

**Transfer of the Saltwater crocodile *Crocodylus porosus* in Malaysia from Appendix I to Appendix II, with wild harvest restricted to the State of Sarawak and a zero quota for wild specimens for the other States of Malaysia (Sabah and Peninsular Malaysia), with no change in the zero quota unless approved by the Parties**

**Proponent: Malaysia**

**Summary:** The Saltwater or Estuarine Crocodile *Crocodylus porosus* currently occurs in Australia, Bangladesh, Brunei, India, Indonesia, Malaysia, Myanmar, Palau, Papua New Guinea, Philippines, Singapore, Sri Lanka, Solomon Islands, Thailand (where it is virtually extinct) and Vanuatu. It is widely distributed in Malaysia's three states of Peninsular Malaysia, Sabah and Sarawak. The species is currently included in Appendix I, except for the populations of Australia, Indonesia and Papua New Guinea, which are included in Appendix II.

By the late 1980s Malaysia's population of *C. porosus* was seriously depleted owing to overexploitation, primarily for hides and meat<sup>1</sup>. Initiation of conservation programmes at that time has resulted in significant increase in the populations of Sarawak and Sabah. This proposal would entail harvest for export only of the population of Sarawak. Little is known about the size of the population in Peninsular Malaysia but it is thought to be small. In Sabah surveys in 2002 indicated that in some areas *C. porosus* numbers had increased by about 10 fold since the 1980s, with nearly four crocodiles per km of river bank in some rivers.

Sarawak covers an area of 12 million hectares with 22 major river basins; *C. porosus* is reported to occur in all these. Two separate recent surveys which covered just over 2000km in essentially the same wetlands came up with very similar estimates of ca. 12,000 individuals and 13,507 non-hatchlings. These estimates are considered conservative as heavily vegetated swamps were not surveyed. The population structure in Sarawak appears to be consistent with a population that has recovered and is both viable and healthy. Suitable habitat reportedly remains abundant. There has been increased incidence of human-crocodile conflict, including fatal and non-fatal attacks on humans.

The Supporting Statement states that the maximum sustainable yield for wild *C. porosus* populations is not known precisely, but notes that a 5% annual harvest rate for alligators did not interfere with continued population growth. It considers a 5% annual harvest rate for the non-hatchling population in the surveyable rivers of Sarawak to have a high probability of being sustainable.

Harvesting is proposed of 500 non-hatchlings and 2500 eggs or their equivalent based on average survival rates i.e. 750 hatchlings or 375 yearlings. The figure of 500 is derived from 5% of the higher of the two population estimates above reduced to be more precautionary (5% of 13,507 is 675). If all the additional harvest is of yearlings, the total non-hatchling offtake could be 875, which represents around 6.5% of the higher population estimate.

Harvest of 2500 eggs is equivalent to around 50 nests per year. Based on offtake of the species in Australia this harvest is thought unlikely to have any impact on the population because density-dependent factors will increase the survival rate of hatchlings in non-harvested nests<sup>2</sup>.

A Master Plan for Wildlife in Sarawak has been put in place, providing recommendations and guidelines for wildlife and its habitats. A crocodile Management Plan has been drawn up to address the use of crocodiles in Sarawak. Funding has been provided for necessary monitoring. Based on population monitoring and assessment of the impact of harvesting on the non-hatchling wild population, the offtake will be adaptively managed, with harvesting in successive years reduced proportionately if the wild population is seen to be declining.

Movement within the state of Malaysia may require export and/or import license or permit to be issued by the Controller of Wild Life. Malaysia currently has seven registered captive-breeding facilities for *C. porosus*, two of which are in Sarawak, which primarily produce skins for export.

The species is in trade from other range States where populations are already in Appendix II (Australia, Indonesia and Papua New Guinea) as well as from captive-breeding facilities. Trade from different states in Malaysia would not be differentiated in the CITES Trade Database.

**Analysis:** Malaysia's population of the Saltwater or Estuarine Crocodile *C. porosus* is neither small nor does it have a restricted range. Conservation action over the past 30 years has resulted in a marked population increase in Sarawak and Sabah, two of the three Malaysian States. Sarawak's population is currently estimated at over 10,000 individuals. The population would appear to no longer meet the biological criteria for inclusion in Appendix I set out in Annex 1 of *Res. Conf. 9.24 (Rev. CoP16)*.

For a transfer from Appendix I to II the precautionary measures in Annex 4 of *Res. Conf. 9.24 (Rev. CoP16)* apply. 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 a special measure approved by the CoP, based on management measures described in the Supporting Statement, provided that effective enforcement controls are in place.

In the case of Sarawak the intent is to harvest a limited number of non-hatchlings and eggs, or the equivalent of those eggs in hatchlings or non-hatchlings, with initial harvest level set on the basis of current population estimates and future harvest adjusted adaptively based on results from annual population monitoring. This could be interpreted as a special measure under the terms of Annex 4 of *Res. Conf. 9.24 (Rev. CoP16)*. Relatively few details are provided on management measures to control harvest and trade. If all initial harvest is in non-hatchlings, the proposed offtake may exceed the reference level of an annual sustainable harvest suggested in the Supporting Statement (ca. 6.5% vs 5% of the population). No mention is made of intention to comply with the universal tagging system for the identification of skins in *Res. Conf. 11.12 (Rev. CoP15)*. No details are given of how specimens would be differentiated from those from the captive-breeding facilities, particularly as the marking provisions in *Res. Conf. 10.16 (Specimens of animal species bred in captivity)* would no longer be applicable if the population were transferred to Appendix II. The proposal includes zero quotas for [wild] specimens from Peninsular Malaysia and Sabah. It is not clear whether measures detailed would be adequate to ensure that specimens from Peninsular Malaysia and Sabah do not enter the trade chain through Sarawak. The Crocodile Management Plan that has been drawn up may provide further information to verify whether precautionary safeguards are met.

#### References:

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

<sup>1</sup> Gani, M.I.Z.A. (2014) *Population density, human-crocodile conflict and genetic variation among saltwater crocodile, Crocodylus porosus in Sarawak*. Master's thesis, University Malaysia Sarawak, (UNIMAS). <http://ir.unimas.my/9017/>.

<sup>2</sup> IUCN SSC Crocodile Specialist Group (2016) *In litt.* to IUCN/TRAFFIC Analyses Team, Cambridge, UK.