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Preliminary Assessment

Species: Great White Shark (*Carcharodon carcharias*)

Proposal: To include *Carcharodon carcharias* in Appendix II with a zero export quota.

Proponents: Australia and Madagascar

Points of significance

1. *C. carcharias* are a large and charismatic marine species, like whale sharks and basking sharks, where abundance today is known or suspected to be reduced relative to abundance historically. They occupy a vast ocean range, mostly in low densities or as occasional visitors, but they occur in higher densities in some waters of some nations, with seasonal congregations (eg Australia, New Zealand, South Africa, United States of America).
2. At COP11 (2000) the Parties rejected Australia's proposal to list the global population of *C. carcharias* on Appendix I. Australia listed the species on Appendix III in October 2001.
3. In 2004 Australia proposed to list *C. carcharias* on Appendix I at COP13, and in accordance with Resolution Conf. 9.24REV Annex 6 section 6, circulated their draft proposal to 77 Range States.
4. A new proposal was finally submitted, with Madagascar as a co-sponsor, to list *C. carcharias* on Appendix II with a zero export quota worldwide, that does not appear to have been commented upon by Range States.
5. In the provisional assessment by the CITES Secretariat it is noted that Appendix II with a zero quota disallows trade for even non-commercial purposes, and is thus a more strict ban on international exports than Appendix I.
6. The effectiveness of the Appendix III listing, and of the efforts by Parties to assist Australia with its management of *C. carcharias*, has not been addressed in the proposal.
7. The role of Madagascar appears to be limited to co-sponsorship. Despite Madagascar being a Range State for *C. carcharias*, there is no information

in the proposal on abundance, use, trade, management or protection measures for *C. carcharias* in Madagascar.

8. The proposal draws attention to the paucity of data available on abundance, distribution, trends and population dynamics of wild *C. carcharias* populations. As pointed out by New Zealand (Proposal Annex C), some important population dynamics presented (eg rates of increase, mortality rates, reproductive intervals, etc.) are theoretical estimates and "guesstimates" yet to be tested. They could be wildly in error.
9. The proposal repeatedly refers to *C. carcharias* being "rare" relative to other shark species, but there are no data suggesting they were ever "common".
10. Research results indicate *C. carcharias* show remarkably high site fidelity from year to year. Congregations around seal colonies (which *C. carcharias* eat) are common, but in most waters they have only ever occurred in low densities.
11. In the 1970s, the book and motion picture "Jaws" stimulated a excessive sport-fishing of *C. carcharias* in areas where they congregate, and increased demand for *C. carcharias* curios. Declines in abundance are partly related to this, but are not considered by New Zealand (Proposal Annex C) to be any greater than for many other marine species. In this case the declines have stimulated protective legislation in the Range States most affected, but no assessment of the effectiveness of improved national legislation, nor of the Appendix III listing is provided in the proposal. Shark fishermen in southern Australia report *C. carcharias* numbers have increased.
12. The claim that *C. carcharias* populations meet the decline criteria of Resolution Conf. 9.24REV is based largely on catch-per-unit-effort (CPUE) data from sites in which *C. carcharias* and other shark species are deliberately caught and eradicated for public safety.
13. The validity of this approach raises several concerns:
 - a. The declines are the result of a deliberate national management actions aimed at reducing a wild population for management purposes. Not to stimulate a sustainable harvest, where but rather to eradicate the species from areas where Parties considered they constituted a high risk to people. As such they do not constitute evidence of a "decline" under Resolution Conf. 9.24REV (Annex 5) for the purposes of Appendix I or Appendix II.
 - b. A species exhibiting high site fidelity and subject to continuous catch effort should be expected to be reduced markedly, as the resident population is eradicated according to the management goal, and to be sustained by migrants, known to occur at relatively low densities,

at some stable catch rate: the monitoring results are consistent with this being achieved.

- c. As pointed out by New Zealand (Proposal Annex C), some of the fluctuations in the CPUE data presented in the proposal are known to reflect changes in the areas fished over time. The results cannot be interpreted as CPUE in a fishery operating in some standard fashion in the same areas over time.
14. Life history traits of large size, late age to maturity and reduced fecundity do not prevent sustainable harvesting as implied - there are many species (eg crocodilians, Minke Whales) with these same traits that are harvested sustainably throughout the world. The species only become vulnerable if the harvesting is uncontrolled and maximized, which is not the case in strongholds for the species in Australia, New Zealand, South Africa, or the United States of America.
 15. Under Australian legislation *C. carcharias* is classified as "vulnerable" within Australian waters with an adult population <10,000 mature adults ("endangered" = <2500 adults). No attempt to estimate the total population (adults and juveniles) has been made. Australia estimates 500 individuals are killed each year despite protection. If there is no current decline, or abundance is increasing (no data are presented in the proposal) then this harvest itself may be sustainable.
 16. The supply, demand and extent of international trade in teeth (300+ marketable teeth per individual) and jaws is poorly known. Internet prices are less than those referred to in the proposal, but are considered to have increased sharply in the USA (www.nzherald.co.nz) when Australia restricted trade the export of teeth and jaws. New Zealand still trades in products derived from bycatch.
 19. The international trade monitoring linked to Australia's Appendix III listing is 5 exports in 2004, at least some of which appear to be of the parts of one individual shark (300 teeth).
 20. The proposal does not address in any detail the complications to legal trade in fish products that could be caused by the listing of *C. carcharias* on Appendix II, if it were not truly justified under the criteria:
 - a. Teeth and jaws may be readily identified with training, but meat, oil, fish meal, fillets and other mixed-species low value products present obvious difficulties.
 - b. Mexico (Proposal Annex C) reported to Australia that *C. carcharias* are caught rarely by commercial fishermen, but that the meat enters the commercial food trade. This is likely to occur throughout the world.

- c. Whole fins are claimed to be identifiable with training, even though they have no value for eating - large fins may be used for display.
- d. The proposal suggests that DNA testing would be a practical means differentiating *C. carcharias* products in trade, but as the CITES Secretariat notes, the proposal gives no information for Parties to evaluate whether such sophisticated and expensive techniques are practical for their fishermen to use.

Conclusion

Carcharodon carcharias should be retained on Appendix III until such times as the status of wild populations can be clarified, the role of international trade in that status determined, and possible adverse effects of listing on Appendix II are resolved.