

Preliminary Summary
FAO Ad Hoc Expert Advisory Panel

Proposal number 28: Atlantic bluefin tuna

A majority of the FAO Ad Hoc Expert Advisory Panel considered that the available evidence supported the proposal to include Atlantic bluefin tuna, *Thunnus thynnus* (Linnaeus, 1758), in CITES Appendix I.

The Panel's deliberations were assisted especially by the Report of the Extension of the ICCAT Standing Committee on Research and Statistics (SCRS) Meeting to Consider the Status of Atlantic Bluefin Tuna Populations with respect to the CITES Biological Listing Criteria held in October, 2009. The Panel concurred with the view of that meeting that the species did not meet the criterion that the wild population was sufficiently small to warrant listing under Appendix I.

In terms of the decline criterion for listing, the Panel again concurred with the view of that SCRS meeting that Atlantic bluefin tuna as a whole were near the borderline between a low and a medium productivity species, and consequently followed that meeting's approach of considering depletion to below 15% of a baseline (expressed in terms of spawning biomass as is customary for commercially-exploited aquatic species) level as the threshold guideline for an Appendix I listing.

The key consideration for the Panel was the choice of the baseline biomass level to use in computing the current extent of depletion. If the maximum spawning biomasses (B_{\max}) in the period assessed (which commenced in 1970) are taken to be the baselines against which these depletions are evaluated, then both the eastern (including Mediterranean) and western populations are assessed to be above the 15% threshold. They are however sufficiently close to this threshold to meet the decline criterion for an Appendix II listing. Alternatively, if the estimated pre-exploitation spawning biomasses (B_0) are used for this baseline, both populations of Atlantic bluefin tuna are below this 15% threshold and meet the decline criterion for listing on Appendix I.

Some members of the Panel considered that B_{\max} was an adequate proxy for pre-exploitation spawning biomass B_0 as in their view the two were unlikely to differ substantially. They considered that the alternative of estimating B_0 in the manner adopted by the ICCAT SCRS was highly sensitive to certain key assumptions, such as for the relationship between spawning stock and recruitment which has proven to be problematic to estimate for bluefin tuna. Estimates of B_0 obtained by the SCRS for the eastern (including Mediterranean) population may be too high for various reasons. If the assessment is undertaken commencing in the early 1950s, it does not yield higher biomasses than the maximum obtained in the 1970+ assessment. As the annual catches prior to the 1950s are typically appreciably smaller than those that followed, the population was thus probably not greatly reduced by harvesting prior to the 1950s. Furthermore recruitment has shown systematic trends over recent decades, suggesting that B_0 also changes over time. Since recent recruitment has been above average levels,

the values estimated for B_0 could be above the long-term average appropriate for a baseline.

However, the majority of members of the Panel considered that estimates of B_0 were preferable to use for the baseline because they took account of the reduction of the population by removals prior to the start of the assessment series, noting that the CITES Resolution Conf. 9.24 (Rev. CoP 14) states that data used to estimate or infer a baseline for extent of decline of a commercially exploited aquatic species should extend as far back into the past as possible. Furthermore, for the western population any net bias in the estimate of B_0 is likely to be less than for the east. Catches off Brazil early in the fishery's history could well have belonged to the western population and so should probably be taken into account in its assessment. Finally, the western population likely has lower productivity than its eastern counterpart. Thus conclusions concerning this western component of the population meeting the Appendix I decline criteria are more strongly founded.

There was consensus in the Panel that the evidence available supported the inclusion of Atlantic bluefin on Appendix II.

An Appendix I listing would be likely to reduce the bluefin catches from both component populations. This would assist to ensure that recent unsustainable catches in the east Atlantic and Mediterranean are reduced.

Although reported catches from the western component of the resource have not exceeded the Total Allowable Catch over the past 2-3 decades, there have been serious flaws in the recent management of the eastern component, including TACs set above scientific recommendations at unsustainable levels, and a large illegal component of the fishery making appreciable catches. However, in 2009 there have been important improvements in ICCAT's eastern management approach, with the TAC for 2010 being reduced to 13,500 t, a commitment to tie future TACs to SCRS advice, and a rebuilding plan based upon projections of reaching B_{MSY} in 2023 with 60% probability (assuming perfect implementation). The 2009 report of the ICCAT SCRS also comments that the appreciable differences between reported and estimated catches noted for 2007 had declined considerably for 2008, which could reflect improved implementation of regulatory and control mechanisms in the Mediterranean.

The proponent argued that the listing proposal included provision for downlisting to Appendix II, should stock status improve. It should be noted that implementation of a listing on Appendix I would impact many of the indices and the associated catch at size/age from the various bluefin fisheries, with unknown impacts on ability to monitor stock trends.

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Proposal number 29: Spiny dogfish

The FAO Ad Hoc Expert Panel concluded that the available evidence does not support the proposal to include Spiny dogfish, *Squalus acanthias*, in CITES Appendix II.

The Panel agreed that this was a species of low productivity. When evaluated on a population by population basis, most of the Spiny dogfish populations do not meet the decline criteria.

A historically-fished population of Spiny dogfish in the Mediterranean and the large population in the northeast Atlantic Ocean are considered to meet the extent of decline criterion. Directed fishing in the EU was prohibited in 2007 and bycatch quotas have subsequently been reduced. In the northwest Pacific, the decline may meet the Appendix II decline criterion.

The historical extent of decline in population abundance does not meet the Appendix II decline criterion for the following regions defined in the proposal: northwest Atlantic (USA and Canada), northeast Pacific (Alaska, Hecate Strait, Puget Sound, Georgia Strait) and the Black Sea. The Panel noted that certain stocks covered in the proposal had been inappropriately subdivided into additional units.

In the southern hemisphere, surveys in the southwest Pacific indicate stable abundance, while those in the southwest Atlantic show modest declines. No information on abundance trends is available for other populations in the southern hemisphere, such as those around Australia, South Africa and Chile.

Absolute abundance estimates are often difficult to evaluate in the context of CITES criteria, but in the case of Spiny dogfish, the global population estimate is in the order of one billion individuals, which mitigates risk of extinction.

International trade of *Squalus acanthias* is the key driver of exploitation in most areas, except the northeast Atlantic where most of the catch is traded internally within EU markets. There has been a serious fisheries management failure for the northeast Atlantic Spiny dogfish population, which has led to the closure of the directed fishery. Catches from the northeast Atlantic stock, both internally traded in the EU and imported, need to be further curtailed. In the event of a CITES listing, Spiny dogfish caught in EU waters would likely be traded within the EU, and thus not be subject to CITES trade limitations. The Panel noted that the EU has adopted a Shark Action Plan and looks forward to its implementation.

In other areas, Spiny dogfish populations will benefit from improved management. Federal and state U.S. fishery management plans have been implemented for the northwest Atlantic stock, but could benefit from better coordination internally and with

Canada. All other areas in which *Squalus acanthias* is harvested need to be closely monitored to ensure that catches remain sustainable. Sustainable management requires that, where they have not done so, range States develop and implement National Plans of Action for sharks.

If *Squalus acanthias* is listed on Appendix II key implementation issues will include difficulties in differentiating *Squalus acanthias* products from other sharks in trade.

The proposal states that some populations of Spiny dogfish should be listed on Appendix II because of conservation concerns (in accordance with Article II paragraph 2(a)), while others should be listed because of inability to distinguish products from those listed for conservation reasons (in accordance with Article II paragraph 2(b)). While it is almost certainly true that differentiating products from different Spiny dogfish populations would be impossible by enforcement officers without specialized equipment or training, the approach of listing different populations of the same species under Article II, paragraphs 2 (a) and 2 (b) needs careful consideration. Ultimately the result of adoption of this approach could lead to a situation whereby one (perhaps relatively small) population was listed under paragraph 2 (a) and the rest of the species under paragraph 2 (b) even though the species as a whole is in a healthy state.

The Panel took note of the wording of CITES Resolution Conf. 9.24 (Rev. COP 14) indicating that Parties had resolved to adopt measures that are proportionate to the anticipated risks to the species when considering proposals to amend the Appendices. In this case, the Panel considered that listing some stocks (New Zealand, Argentina, and Alaska) in accordance with Article II paragraph 2 (b) would be inconsistent with the proportionate risks to the species as a whole, since populations representing most of the historical abundance of the species globally were considered not to meet the criteria for listing in accordance with Article II paragraph 2 (a).

In the 2007 deliberations of the Panel, the Panel concluded that the species did not meet the biological decline criteria for listing in CITES Appendix II. The additional information available to the current Panel included evidence of improved management actions in the northeast Atlantic, updated stock assessments for the northwest Atlantic, which indicated an improved prognosis due primarily to reduced fishing mortality and recovering recruitment, and additional information for the northwest Pacific and southwest Atlantic stocks. For the northwest Pacific, in light of all the available information, it remains unclear whether the decline criterion is met. The additional information reinforces the previous conclusion of the Panel that the species as a whole does not warrant listing under Appendix II.

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Proposal number 30: Porbeagle shark

The FAO Ad Hoc Expert Panel concluded that the available evidence supports the proposal to include Porbeagle shark, *Lamna nasus*, in CITES Appendix II.

When evaluated on a population by population basis, the historically large Porbeagle populations in the north Atlantic (northeast and northwest) and Mediterranean were considered to meet the Appendix II decline criterion.

Porbeagles in the northeast Atlantic Ocean were considered to meet the Appendix II decline criterion, with no evidence that the decline has ceased. Past management has been inadequate. The decline in population abundance of the northwest Atlantic meets the Appendix II decline criterion, although the population is currently recovering. Although no stock assessment has been performed, the tuna trap catch data for Porbeagle in the Mediterranean indicate that this population also meets the Appendix II decline criterion. New assessments for the southwest Atlantic indicated substantial declines, but results were too uncertain to determine whether Porbeagle in this region meet the decline criterion for Appendix II.

The status of other southern hemisphere populations (excluding the southwest Atlantic) was considered to be above Appendix II decline thresholds. The proposal refers to additional stocks that qualify under Article II paragraph 2(b), which the Panel was not able to identify.

The Panel took note of the wording of CITES Resolution Conf. 9.24 (Rev. CoP 14) indicating that Parties had resolved to adopt measures that are proportionate to the anticipated risks to the species when considering proposals to amend the Appendices. In this case, the Panel considered that populations representing most of the historical abundance of the species globally met the decline criteria for Appendix II. Therefore, listing the smaller, less exploited southern hemisphere populations as well would be consistent with the proportionate risks to the species as a whole.

Although adequate management measures are in place in some regions, there are others where appropriate management is urgently needed. Risk to the northwest Atlantic population is mitigated by population rebuilding and the implementation of both Canadian and United States management plans designed to rebuild stocks. In other populations, sustainable management requires that, where they have not done so, range States develop and implement National Plans of Action for sharks.

In the event of a CITES listing, Porbeagle caught in EU waters would likely be traded within the EU, and thus not be subject to CITES trade limitations. In the northwest Atlantic, most Porbeagle are harvested within the EEZs under rigorous management,

which should form the basis for non-detriment findings. A CITES listing would also result in better monitoring of catches entering international trade from all stocks. Introduction from the Sea would only be an important issue for high seas longline fleets, which sometimes take Porbeagle shark as bycatch. .

In its 2007 deliberations, the Panel concluded that the species did not meet the biological decline criterion for inclusion in CITES Appendix II. The additional information available to the current Panel included a stock assessment for the northeast Atlantic and additional information for the Mediterranean and southwest Atlantic stocks. On the basis of this additional information, the species as a whole now warrants listing under Appendix II.

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Proposal number 31: Scalloped hammerhead and related species

The FAO Ad Hoc Expert Panel concluded that the available evidence supports the proposal to include Scalloped hammerhead (*Sphyrna lewini*) in CITES Appendix II in accordance with Article II paragraph 2(a), along with the look-alike species, Great hammerhead shark (*S. mokarran*) and Smooth hammerhead shark (*S. zygaena*), in accordance with Article II paragraph 2(b). However, it considered that there is insufficient evidence to also include Sandbar shark (*Carcharhinus plumbeus*) and Dusky shark (*C. obscurus*) in accordance with Article II paragraph 2(b), due to inadequate evidence relating to “look-alike” considerations.

The Panel concluded that this was a species of low productivity.

When evaluated on a population by population basis, two historically large Scalloped hammerhead populations proposed for listing were considered to meet the Appendix II decline criterion.

In the northwest Atlantic Ocean, the most robust information is from a population assessment based on multiple data sets that showed an extent of decline of 83% between 1981 and 2005. This meets the Appendix II decline criterion for a low productivity species. In the southwest Atlantic Ocean, hammerhead sharks were targeted by several fisheries that have subsequently collapsed (overall extent of decline up to 90%). Scalloped hammerhead appear to have been relatively abundant in the past in this area, but are now generally too sparse to support target fisheries.

Information for judging the extent of decline elsewhere is only available for a few areas. In the Pacific Ocean, datasets that provide compelling evidence of substantial declines include beach-protection net data from the southwest Pacific that indicate a 65-85% decline over a 44 year period spanning 1963-2007, and sightings data from the eastern Pacific that indicate a 71% decline over a 12 year period spanning 1992-2004. In the western Indian Ocean, beach-protection net data indicate a 64% decline over a 25 year period spanning 1978-2003.

Although the Panel was not able to locate reliable time series of data for other areas, consideration of life history information (philopatry, coastal distribution, vulnerability to fishing at all stages of life, and behaviour) and high demand for fins led the Panel to conclude that levels of decline are likely to be similar elsewhere. Based on these considerations and evidence of substantial declines that meet or nearly meet the Appendix II decline criteria in all areas where adequate time series exist, the Panel considered that, overall, Scalloped hammerhead meets the decline criterion for Appendix II.

Fins for this species are in demand and are of relatively high value in the world market, and there is evidence that international trade has resulted in targeting of this species for its fins. Currently, it appears that several target fisheries have collapsed and most catches constitute bycatch from fisheries targeting other species.

In the area where the largest decline has been observed, the northwest Atlantic, increasingly stringent management measures are being implemented for a species complex of which Scalloped hammerhead is a part, which may mitigate risk. In other areas, finning bans may support management but there are no strong management measures in place for this species.

With respect to the proposal to list four other shark species (Great hammerhead shark, Smooth hammerhead shark, Sandbar shark, Dusky shark) in accordance with Article II paragraph 2(b), the Panel concluded that the information available justified the case for Great and Smooth hammerheads, but did not justify the case for Sandbar and Dusky sharks, as products from these two species do not resemble those of the Scalloped hammerhead to the extent that regulation of trade was required to protect the Scalloped hammerhead. Evidence was available that fins of Scalloped and smooth hammerhead are not separated in the Hong Kong market, so there is clear justification for an Article II paragraph 2(b) listing of the latter. Similarly, fins of these two species and the Great hammerhead closely resemble each other, such that the latter species might be included in a “look-alike” group. However the reasoning provided for including Sandbar and Dusky shark, and for not including other species of sharks, did not appear strong.

Assessing Article II paragraph 2(b) proposals for exploited sharks whose fins are in trade is complicated by a lack of information on the “taxonomy” of fins (as might be provided in an identification guide) and the lack of standards in CITES for making decisions on Article II paragraph 2(b) listings. The former difficulty is being addressed by the US which is preparing an identification guide to fins, and the latter could be addressed by a technical consultation on Article II paragraph 2 (b) listings of commercially exploited aquatic species, perhaps organised by FAO.

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Proposal number 32: Oceanic whitetip shark

The FAO Ad Hoc Expert Panel concluded that, on balance, the available evidence supports the proposal to include the Oceanic whitetip shark, *Carcharhinus longimanus*, in CITES Appendix II.

The Panel concluded that this was a species of low productivity.

There is a paucity of quantitative data with which to determine global trends in this widely-distributed tropical Oceanic shark. All the available indices are based on fishery catch per unit effort (CPUE). Two regional studies provide long time series (45-50 years) that show historical extents of decline conforming to the Appendix II decline criterion, and a short (10 yr) recent time series in one area also shows a historical extent of decline consistent with the Appendix II decline criterion. Information from other areas is very limited and difficult to interpret.

In the Northwest Atlantic, the longest time series (1950s to 1990s) shows a substantial decline consistent with the Appendix II decline criterion. This series is based on different approaches in the early and late parts of the time series (research vessels and commercial vessels with observer coverage respectively), but areas sampled and gear used were generally consistent and efforts were made to standardise the data sets. Trends in longline CPUE for large pelagic teleost species show larger declines than were seen over similar periods from more detailed stock assessments, raising questions about the reliability of long-term CPUE trend information; however no stock assessments of Oceanic whitetip are available. Indices from the northwest Atlantic covering more recent periods (1992-2005) showed continuing declines.

In the central Pacific, the longest time series (1950s to 1999-2002) shows a substantial decline consistent with the Appendix II decline criterion. As with the northwest Atlantic, approaches in early and late periods were different (research vessels and observed commercial longliners respectively) and areas covered were also somewhat different, but gear was similar and efforts were made to standardise the data sets. Interpretation of this series is complicated by the same issue as for the northwest Atlantic, a discrepancy between population trends over long periods in CPUE series and in more detailed assessments for teleost species, but again no detailed assessment of Oceanic whitetip is available for comparison. A set of shorter time series (1960s to early 1990s) shows declines in four subareas of the central Pacific, but not to levels consistent with the Appendix II decline criterion, when information uncorrected for depths of sets is considered. When corrected data is considered, trends are conflicting. However this document indicates that further standardisation is required. More recent series (1995-2005) show a continuing large decline.

In the eastern Pacific, the only available index shows a very large historical extent of decline, consistent with the Appendix II decline criterion, over a short time period (1994-2006). This is based on information from a purse seine fishery which takes relatively low numbers of this species, and occurred after a lengthy period during which this species would have been harvested in longline fisheries, suggesting that such a rapid decline during this recent period may not reflect population changes reliably.

Fins for this species are in demand and of high value in the world market, and there is evidence that international trade is driving exploitation. This species is generally not targeted, but is taken as bycatch in fisheries targeting other species. The Panel noted that a large proportion of individuals captured as bycatch could be released alive.

Demand in the international shark fin trade and bycatch in high-seas tuna fisheries constitute important risk factors for the species. Each of the five Tuna Regional Fisheries Management Organizations has a management measure requiring vessels to have fins onboard that total no more than 5% of the weight of sharks onboard, up to the first point of landing. A number of countries have adopted finning bans but no species-specific international or domestic management measures are in place. Sustainable management requires that, where they had not done so, range States develop and implement National Plans of Action for sharks.

With respect to the likely effectiveness of a CITES Appendix II listing, the Panel concluded that the resulting regulatory measures could aid management of this species by improving catch monitoring and encouraging assessments of sustainability of harvests. Most harvests would be from international waters, falling under the “introduction from the sea” provisions of the Convention. These would require catch documentation to the species level and that a non-detriment finding indicating that the harvest was sustainable be provided for all catches moving from international waters to the jurisdiction of a State.

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Proposal number 35: Family Coralliidae

The FAO Ad Hoc Expert Panel concluded that the available evidence does not support the proposal to include all species in the family Coralliidae (*Corallium* spp. and *Paracorallium* spp.) in CITES Appendix II.

The Panel considered that populations representing a large proportion of the abundance of the seven species proposed for listing under Article II paragraph 2(a) (*Corallium rubrum*, *C. japonicum*, *C. secundum*, *C. elatius*, *C. konojoi*, *Corallium* sp. nov., *C. lauuense* (*C. regale*)) globally did not meet the decline criteria for Appendix II.

The Panel considers *Corallium rubrum* to be a low productivity species. Little is known about the life-history characteristics of the other 6 species under consideration but it is highly likely that they are also low productivity species.

The proposal depends heavily on catch statistics to support inclusion of the 7 species for listing under the Appendix II decline criterion. The Panel considered that these data were not very reliable, as landings are influenced by economics (such as price of coral, price of fish, price of fuel), management practices (such as size limits, area closures), difference in spatial coverage, mixing of live and dead coral weights (Japan targets dead coral in some fisheries), differences in collection methods (SCUBA, submersibles, drags), and other factors. Nevertheless, these data can be useful to observe the extreme “boom and bust” cycles characteristic of this fishery when new beds are discovered.

The Panel observed that some fished areas in the Mediterranean demonstrate a historical extent of decline in a few metrics (trends in number of polyps per colony and population fecundity) commensurate with the Annex 5 guidelines on extent of decline for low productivity species. Decline to a lesser extent was found in the catches, maximum size of colonies, mean height and proportion of older colonies per stock. There has been a clear over-exploitation of shallow water beds which has led to a shift in harvesting to deeper water colonies. In some areas in the Mediterranean (for example the Costa Brava) only 9% of the colonies are sexually mature. However, in other areas (for example Sardinia) management measures have been implemented and recruitment appears strong.

In the Pacific including Hawaii, Japan, Taiwan Province of China, and in international waters there is no evidence to show extents of decline that meet the criteria for inclusion in Appendix II. In Hawaii, harvest of the family Coralliidae is under a management scheme and there has been an increase in population density since 1971. In Japan only three out of twenty-eight known areas with coral beds have been assigned for harvest. Little quantitative analysis has occurred of population dynamics in Japan or Taiwan Province of China. In the Philippines all areas with coral beds are closed to fishing (at least 11) and have never been exploited. Pacific seamounts have been overexploited, with catches exhibiting classic boom and bust dynamics. No fisheries occur on international

sea mounts at present. The Panel concluded that the recent fisheries (last 20 years) in the Pacific appear to be small-scale and managed. The Panel noted that of the 7 species proposed for listing under the Appendix II decline criterion, no data are presented for *C. lauuense* (*C. regale*) to support its listing. *C. lauuense* is described by Baco and Hank (2005) as one of the more common deep-sea octocorals on the seamounts and islands of the Hawaiian Archipelago.

The data from all areas indicate that uncontrolled fisheries have depleted coral beds in the past. Some populations rely on refugia in inaccessible areas that might become accessible to the fisheries through new technology (ROVs, mixed gas diving etc). These exploited long-lived corals require effective local management to prevent unsustainable harvesting and this is not occurring across their full geographic distribution. Recovery of these low productivity species may take several decades. There is a risk that new fishing activities could be initiated in international waters leading to over-exploitation of coral on sea mounts.

The Panel considered the difficulty of identifying products in trade and the substantial administrative burden of issuing CITES trade documents and of recording for the large number of individual specimens in trade as key issues affecting the effective implementation of CITES regulations for these species. It recognises efforts by the proposing parties to address these issues.

The Panel considered that, despite a lack of reliable statistics, it seems probable that a substantial fraction of the production of *Corallium* spp. and *Paracorallium* spp. is in international trade and that international trade was an important driver of the harvest of these species.

In the 2007 deliberations of the Panel, the Panel concluded that the genus *Corallium* did not meet the biological decline criteria for listing in CITES Appendix II. The additional information available to the current Panel included a consideration about decline in number of polyps and a shift in depths of harvesting in the Mediterranean. The current proposal also increased the requested listing to the family Coralliidae. The additional information and scope of the proposal did not lead the Panel to change its previous conclusion related to the genus *Corallium*.