2005 by twenty individuals. **These discrepancies calls into question the ability of Mozambique to manage its export quotas.**

## **CONCLUSION**

Resolution Conf. 9.21 (Rev. CoP13) states that proposals for quotas must provide “*supporting information including details of the scientific basis for the proposed quota*”. Proposal 14.3 provides no scientific basis whatever for Uganda's proposed leopard export quota. The scientific basis for Mozambique's proposed doubling of its leopard export quota, in Document 37.1, has been discredited. We urge CITES Delegates to reject both Proposal 14.3 and Document 37.1.

Thank you for considering our comments.

Sincerely,

Teresa M. Telecky, Ph.D.  
Chair  
Trophy Hunting Working Group  
Species Survival Network

**REFERENCES CITED: IUCN/SSC Cat Specialist Group, 2002.** *Panthera pardus*. In: IUCN 2006. *2006 IUCN Red List of Threatened Species*. <[www.iucnredlist.org](http://www.iucnredlist.org)>. Downloaded on 06 May 2007. **Martin, R. and T. de Meulenaer, 1988.** Survey of the status of the leopard (*Panthera pardus*) in sub-Saharan Africa. CITES, Switzerland. **Norton, P. 1990.** How many leopards? A criticism of Martin and de Meulenaer's population estimates for Africa. S. AFR J. SCI./S.-AFR. TYDSKR. WET. Vol. 86, no. 5-6, pp. 218-219. **Nowell, K. and P. Jackson (compilers and editors), 1996.** *Wild Cats: Status Survey and Conservation Action Plan*. IUCN/SSC Cat Specialist Group, IUCN, Gland, Switzerland. **UNEP-WCMC, 2007.** *CITES Trade Database*. Downloaded on 07 February 2007.