

# A GUIDE TO THE ICCAT SCIENTIFIC COMMITTEE'S ADVICE ON THE LISTING OF ATLANTIC BLUEFIN TUNA UNDER CITES APPENDIX I

by Greenpeace, the Pew Environment Group, and WWF

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## 1) Purpose of the guide

The Principality of Monaco has submitted a proposal to include the Atlantic bluefin tuna (*Thunnus thynnus*) – a species that has been decimated by decades of overfishing – on Appendix I of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES).<sup>1</sup> CITES Appendix I would prohibit international commercial trade in the species. This proposal has obvious implications for the remit of the *International Commission for the Conservation of Atlantic Tunas* (ICCAT), the international regional body in charge of managing exploitation of the species. The annual meeting of the ICCAT contracting Parties is 9 – 15 November 2009 in Brazil, and the CITES meeting of the Conference of the Parties is 13 – 25 March 2010, in Qatar.

The *Working Group on the Future of ICCAT*, which met in Sapporo, Japan, from 31 August to 3 September 2009, tasked the ICCAT scientific committee (Standing Committee on Research and Statistics, SCRS) with producing an opinion on whether the Atlantic bluefin tuna would qualify for a CITES listing.

The ICCAT SCRS subsequently established a two-step process. First, during the *ICCAT Species Working Group* meeting, held 30 September to 2 October 2009 in Madrid, participants discussed the means of applying the CITES criteria for commercially exploited aquatic species to Atlantic bluefin tuna and generated Terms of Reference for a second, dedicated meeting. Those Terms of Reference were endorsed by the ICCAT scientific committee, which met 5 – 9 October in Madrid, and continued 21 – 23 October 2009, wherein it applied the CITES criteria for inclusion of species in Appendix I to the Atlantic bluefin tuna, on the basis of those agreed terms of reference.

The 20–page report of the 21 – 23 October meeting is quite technical and contains much additional information which is not directly relevant to a CITES listing. Accordingly, Greenpeace, the Pew Environment Group, and WWF have produced this short guide to the report of the meeting, to facilitate the analysis of its conclusions from the perspective of those aspects relevant to CITES.

## 2) Before you start

There is a lot of information in the 20–page SCRS report that is not directly relevant to the CITES listing criteria, and can make it more difficult to find the relevant information. Accordingly, there are three main aspects which should be taken into account before reading the ICCAT scientific committee's advice regarding the listing of bluefin tuna on CITES Appendix I. **From the perspective of an Appendix I CITES listing:**

### **2.1. The main CITES criterion used to determine the eligibility of Atlantic bluefin tuna is the historical extent of decline**

The CITES listing criteria are found in CITES Resolution Conf. 9.24 (Rev. CoP14). For commercially exploited aquatic species, there is a footnote to Annex 5 of the Resolution that provides further guidance (entitled *Application of decline for commercially exploited aquatic species*). In the case of Atlantic bluefin tuna, both the proponent (Monaco) and the SCRS agreed that the criterion that is based on the historical extent of decline is the most relevant one. In this regard, the key considerations are outlined in the above-mentioned footnote. The relevant text reads as follows:

*In general, **historical extent of decline should be the primary criterion for consideration of listing in Appendix I.** However, in circumstances where information to estimate extent-of-decline is limited, rate-of-decline over a recent period could itself still provide some information on extent-of-decline.*

This is recognized in the report of the SCRS meeting, where it is stated that:

*It was clarified that in the CITES criteria, the historical decline is the primary criterion, and remains of key significance, **regardless of available information on more recent declines, or the potential for a decline to resume or reverse.***

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1 Available at [http://www.cites.org/common/cop/15/raw\\_props/E-15%20Prop-MC%20T%20thynnus.pdf](http://www.cites.org/common/cop/15/raw_props/E-15%20Prop-MC%20T%20thynnus.pdf).

This means that in situations where enough information exists, as is the case with Atlantic bluefin tuna,<sup>2</sup> the recent rate of decline or the projected declines – or projected recovery – over the coming years, are not relevant. CITES looks primarily into what has happened to the population in the past – what is known, as opposed to what is projected or is hypothetical. The CITES Parties have been very clear in the resolution, and in discussions, that the historical baseline is the reference to be referred to when looking at the extent of decline.

## **2.2. The unfished biomass is the correct baseline against which the historical decline should be measured**

Annex 5 of CITES Resolution Conf. 9.24 (Rev. CoP14) provides that:

*Decline can be expressed in two different ways: (i) the overall long-term extent of decline; or (ii) the recent rate of decline. The long-term extent of decline is the **total estimated or inferred percentage reduction from a baseline level of abundance** or area of distribution. The recent rate of decline is the percentage change in abundance or area of distribution over a recent time period.*

Additionally,

*The data used to estimate or infer a baseline for extent of decline **should extend as far back into the past as possible.***

And,

*In estimating or inferring the historical extent of decline or the recent rate of decline, all relevant data should be taken into account. A decline need not necessarily be ongoing.*

This was duly taken into account when the terms of reference of the SCRS meeting to advise on the listing of bluefin tuna under CITES Appendix I were agreed:

***Where the criteria refer to the "baseline" this will generally refer to the unfished condition** (e.g., "virgin" population,  $B_0$ ,  $SSB_{max}$ , etc.). Computations will **also** be made for the highest value in the estimated time series (i.e., the largest population size estimated for the time period that the assessment covers).<sup>3</sup>*

This implies that when viewing the attached report, the reader should focus on the results which compare the current estimated level of the bluefin tuna spawning stock biomass (SSB) with the estimated virgin spawning stock biomass –  $SSB_0$  in the report.

The SCRS also computed stock decline based on the maximum SSB (max SSB) estimated from a time series that started in 1970s, while warning that this baseline underestimated the historical biomass because there had been substantial catches prior to 1970<sup>4</sup>. It is therefore important to focus on those parts of the report that assess the extent of decline in reference to the virgin biomass ( $SSB_0$ ) and not the biomass in 1970 – 2009.

## **2.3. Bluefin tuna should be considered a low productivity species**

The abovementioned footnote to Annex 5 of Res. Conf. 9.24 (Rev. CoP14) provides for a more precautionary application of the decline criterion for commercially exploited aquatic species if they are low productivity species. In other words, a higher historical decline could be tolerated for a high productivity species; low productivity species would be eligible for Appendix I sooner, as the risk would be greater. The CITES criteria state:

*In marine and large freshwater bodies, a narrower range of 5-20% is deemed to be more appropriate in most cases, with a range of 5-10% being applicable for species with high productivity, 10-15% for species with medium productivity and 15-20% for species with low productivity. Nevertheless some species may fall outside this range. Low productivity is correlated with low mortality rate and high productivity with high mortality. One possible guideline for indexing productivity is the natural mortality rate, with the range 0.2-0.5 per year indicating medium productivity.*

Different studies conclude that the Atlantic bluefin tuna is a low productivity species. Silfvergrip followed the

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2 In fact, the representative of the CITES Secretariat at the meeting, noted that Atlantic bluefin tuna had very detailed information on which to apply the criteria relative to other species that have been included in the CITES Appendices in the past.

3 Doc. No. SCI-064 / 2009. Report of the Planning Meeting for the Extension of the 2009 SCRS Meeting to Consider the Status of Atlantic Bluefin Tuna Populations with Respect to CITES Biological Listing Criteria. 6 October 2009.

4 According to the report "... the short time series could give a false impression of the magnitude of maximum SSB (i.e. underestimated)

scoring system of the UN Food and Agriculture Organization (FAO) and the American Fisheries Society, and concluded that the Atlantic bluefin tuna is a species of low productivity and high fecundity.<sup>5</sup> Cooke used ratios of biomass gain/loss as a proxy for productivity and concluded that Atlantic bluefin tuna is a low productivity species.<sup>6</sup> Fromentin et al., using potential population growth rate as a means of estimating productivity, concluded that Atlantic bluefin tuna would straddle the boundary between low productivity and medium productivity species.<sup>7</sup> The meeting noted the differing views and compiled tables based on both low and medium productivity. It was however agreed by all that the Western stock of the Atlantic bluefin tuna is low productivity.

### 3. Looking at the tables and conclusions of the report

When the information set out above is taken into account the reading of the report is greatly simplified, since it contains a substantial amount of information that is not strictly relevant from a CITES point of view. Such information was however included in the report as information to be considered in the coming annual meeting of the ICCAT parties and will be of value to inform the decisions taken at that meeting.

ICCAT SCRS decided to estimate the *probability* with which the CITES criteria for Appendix I are satisfied. The report contains various estimates of the probability, based on different assumptions. The probabilities were calculated separately for the Eastern and Western stocks of Atlantic bluefin tuna.

The key conclusions are expressed in terms of the probability that the CITES criteria for Appendix I are met when (a) the historical extent of decline is chosen as the primary criterion, in accordance with CITES; (b) the unfished biomass is taken as the baseline, in accordance with CITES; and (c) the species is considered as a low productivity species (threshold for decline of 20%) or a borderline low/medium productivity species (threshold for decline of 15%).

The probabilities in the table below refer to the statistical probability, based on the modelling analysis performed by the SCRS, that the stock in question has declined to 10%, 15%, and 20% of the baseline unfished biomass (SSB<sub>0</sub>). The maximum probability is 1.0 (certainty). The ICCAT SCRS also modelled hypothetical future projections of the stocks from 2009 to 2019. While of use to ICCAT Contracting Parties, such projections are not relevant to the CITES Appendix I listing criteria.

	<b>Historical Decline for the Western stock-probability of B2009</b>		
<b>Recruitment</b>	<b>&lt;0.10 SSB<sub>0</sub></b>	<b>&lt;0.15 SSB<sub>0</sub></b>	<b>&lt;0.20 SSB<sub>0</sub></b>
Low	0.302	0.926	0.996
High	0.996	1.000	1.000
	<b>Historical Decline for the Eastern stock-probability of B2009</b>		
<b>Run</b>	<b>&lt;0.10 SSB<sub>0</sub></b>	<b>&lt;0.15 SSB<sub>0</sub></b>	<b>&lt;0.20 SSB<sub>0</sub></b>
All runs [08-05] all	0.88	0.96	0.99
All runs [08-05] perfect impl.	0.88	0.96	0.99
All runs [08-05] 20% error	0.88	0.96	0.99

### 4. Final conclusions

Succinctly, the outcome of the calculations made by the ICCAT SCRS is that the probability that the population of Atlantic bluefin tuna (both Western and Eastern stocks) is at a level below 15% of the historical baseline is virtually 100%. In the context of CITES, this conclusion means that the species fully qualifies for inclusion in CITES Appendix I.

5 Silfvergrip, A. *Supplementary information to the draft proposal to CoP15 to include bluefin tuna Thunnus thynnus on Appendix I of CITES as proposed by Monaco*. 18 September 2009.

6 SCRS/2009/197. *A note on the evaluation of Atlantic bluefin tuna (Thunnus thynnus) with respect to the biological criteria for CITES Appendix I*.

7 SCRS/2009/193. *Estimating the productivity of Atlantic bluefin tuna from validated scientific data*.