

Incorrect use of the IUCN Classification may lead to bad management decisions. The Case of the *Trichechus manatus manatus* in Suriname

Monique Pool

Green Heritage Fund Suriname, Paramaribo, Suriname

Abstract

In the past few years as a result of increased explorations for oil, numerous reports have been written about environmental impacts. In all of these, the West Indian Manatee species occurring in Suriname was incorrectly identified and because of this, incorrectly classified as Vulnerable. In this brief I address the correct classification and show how incorrect classification could potentially lead to bad management decisions, and thus to its accelerated extinction in Suriname. The purpose of this brief is to ensure that this erroneous classification does not occur in future reports and publications, and that better management decisions will be made.

Keywords: Suriname, Suriname Manatee, *Trichechus manatus manatus*, IUCN Classification, West Indian Manatee, Antillean Manatee, Florida Manatee, Vulnerable, Endangered



© Fernando Trujillo

Antillean Manatee

Increased oil explorations in the coastal zone have given rise to a number of recent reports, including Environmental Impact Assessments (Mol 2010, 2011, Environmental Sciences Ltd., 2011, ERM, 2012, P-all Projects Supply Suriname, 2013), and other technical papers (CSA International Inc., 2012a, 2012b), in which the Antillean Manatee, *Trichechus manatus manatus*, the subspecies occurring in Suriname, is incorrectly reported as listed by the International Union for Conservation and Nature (IUCN) as Vulnerable, rather than Endangered. Last year, Dr. Randall Reeves, Chairman of the IUCN Species Survival Commission's Cetacean Specialist Group, addressed the River Seismic Survey conducted by Staatsolie, and correctly categorized the manatee species occurring in Suriname

(Reeves, 2012). Subsequently, however, the species was again wrongly listed in the Living Guianas Report 2012 (WWF Guianas, 2012). The use of the incorrect IUCN classification when speaking about the manatee species present in Surinamese waters may result in bad management decisions and possibly accelerate extinction on a national level.



© Fernando Trujillo

Antillean Manatee

The IUCN's Red List of Threatened Species identifies the global status of species based on IUCN guidelines published in the Red List Categories and Criteria publication (IUCN, 2012a). Although a global status is given for each listed species, the same status may not apply throughout a species range, particularly at regional and national levels (IUCN, 2012b). Based on an IUCN status review, in 2007 and revalidated on

Correspondence to: Monique Pool. Green Heritage Fund Suriname, Paramaribo, Suriname. Tel. (597) 402758. E-mail: info@greenfundsuriname.org

Available on-line July 4, 2013

25 September 2012, the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) recognized and listed both subspecies of the West Indian Manatee, *Trichechus manatus latirostris* (IUCN Red List of Threatened Species, 2013.1,

<http://www.iucnredlist.org/details/22106/0>) and *Trichechus m. manatus* ((IUCN Red List of Threatened Species, 2013.1, <http://www.iucnredlist.org/details/22105/0>), as threatened with extinction (CITES Appendix 1; <http://www.cites.org/eng/app/appendices.php>).

Three species of manatees are currently recognized: *Trichechus inunguis*, *T. manatus* and *T. senegalensis* (Domning and Hayek, 1986). Each has a different geographic range; *T. inunguis* and *T. manatus* are the New World species, while *T. senegalensis* is the Old World or African species. The geographic range of the West Indian Manatee, *T. manatus*, runs from southeastern North America to northeastern Brazil. Two subspecies of the West Indian Manatee are known: the Florida Manatee, *T. m. latirostris*, and the Antillean Manatee, *T. m. manatus* (Domning and Hayek, 1986). Other, more recent studies suggest that there may be other distinct, geographic lineages: (1) Florida and the Greater Antilles; (2) Western and Southern Gulf of Mexico, Central America, and NW South America west of the Lesser Antilles; and (3) NE South America east of the Lesser Antilles (García-Rodríguez *et al.*, 1998, Vianna *et al.*, 2006, Deutsch *et al.*, 2008). These distinctions are important.



Typical manatee habitat near the MCP canal in Nickerie, Suriname where the manatee feeds on leaves of the 'moco moco' plant

“The marked genetic structure and geographic subdivision of *T. manatus* should be considered in its management and conservation. Management strategies should consider particularly the distinctiveness of manatees separated by the Lesser Antilles which isolate the populations in the Guyanas–Brazil from other locations” (Vianna *et al.*, 2006). The authors further suggested that focus on country populations, rather than regions, would be useful for management (Vianna *et al.*, 2006). The studies by García-Rodríguez *et al.* (1998) and Vianna *et al.* (2006) led to IUCN reclassification for the two subspecies in 2007. Of

particular note is that although the West Indian Manatee as a species was listed as Vulnerable by IUCN, both subspecies, the Florida Manatee and the Antillean Manatee, were listed as Endangered. This decision appears to be based on 1) regional populations estimated to number at most 2500 animals and 2) an anticipated decrease of 10% due to habitat loss and anthropogenic factors over the course of 60 years (Deutsch *et al.*, 2008).



Typical River where manatees can be found. This is a picture of the Saramacca River in Suriname.

In Suriname, the most recent countrywide study estimated a manatee population of only 500-600 (Duplaix and Reichart, 1978). More recently, the Nature Conservation Division of Suriname estimated the manatee population in Suriname as between 200-300 with a maximum at best of 500-600 (Wassink, 1997). The IUCN Red List Table 1, which provides a summary based on the best available data, listed the extant population for Suriname at ten, stating further that the population is declining (Deutsch *et al.*, 2008). Remarkably, this table does not report that this number is unknown due to data deficiency as was done for some of the other countries. Table 4.1 in the paper of Self-Sullivan and Mignucci-Giannoni (2012) lists minimum counts for Suriname of 10 and a population estimate of 100. With two reported deaths since May 2012 (pers. comm. Sahadewlal, pers. comm. Bisoen), the manatee population in Suriname would now be ninety-eight. This number is, of course, probably too low an estimate. Rather, if we assume the highest numbers proposed by Duplaix in 1978 and apply a 5% reduction (half of the IUCN estimate for depletion over a 60 yr period), the current population would at best be around 570. Whether this number is reasonable, remains currently unknown, but even this higher value suggests the Suriname population should be considered Endangered, not merely Vulnerable. One should not forget that none of the numbers above are based on any actual surveys, and are mere “guesstimates”. In either case, it is clear that not only is a census needed, but further that making management decisions based on the wrong categorization may lead to accelerated extinction of this species in our waters. It is, for that matter, critical that reports used for management

correctly utilize the IUCN status of Endangered for the manatee population in Suriname.

References

- Bisoen, I. March 2013. Personal communication of a dead Manatee in Oreala Creek in Commewijne reported to the Nature Conservation Division.
- CSA International Inc. 2012a. Recorded Sound Source Pressure Levels in the Corantijn, Coppename, Saramacca, Suriname, and Commewijne Rivers during the Staatsolie 2d Seismic Survey (October 15 to November 8 2012), 8502 SW Kansas Ave Stuart, Florida 34997.
- CSA International Inc. 2012b. Seismic Survey Mitigation and Marine Fauna Observations for Five Surinamese Rivers. 8502 SW Kansas Ave Stuart, Florida 34997.
- Deutsch, C.J., Self-Sullivan, C. and Mignucci-Giannoni, A. 2008. *Trichechus manatus*. In: IUCN 2012. IUCN Red List of Threatened Species. Version 2012.2. <www.iucnredlist.org>. Downloaded on 10 May 2013.
- Domning, D. P. and Hayek, A. C. 1986. Interspecific and intraspecific morphological variation in manatees (Sirenia: Trichechus). *Marine Mammal Science* 2: 87–144.
- Duplax, N. and H. A. Reichart. 1978. History, status and protection of the Caribbean manatee *Trichechus m. manatus* in Suriname. Rare Animal Relief Effort and United States Fish and Wildlife Service, unpublished report. 23 pp + x append.
- Environmental Resources Management (ERM). 2012. Draft Environmental and Social Impact Assessment Staatsolie Wageningen Sugarcane to Ethanol and Sugar Project November 2012.
- Environmental Sciences Ltd. 2011. Environmental and Social Impact Assessment for POC Block IV 2D and 3D Seismic Survey, Offshore Suriname. Draft ESIA Rev 1 R3036.
- García-Rodríguez, R. 1998. Phylogeography of the West Indian manatee (*Trichechus manatus*): how many populations and how many taxa? *Molecular Ecology* 7: 1137–1149.
- IUCN. 2012a. IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. iv + 32pp.
- IUCN. 2012b. Guidelines for Application of IUCN Red List Criteria at Regional and National Levels: Version 4.0. Gland, Switzerland and Cambridge, UK: IUCN. iii + 41pp.
- Mol, J.H. 2010. Draft Report Seismic Surveys ESIA, Paradise Oil / Staatsolie Block IV, Saramacca district, Suriname. Baseline study of marine fishes, marine turtles, and marine mammals (manatee and cetaceans) of Suriname with remarks on potential effects of seismic surveys.
- Mol, J.H. 2011. Environmental and Social Impact Assessment for the Staatsolie River Seismic Project Aquatic ecology baseline and impact assessment for the Environmental and Social Impact Assessment of the River Seismic Project of Staatsolie Maatschappij N.V., Suriname: a desktop study.
- P-all Projects Supply Suriname N.V. 2013. Preliminary Environmental and Social Impact Assessment (PESIA) Coesewijne 2D Seismic.
- Reeves, R. 22 September 2012. Open letter with regard to the River Seismic Survey. 27 Chandler Lane, Hudson, Quebec, JOP 1H0, Canada. Email: rreeves@okapis.ca.
- Sahadewlal, M. May 2012. Personal communication of a dead Manatee washed ashore on the river bank at their property at Anton Dragtenweg.
- Self-Sullivan C., Mignucci-Giannoni AA (2012) West Indian manatees (*Trichechus manatus*) in the Wider Caribbean. In: Hines EM, Reynolds III JE, Aragones LV, Mignucci-Giannoni AA, Marmontel M (eds) Sirenian Conservation - Issues and Strategies in Developing Countries. University Press of Florida, Gainesville, FL, p 36-46
- Vianna, J. A., Bonde, R. K., Caballero, S., Giraldo, J. P., Lima, R. P., Clark, A., *et al.* 2006. Phylogeography, phylogeny and hybridization in trichechid sirenians: implications on manatee conservation. *Molecular Ecology* 15: 433–447.
- Wassink, W. 1997. Zeekoeien van Suriname. Afdeling Natuurbeheer, Dienst 's Lands Bosbeheer. Ministerie van Natuurlijke Hulpbronnen.
- WWF-Guianas. 2012. *Living Guianas Report* 2012.