

**Western  
Pacific  
Regional  
Fishery  
Management  
Council**

January 18, 2012

Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910

**Re: 90-Day Finding on a Petition To List the Scalloped Hammerhead Shark as Threatened or Endangered Under the Endangered Species Act (RIN 0648-XA798)**

To Whom It May Concern:

The Western Pacific Fishery Management Council (Council) appreciates this opportunity to comment on the 90-day finding on a petition to list the scalloped hammerhead shark under the Endangered Species Act (ESA)<sup>1</sup>, submitted by WildEarth Guardians and Friends of Animals. The Council disagrees with the initial finding by the National Marine Fisheries Service (NMFS) concluding that the petitioned action may be warranted, and offer information that suggest that ESA listing is not warranted. Specifically, we provide information within the following headings, with particular focus on the Pacific Ocean: comments on the petition, information on the shark fin trade, information from other Pacific data sources, and other Pacific management actions.

**Comments on the Petition**

The petition fails to establish the endangered or threatened status of the scalloped hammerhead sharks in the Pacific because of a) lack of delineation of the Pacific population(s); b) misrepresentation of some Pacific and global shark data; and c) a lack of other shark data representative of the Pacific.

*Delineation of the Pacific population(s)*

The petition does not present any valid information to support the distinct nature of the Eastern Central and Southeast Pacific scalloped hammerhead sharks from other conspecifics in the Pacific or Indian Oceans. While it makes continual references to Chapman et al. (2009), this paper focuses on identifying the subpopulations in the Atlantic Ocean and refers to all non-Atlantic scalloped hammerhead sharks as “Indo-Pacific”. There is therefore no basis for the

<sup>1</sup> See 76 Fed. Reg. 72891 (November 28, 2011).

statement on p.8 of the petition that “scalloped hammerheads in the Pacific and Indian Oceans may comprise one DPS each”. By making this unsubstantiated assertion, the petition suggests that the status of scalloped hammerhead sharks throughout the entire Pacific and Indian Oceans can be represented by the IUCN Red List Assessments for the Eastern Central and Southeast Pacific and the Western Indian Ocean, respectively. Not only is such extrapolation invalid without evidence from genetic studies, as will be explained below, the Eastern Central and Southeast Pacific’s Red List Assessment is not based on robust data sets even for that portion of the Pacific.

Another issue relevant to the definition of subpopulations is that higher growth rates have been found for scalloped hammerhead sharks in the Pacific as compared to the Atlantic<sup>2</sup>. This fact, which is not mentioned in the petition, might suggest that the Pacific populations are less intrinsically vulnerable than the Atlantic populations, and thus argue against assuming that trends observed in the better-studied Atlantic populations apply on a global basis.

In summary, it should not be assumed that the status of scalloped hammerheads in the Pacific is represented by information from the Eastern Central and Southeast Pacific. Furthermore, it should not be assumed that the status of Atlantic populations is representative of the status of populations in the Pacific.

#### *Evidence for Population Declines and Endangered Status*

In several cases the petition presents misleading information about the extent of scalloped hammerhead shark population declines. As the remainder of this section will show there is insufficient information to conclude that the scalloped hammerhead is overutilized, in decline, endangered or threatened in the Pacific Ocean.

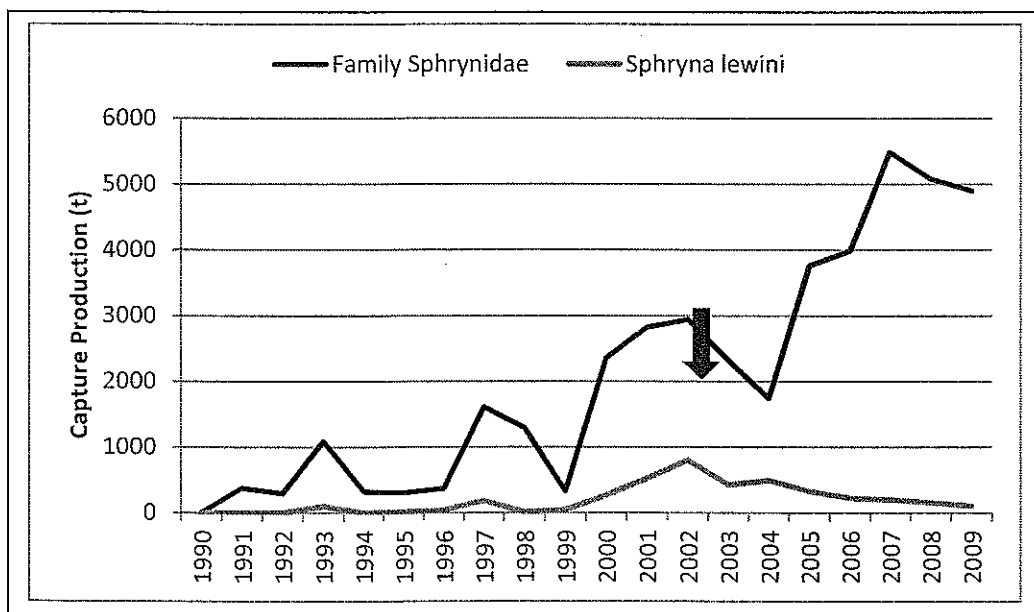
In the first instance, it is not valid to draw inferences about population trends from catches or landings alone. The former is directly influenced by effort and the latter by effort and utilization (i.e. whether the caught sharks are discarded whole or in part before landing). For these reasons, it is necessary to calculate catch per unit effort in order to approximate an abundance index. Rather than attempt this, the petition claims that the decreasing catches in recent years occurred “with the same or even greater fishing effort”. The supporting references are not made explicit but appear to be limited to anecdotal information of increased targeting at the Galapagos and a study by Dudley and Simpfendorfer (2006). The latter is based on shark netting for beach protection in South Africa and thus is not an example of an increase in commercial fishing effort. The decreasing catch statistics by the United Nations Food and Agriculture Organization (FAO) presented in the petition’s Figure 5 do not therefore demonstrate a decline in scalloped hammerhead sharks as stated on pp. 13 and 15 of the petition.

Furthermore, the petition cites Maguire et al. (2006) as confirming the declining trend shown in Figure 5. In fact, since Maguire et al. (2006) is based on the same FAO dataset plotted in Figure 5 it does not represent independent confirmation. The Maguire et al. (2006) data is for

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<sup>2</sup> CITES CoP15 Prop. 15. Proposal to include Hammerhead, Sandbar, and Dusky Sharks in Appendix II. Fifteenth meeting of the Conference of Parties, 13-25 March 2010. Accessed online at <http://www.cites.org/eng/cop/15/prop/E-15-Prop-15.pdf>

family Sphyrnidae (all hammerhead sharks), of which it states scalloped hammerhead “is probably the most abundant” species, and it only extends through 2004. If all of the most recent available FAO data for family Sphyrnidae and *Sphyrna lewini* (see the petition’s Figure 5) are examined (Figure 1 below), the trend in total hammerhead catches since 2004 has been strongly upward. It is difficult to know how to reconcile the divergent trends for hammerheads as a group and scalloped hammerhead sharks per se, but it is likely that changes in reporting practices (i.e. perhaps an increasing number of countries reporting at the family level rather than as unidentified “shark”) are at work. Thus, rather than confirming the data in the petition’s Figure 5, the Maguire et al. (2006) data actually refute it, although given the potential biases in reporting practices, it is not clear which catch data series is more credible. Complicating matters further, the decline in scalloped hammerhead sharks since 2002 asserted by the petition coincides with an overall decline in catches of chondrichthyan fishes (sharks, skates, rays and chimeras) since 2003 (see Figure 2). This suggests that the trend is not specific to scalloped hammerheads, and raises the possibility that it is part of a wider phenomenon which may or may not be related to abundance (e.g., changes in fisheries).



**Figure 1. FAO capture production data for family Sphyrnidae (all hammerhead sharks) and *Sphyrna lewini* (scalloped hammerhead), 1990-2009. The arrow shows the start of the most recent data not included in Maguire et al. (2006) or the petition.**

Beyond the references to FAO global capture production data, the petition cites the IUCN Red List Assessments of “endangered” or “vulnerable” status for five subpopulations of scalloped hammerhead, two of which may be relevant to the status of this species in the Pacific. For the Eastern Central and Southeast Pacific Ocean, all of the information cited is either anecdotal or landings data, which as described above cannot be relied upon to indicate population trends without a measure of effort. The only quantitative reference is that from Costa

Rica (Arauz et al. 2004<sup>3</sup>), but this is for pelagic sharks in general, does not present standardized catch rates (as falsely claimed), and infers a 60% decline on the basis of two data points separated by 8 years (during which there may have been important changes in the fishing operations and/or data collection practices which were not accounted for). For the Western Indian Ocean, the information is again overwhelmingly based on anecdotal information and landings. The only reliable basis for inferring a declining population trend is provided by beach protection netting catch records (Dudley and Simpfendorfer 2006).

Although it is not mentioned in the petition or the 90-day finding, the CITES CoP15 Listing Proposal refers to an unpublished study<sup>4</sup> which indicates an 85% decline in hammerhead sharks over 44 years of beach protection netting off Cairns and Townsville, Australia. This appears to be the only solid evidence for population declines of scalloped hammerhead sharks in the Pacific but is limited to two localized areas.

In summary, the petition fails to adequately support the proposition on p. 22 that “populations are declining worldwide and in every portion of the species’ range, almost exclusively due to exploitation”. Although our analysis does not focus on Atlantic datasets, it should be noted that the most compelling evidence cited by the petition for declining population trends in Atlantic hammerhead sharks (Baum et al. 2003), has been challenged on its selection of datasets and methods<sup>5</sup>.

#### *Evidence for Overutilization*

On p.20 the petition references the CITES CoP15 Listing Proposal as the source for its assertion that fishing is unsustainable. However, the listing proposal actually only states “current landing levels may be unsustainable”. As described in the 90-day finding, a study by Hayes et al. (2009) has documented overfishing of scalloped hammerhead sharks in the western North Atlantic but there are as yet no similar studies for the Pacific Ocean. Therefore, the petition fails to establish that scalloped hammerhead sharks are overfished or that overfishing is occurring in the Pacific.

#### *Evidence for Critical Habitat*

On p. 28 the petition requests critical habitat designation in the Pacific around the Hawaiian Islands. However, there is no evidence for there being critical habitat for this species around Hawaii and no argument advanced for critical habitat around seamounts based on

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<sup>3</sup> Arauz, R., A. López, J. Ballesteros and A. Bolaños. 2004. Estimación de la abundancia relativa de tiburones en la Zona Económica Exclusiva de Costa Rica a partir de observadores a bordo de la flota de palangre de Playas del Coco, Guanacaste, Costa Rica. Rojas and Zanela (eds). Primer Seminario-taller del Estado del Conocimiento de la Conductiofauna de Costa Rica de Biodiversidad INBIO. Santo Domingo de Heredia, Costa Rica. 2 de Febrero, 2006. Accessed online at <http://www.pretoma.org/downloads/pdf/avistamientos/memoria-final.pdf>

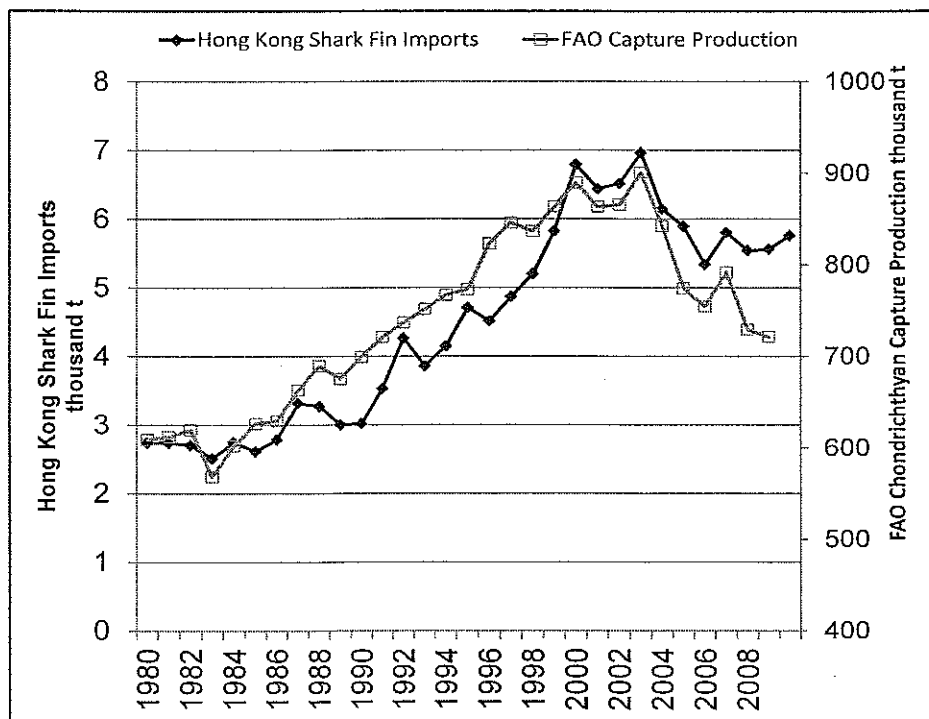
<sup>4</sup> de Jong S, and C. Simpfendorfer. 2009. The Queensland Shark Control Program: a fisheries-independent assessment of shark stocks in far north Queensland. 8th Indo Pacific Fish Conference and 2009 Australian Society for Fish Biology Workshop and Conference, 31 May – 5 June 2009, Freemantle, Western Australia.

<sup>5</sup> Burgess, G.H., L.R. Beerkircher, G.M. Cailliet, J.K. Carlson, E. Cortés, K.J. Goldman, R.D. Grubbs, J.A. Musick, M.K. Musyl and C.A. Simpfendorfer. 2005. Is the collapse of shark populations in the Northwest Atlantic Ocean and Gulf of Mexico real? *Fisheries* 30: 19–26.

findings off Mexico (as described in the 90-day finding). Therefore the request for designation of critical habitat around the Hawaiian Islands is unsubstantiated.

### Information from the Shark Fin Trade

The 90-day finding requests information on the shark fin trade. Figure 2 shows adjusted (unprocessed fins only; “salted”/frozen fins normalized for water content before tallying) imports of shark fins to Hong Kong through 2010. Although Hong Kong is no longer expected to be the country or territory importing the largest number of shark fins per year, in the absence of readily interpretable customs statistics from the largest market, i.e. Mainland China<sup>6</sup>, the Hong Kong imports provide the best available indication of trade trends. The Hong Kong shark fin trade reached its peak in 2003 and has declined in subsequent years with a local minimum in 2006 and a slight rebound thereafter (Figure 2, black series).



**Figure 2. Adjusted Hong Kong imports of shark fin (◆, left axis) and FAO capture production for chondrichthyan fishes (□, right axis), 1990-2010 (Hong Kong Census and Statistics Department, UN Food and Agriculture Organization).**

Interpretation of this downward trend is complicated by the expectation that Hong Kong is losing market share to Mainland China with the liberalization of the latter’s market since 2001. However, global catches of chondrichthyan fishes (sharks, skates, rays and chimeras) as reported to FAO (Figure 2, gray series) show a similar pattern of annual variability since 2000 suggesting

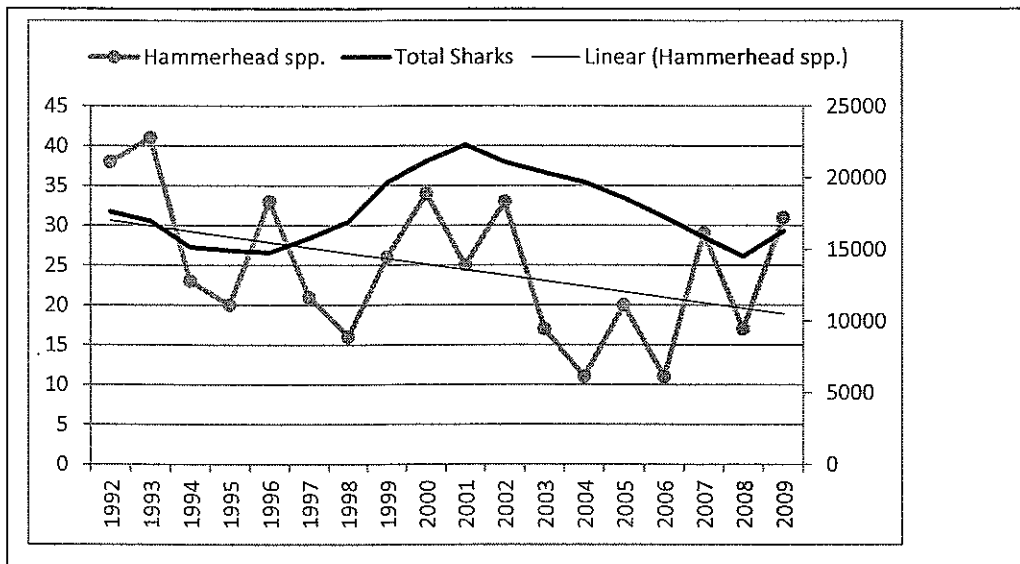
<sup>6</sup> The Mainland China trade statistics system has required since May 2000 that all fresh, chilled and frozen (i.e. not dried) shark fins should be recorded under commodity codes designated for fresh and chilled or frozen shark meat. Since it is not possible to determine what percentage of China’s frozen shark meat trade is frozen fins, it is impossible to quantify the full extent of shark fin trade into China.

that the Hong Kong trade is responding to, and possibly representative of, global shark fin patterns. If trade and catches are driven by demand we would expect that with the ongoing economic development of Mainland China shark fin imports and capture production would have continued to rise since 2000. The fact that both trade and catch indicators have fallen since 2003 suggests that either demand is dropping, or that supplies may be diminishing due to overfishing or other factors.

**Information from Other Pacific Data Sources**

As reflected in the lack of information for Pacific scalloped hammerhead sharks in the petition, the IUCN Red List assessment and the CITES CoP15 Listing Proposal, available catch data for this region are limited and most of the data are not specific to scalloped hammerhead. This section describes two datasets, not mentioned in the preceding documents, which can shed some light on hammerheads in the Pacific.

Japan publishes a time series of landings data for hammerheads which is likely to derive primarily from shark markets associated with the northern Japanese port of Kesenuma. As shown in Figure 3, hammerhead landings declined by over 30% since 1992, while total shark landings which are dominated by blue shark increased in the early part of the time series and then fell back to their earlier level. It should be noted that the previously stated caveats regarding the use of catch rather than catch rate information apply.



**Figure 3. Landings of hammerhead sharks reported by Japan, 1992-2009. (Data source: Fisheries Research Agency of Japan, *The State of International Fishery Resources: Other Pelagic Sharks in the North Pacific*, Accessed online at [http://kokushi.job.affrc.go.jp/H22/H22\\_41.html](http://kokushi.job.affrc.go.jp/H22/H22_41.html))**

At the sixth meeting of the Western and Central Pacific Fisheries Commission (WCPFC) Scientific Committee, information on historical catches of hammerheads in the Convention Area was presented to inform debate surrounding whether to designate hammerheads as WCPFC key species. Representatives of the Secretariat of the Pacific Community (SPC) informed the

WCPFC that although there were virtually no hammerheads contained in logsheet data, a total of 106 mt of hammerheads were caught in observed longline sets from 1994-2009 representing 0.2% of the observed catch<sup>7</sup>. Of this number, 68% were recorded only as *Sphyrna* spp. A negligible number of hammerheads were observed in purse seine fisheries. The greatest number of observations were recorded off Australia, Papua New Guinea (where there is a directed shark fishery), Fiji, and Hawaii. (This pattern is as likely to reflect the history and precision of the observer programmes in these areas as it is the distribution and abundance of hammerhead sharks). Observers recorded that over 50% of hammerhead sharks, including scalloped hammerheads, were finned<sup>8</sup>. SPC is responsible for estimating the annual catches of target and some non-target species but it has not yet produced estimates for hammerhead sharks as these were only designated as key shark species in December 2010 and the data holdings are small.

### **Other Pacific Management Actions**

Another area for which information is being solicited by the 90-day finding is management, regulations and enforcement. The petition and the 90-day finding present very little information on existing shark management in the Pacific. The following information is drawn from a paper prepared by SPC and presented to the seventh meeting of the WCPFC's Scientific Committee<sup>9</sup>, updated to include events after July 2010. The original paper contains detailed references to the sources of information. Sources are quoted below only for supplementary information describing developments in the last six months.

#### *Shark Finning Controls*

The WCPFC's ban on shark finning as contained in the Conservation and Management Measure (CMM) 2010-07 is designed to apply to all waters of the Convention Area but allows coastal States to apply alternative measures and report those alternative measures to the Commission in their Annual Reports – Part 2. As of October 2010, of the 32 members and cooperating non-members (CCMs) required to submit Annual Reports – Part 2, half (16) had confirmed that they are fully implementing the CMM. Eleven of these provided specific confirmation of either implementation of the 5% rule or an alternative measure in national waters (e.g., requiring fins to be attached, banning shark fishing or fin trade, or controlling shark mortality under a quota management system). More CCMs may be implementing the measure but have not reported this.

In addition to the WCPFC finning ban, a number of CCMs have implemented national finning controls:

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<sup>7</sup> SPC (Secretariat of the Pacific Community). 2010. Non-Target Species Interactions with the Tuna Fisheries of the Western and Central Pacific Ocean. Paper prepared for the Joint Tuna RFMOs International Workshop on Tuna RFMO Management Issues relating to Bycatch. Brisbane, Australia, 23-25 June 2010.

<sup>8</sup> Ibid.

<sup>9</sup> Clarke, S. 2011a. A Status Snapshot of Key Shark Species in the Western and Central Pacific and Potential Management Options. WCPFC-SC7-2011/EB-WP-04.

- Australia banned finning in federal waters (3 to 200 miles offshore) for tuna and billfish longline fisheries in 2000 and now requires sharks to be landed with fins attached. Additional regulations apply in some territorial waters (out to 3 miles).
- The State of Hawaii, followed by the United States nationally in the same year, enacted legislation banning finning in state/federal waters and by US vessels by requiring that the total wet weight of the shark fins does not exceed 5% of the total, dressed weight of shark carcasses landed or found on board the vessel. These rules were superseded by the US Shark Conservation Act of 2010 which requires that sharks be landed with their fins attached.
- French Polynesia banned shark finning in conjunction with a ban on fishing and retaining sharks except for mako sharks in 2006.
- Palau prohibited finning by foreign vessels, as well as all shark fishing, in 2003.
- The European Union (EU) implemented controls on finning in EU waters and by EU vessels worldwide in 2003 with a regulation that limits fin weights to 5% of the live (whole) weight of the shark catch. Onboard fin removal is allowed under Special Fishing Permits and fins may be landed and transhipped separately from other shark products. In November 2011, the European Commission announced a new rule requiring that all vessels fishing in EU waters and all EU vessels fishing anywhere in the world will have to land sharks with their fins still attached. The rule will take effect once it is approved by the European Parliament and national ministers<sup>11</sup>.
- Since 2006, it is required in El Salvador waters and wherever Salvadorean vessels fish that fins be at least one-quarter attached to the carcass at landing.
- Chinese Taipei is reportedly planning at some point in 2012 to require that all sharks have their fins attached when landed at Chinese Taipei ports; it is not clear however whether the new regulations will apply to Chinese Taipei vessels landing sharks in foreign ports<sup>12</sup>.
- Japan requires the landing of all parts of sharks since August 2008 but exempts Japanese vessels operating and landing outside Japanese waters<sup>13</sup>.

As details on the monitoring and enforcement of national shark finning controls are not often publicly available, it is not possible to evaluate their effectiveness in terms of discouraging finning and reducing shark mortality. However, it is clear that an increasing number of countries are taking steps to control finning.

### *Catch Limits for Sharks*

Three WCPFC CCMs have implemented measures which could serve to limit catches of hammerhead sharks, although the measures are applicable to sharks in general and not hammerhead sharks specifically:

<sup>11</sup> Ebels, P. 2011. EU Bans Practice of Chopping Off Shark Fins (21 November 2011). Accessed online at <http://euobserver.com/885/114345>

<sup>12</sup> Kastner, J. 2011. Taiwan Tries to Slow Shark Finning. Asia Sentinel, 18 July 2011. Accessed online at [http://www.asiasentinel.com/index.php?option=com\\_content&task=view&id=3324&Itemid=189](http://www.asiasentinel.com/index.php?option=com_content&task=view&id=3324&Itemid=189)

<sup>13</sup> Camhi, M.D., S.V. Valenti, S.V. Fordham, S.L. Fowler, and C. Gibson. 2009. The Conservation Status of Pelagic Sharks and Rays: Report of the IUCN Shark Specialist Group Pelagic Shark Red List Workshop. IUCN Species Survival Commission Shark Specialist Group. Newbury, UK.



- Australia implemented a retention limit of 20 sharks per trip for its Eastern Tuna and Billfish (longline) fishery in 2000; any sharks caught in excess of this limit must be discarded whether alive or dead. For 2010, Australia's reported catch of sharks totalled approximately 92 t.
- Papua New Guinea has a small, directed shark fishery operating entirely within its national waters which is assigned a total allowable catch of 2,000 t dressed weight (~3,300 t whole weight assuming dressed weight is equivalent to 60% of whole weight) per year.
- Tonga's license conditions for longline fishing vessels require that shark bycatch must not exceed 10% of the total catch; for 2009 Tonga reported a total shark catch of 10 t.

New Zealand also implements catch limits for sharks in the form of a quota management system but the system does not include hammerhead sharks. The most recent annual reported shark catches under catch limits for Australia, New Zealand, Papua New Guinea, and Tonga (4,355 t) compares to a total estimated shark catch in the WCPFC Statistical Area of 61,000 t.

#### *Bans on Wire Leaders*

Another form of catch control consists of restrictions on methods used to catch sharks in order to reduce mortality or trauma. As it pertains to hammerhead sharks, this type of mitigation measure is illustrated by a ban on wire leaders, i.e. the branch lines or traces, in longline fisheries. Examples of these practices currently implemented by WCPFC CCMs include:

- Australia banned the use of wire leaders in its eastern tuna and billfish fishery in 2005.
- Palau's Shark Protection Law of September 2003 prohibits having a steel leader onboard at any time.
- In October 2011, the Republic of the Marshall Islands banned commercial shark finning in its waters (all captured sharks must be released), banned wire leaders, and prohibited trade in shark products<sup>14</sup>.

Australia's ban on wire leaders was adopted in response to a study which found that while the catch rates of many species, including eight of ten shark species, were significantly higher on wire leaders, the catches of the target species (bigeye tuna) were significantly lower, and that the five vessels involved in the study would take an additional 679 sharks per year if 100% wire leaders were used.

#### *Time/Area Closures for Sharks*

Time/area closures for sharks prohibit fishing, either permanently or for a fixed period of time (e.g. seasonal closures on a recurring annual basis). The following shark-specific and non shark-specific time/area closures are currently implemented within the WCPO:

- Palau, building on its previous shark fishing controls (see above), declared all of its national waters a shark sanctuary by banning all commercial fishing for sharks in September 2009; sharks caught as bycatch must be released whether dead or alive.

<sup>14</sup> Environmental News Service. 2011. Marshall Islands Creates World's Largest Shark Sanctuary. 7 October 2011. Accessed online at <http://www.ens-newswire.com/ens/oct2011/2011-10-07-01.html>

- French Polynesia has fully protected all sharks except for makos in its waters since 2006; there are currently plans to expand this protection to include makos.
- Under a conservation and management measure for bigeye and yellowfin tuna (CMM 2008-01), two high seas pockets within the WCPF Convention Area were closed to all purse seine fishing on 1 January 2010.
- The Federated States of Micronesia, the Marshall Islands, Palau, Guam, and the Commonwealth of the Northern Mariana Islands agreed in July 2011 to begin the process of creating a regional sanctuary where shark fishing would be prohibited<sup>15</sup>.
- In September 2011, the Pew Environment Group announced that the waters of Tokelau had been declared a shark sanctuary<sup>16</sup>.
- In October 2011, the Republic of the Marshall Islands banned commercial shark finning in its waters (all captured sharks must be released), banned wire leaders, and prohibited trade in shark products<sup>17</sup>.

As for many of the other measures introduced above, monitoring and enforcement data which would allow an evaluation of the effectiveness of these measures in reducing shark mortality are not publicly available. However, it is clear that an increasing number of countries, at least in the Western and Central Pacific are taking actions to conserve sharks, including scalloped hammerhead sharks.

#### *Shark Product Trade and Possession Controls*

In an effort to curb shark fishing several Pacific countries, territories and states have recently adopted bans on the trade and possession of shark fins. Most of these bans pertain to detached fins only and would not affect commercial or recreational landings of whole sharks. The following jurisdictions have implemented such bans since July 2010: Hawaii, the Commonwealth of the Northern Mariana Islands, Guam, the Marshall Islands, and the US States of California, Oregon and Washington. Regulations are under consideration in Fiji despite reports of resistance from the fishing industry<sup>18</sup>.

#### *Scalloped hammerhead catches in the US Western Pacific Region (Hawaii, Guam, Commonwealth of the Northern Mariana Islands, American Samoa)*

There are no directed shark fisheries in the US Western Pacific Region, including fishing for scalloped hammerhead sharks. A small volume of scalloped hammerhead sharks are caught by the Hawaii longline fishery. In observed sets made by the Hawaii longline fishery between

<sup>15</sup> Marianas Variety. 2011. Regional Micronesian Shark Sanctuary Seen by 2012. Marianas Variety, 1 August 2011. Accessed online at [http://mvguam.com/index.php?option=com\\_content&view=article&id=19220%3Aregional-micronesian-shark-sanctuary-seen-by-2012&Itemid=61](http://mvguam.com/index.php?option=com_content&view=article&id=19220%3Aregional-micronesian-shark-sanctuary-seen-by-2012&Itemid=61)

<sup>16</sup> Pew Environment Group. 2011. Tokelau Declares Shark Sanctuary. 7 September 2011. Accessed online at <http://www.pewenvironment.org/news-room/press-releases/tokelau-declares-shark-sanctuary-85899363741>

<sup>17</sup> Environmental News Service. 2011. Marshall Islands Creates World's Largest Shark Sanctuary. 7 October 2011. Accessed online at <http://www.ens-newswire.com/ens/oct2011/2011-10-07-01.html>

<sup>18</sup> Vuibau, T. 2011. State Mulls Over Shark Fin Bill, says Naupoto, Fiji Times, 25 November 2011. Accessed online at <http://www.fijitimes.com/story.aspx?id=186827>

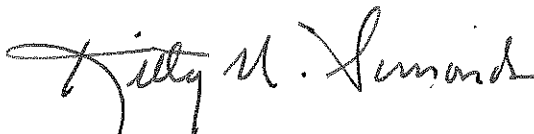
1995 and 2006 only 0.2% of sets took scalloped hammerhead sharks<sup>19</sup>. Most sharks are released alive in the Hawaii longline fishery. A total estimate of 774 pounds or 0.35 mt scalloped hammerhead bycatch for the Hawaii longline for the year 2005<sup>20</sup>. Catches in all other fisheries in the region were found to be negligible.

## Conclusion

In conclusion, given the lack of existing evidence of population declines in the Pacific, an ESA listing for scalloped hammerhead sharks in the Pacific or worldwide does not appear warranted on the basis that this species is overutilized for commercial, recreational, scientific, or educational purposes. Available information does not indicate that the species is in danger of extinction throughout all or significant portion of its range, or that the species is likely to become endangered in the foreseeable future. An ESA listing also does not appear warranted on the basis that existing regulatory mechanisms are inadequate to ensure the continued existence of the species. A number of shark protection measures are being implemented throughout the Pacific by regional fishery management organizations as well as individual jurisdictions. Given the lack of evidence for population declines and imminent danger of extinction of scalloped hammerhead sharks, any possible overfishing can be more effectively addressed through existing fishery management mechanisms than through protection under the U.S. Endangered Species Act.

The Council requests that NMFS fully consider the information provided here in the ongoing status review.

Sincerely,



Kitty M. Simonds  
Executive Director

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<sup>19</sup> . Walsh, W. A., K. A. Bigelow and K.L. Sender. 2009. Decreases in Shark Catches and Mortality in the Hawaii-Based Longline Fishery as Documented by Fishery Observers. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science* 1:270–282.

<sup>20</sup> National Marine Fisheries Service. 2011. U.S. National Bycatch Report [ W. A. Karp, L. L. Desfosse, S. G. Brooke, Editors ]. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-117C, 508 p.