ADDENDUM 2

ADDITIONAL COMMENTS ON JAGUAR PROPOSAL
(Submitted by COSTA RICA)

PROPOSAL FOR THE INCLUSION OF THE JAGUAR (*Panthera onca*) IN APPENDICES I AND II OF THE CONVENTION UNEP/CMS/COP13/Doc.27.1.2

RESPONSES TO COMMENTS ON THE DOCUMENT

Conservation Status of the Jaguar Species

- Costa Rica welcomes the acknowledgment by the Scientific Council that while the Jaguar is currently listed on the IUCN Red List as Near Threatened globally, given developments since that listing, it would now be likely to qualify as at least Vulnerable[1]. As noted by the Scientific Council all but the largest Amazonian subpopulation are endangered (or critically endangered)[2] and it is this Amazonian population that is determining a lower threat level for the global Red List Assessment. As noted by the Scientific Council, the recent Amazon fires may be affecting the majority of the Jaguar populations, but this has not yet been studied.
- IUCN also noted that the decline in Jaguar populations is likely to be greater due to difficulties in assessing isolated populations and that as connectivity between Jaguar populations continues to decline, the severity of the decline in population is likely to amplify.[3]
- These smaller, probably endangered populations are often the ones that reside near international boundaries and were identified as of critical conservation priority as far back as 2002,[4] making both an Appendix I and II listing critical for the maintenance of Jaguar populations.
- Operative paragraph 3 of Resolution 11.33 (Rev COP12) “Resolves that, by virtue of the precautionary approach and in case of uncertainty regarding the status of a species, the Parties shall act in the best interest of the conservation of the species concerned…”. In the absence of IUCN assessments for smaller subpopulations of Jaguar, it is the view of the proponents that we must use the precautionary approach and rely on the assessments conducted using IUCN criteria by De la Torre et al (2018) and domestic assessments of the status of jaguar populations from Range States; of the 19 countries where Jaguars currently reside, 13 have found the species to be Endangered.[5]
- Most significantly of all, the CMS Convention Text states that an Appendix I listing is warranted if the species has an endangered status “throughout all or a significant part of its range.”[6] 33 out of the 34 subpopulations qualify as Endangered or Critically Endangered using IUCN criteria. These 33 subpopulations cover areas in all 19 current Range States. In addition, domestic assessments in 65 per cent of Range States also identify Jaguars as Endangered. Thus, this criterion of endangerment in “a significant part of its range” is clearly met. If the international community wishes to see Jaguars persist throughout their current range, then significance cannot be determined to be solely percentages of a global population or extent of range.

Cyclical and Predictable Movements Across International Boundaries

- As referenced in the proposal, movements across international boundaries have been tracked using both camera traps and telemetry. Given that there are 26 transboundary populations of Jaguar and they are known to have large ranges to search for resources,[7] it is likely that the studies mentioned below are capturing only a small percentage of international boundary crossings.

- Using camera traps, Paviolo et al. documented Jaguar movement between Argentina and Brazil,[8] and Romero et al. document the movement of Jaguars between Bolivia and Paraguay.[9]
- Several studies tagged Jaguars and monitored their movements using telemetry as well. De la Torre found that in the Southern Mayan forest, tagged Jaguars were documented spending significant amounts of time in both Mexico and Guatemala, indicating that they were moving regularly across that international boundary.[10] Another study by De la Torre and colleagues of this Jaguar population used telemetry to examine the frequency and intensity of use of home ranges by individual Jaguars. This suggested differentiation between areas in home ranges, with Jaguars spending prolonged periods of time but visiting areas only once – probably hunting – and areas frequently visited associated with resting or refuge sites. The study also indicated a preference for movement through primarily forested areas. While limited in its sample size, the study indicates that Jaguars make extensive predictable use of different parts of their home ranges for various cyclical behaviors such as movement, feeding and resting/refuge.[11]
- Using the telemetry data from McBride and Thompson (2018)[12] and Morato et al. (2016),[13] J.J. Thompson developed Figure 1, showing the regular movement of two Jaguars across the border between Bolivia and Paraguay (left) and the regular movement of a single jaguar across the border of Brazil and Paraguay.

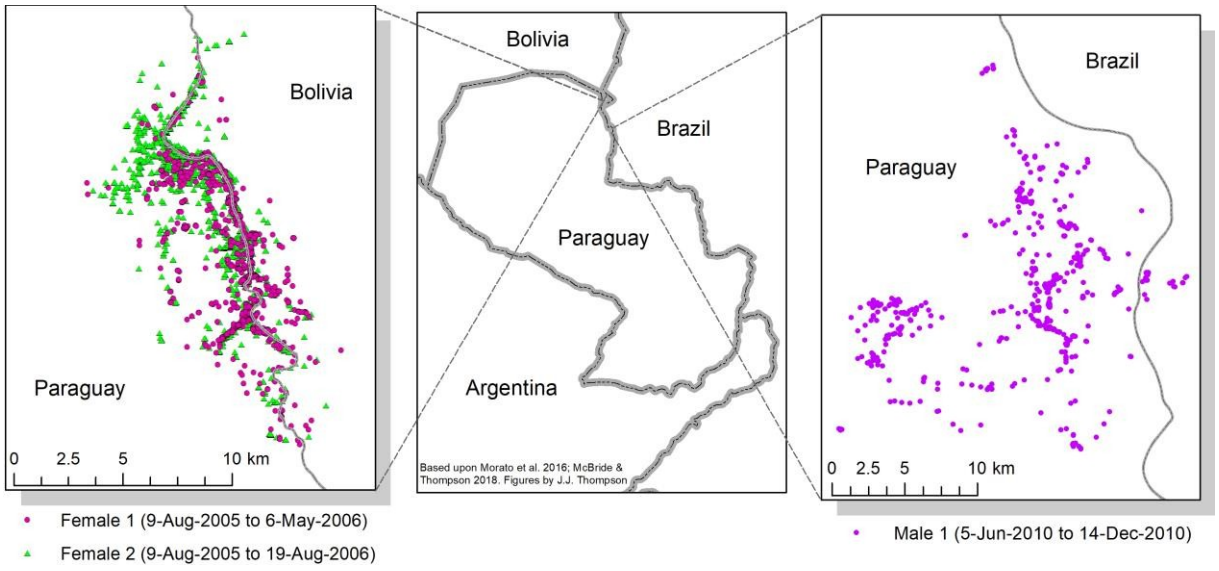

Figure 1. Telemetry tracking data of jaguars on the Paraguay/Bolivia border (far left) and the Paraguay/Brazil border (far right).

- In addition to the above documentation of regular border crossings by Jaguars, there are anecdotal observations and photos of Jaguars swimming across bodies of water that serve as international boundaries.[14] While not published in peer-reviewed journals, these should also be taken into account as evidence of regular international crossings.

Coherence with existing measures in other multilateral fora

The Guidelines for Assessment of Appendix I and II Listing Proposals in Annex I to Resolution 11.33 (Rev. CoP12), paragraph 5 states "Coherence with existing measures in other multilateral fora should be considered". As referenced in the proposal, the Jaguar is listed in Appendix I of CITES, and as also noted by the Scientific Council, CITES COP18 passed a number of Decisions related to Jaguars, which included encouraging Parties to promote the design and implementation of conservation corridors between Jaguar Range States. Therefore, the listing of the Jaguar on Appendix I and II of the Convention promotes coherence with the listing of the Jaguar in CITES and recent relevant CITES Decisions.

Responses of the IUCN Cat Specialist Group

This document has been shared and meets the approval of the IUCN Cat Specialist Group with the following comments:

- The IUCN Cat Specialist Group has read the comments of the CMS Scientific Council and finds that the on the question of whether the conservation status of the Jaguar qualifies it for CMS Appendix I, individual country determinations and management plans determining Jaguars to be largely Endangered should suffice in meeting the CMS criteria.
- More broadly, and not addressed by the Scientific Council, habitat loss is the largest threat facing Jaguars today. A CMS Appendix I and II listing would encourage countries to work together to improve connectivity between Jaguar populations and prevent further fragmentation of their range.

[1] Addendum to Proposal for the Inclusion of the Jaguar in Appendix I and II of the Convention: Scientific Council Comments. UNEP/CMS/COP13/Doc.27.1.2/Add.1

[2] De la Torre, J.A., González-Maya, J.F., Zarza, H., Ceballos, G. and Medellín, R.A., 2018. The Jaguar's spots are darker than they appear: assessing the global conservation status of the Jaguar *Panthera onca*. Oryx, 52(2), pp.300-315.

[3] Quigley, H., Foster, R., Petracca, L., Payan, E., Salom, R. & Harmsen, B. 2017. *Panthera onca* (errata version published in 2018). The IUCN Red List of Threatened Species 2017: e.T15953A123791436. http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T15953A50658693.en

[4] Ibid.

[5] CMS COP13 Jaguar Proposal

[6] CMS Convention Text, Article 1.1.e

[7] CMS COp13 Jaguar Proposal

[8] Paviolo, A., De Angelo, C., Di Blanco, Y., Ferrari, C., Di Bitetti, M., Kasper, C.B., Mazim, F., Soares, J.B.G. and Oliveira, T.G., 2006. The need of transboundary efforts to preserve the southernmost Jaguar population in the world. Cat News, 45, pp.12-14.

[9] Romero-Muñoz, A., Noss, A.J., Maffei, L. and Montaño, R., 2007. Binational population of Jaguars confirmed by camera-trapping in the American Gran Chaco. Cat News, 46, pp.24-25.

[10] De la Torre, J.A., Núñez, J.M. and Medellín, R.A., 2017. Habitat availability and connectivity for Jaguars (*Panthera onca*) in the Southern Mayan Forest: Conservation priorities for a fragmented landscape. Biological conservation, 206, pp.270-282.

[11] De la Torre, J.A. and Rivero, M., 2019. Insights of the Movements of the Jaguar in the Tropical Forests of Southern Mexico. In Movement Ecology of Neotropical Forest Mammals (pp. 217-241). Springer, Cham.

[12] McBride, R.T. and Thompson, J.J., 2018. Space use and movement of Jaguar (*Panthera onca*) in western Paraguay. Mammalia, 82(6), pp.540-549.

[13] Morato RG, Stabach JA, Fleming CH, Calabrese JM, De Paula RC, Ferraz KMPM et al (2016 Space use and movement of a neotropical top predator: the endangered jaguar. PLoS One 11:1–17

[14] Rodrigo Medellin, pers comm.