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**LEGISLATIVE REVIEW AND RECOMMENDATIONS FOR IMPLEMENTATION  
OF THE CMS CONCERTED ACTION FOR THE WHALE SHARK  
(*Rhincodon typus*)**

*(Prepared by Sea Shepherd Legal)*

Summary:

The Legislative Review and Recommendations for Implementation of the CMS Concerted Action for the Whale Shark (*Rhincodon typus*) has been prepared by Sea Shepherd Legal (SSL) as part of its agreement to assist the Government of the Philippines and the CMS Secretariat with implementing the Concerted Action for the Whale Shark (UNEP/CMS/CoP12/doc.26.2.7).

The report provides the results of an overarching legislative review and recommendations applicable to all Whale Shark Range States as addressed in CMS COP13 document 28.1.7(a).



## **Legislative Review and Recommendations for Implementation of the CMS Concerted Action for the Whale Shark (*Rhincodon typus*)**

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### **Purpose**

Sea Shepherd Legal (SSL) submits this Legislative Review and Recommendations for Implementation of the CMS Concerted Action for the Whale Shark as part of its agreement to assist the Government of the Philippines and the CMS Secretariat with carrying out the Concerted Action for the Whale Shark (UNEP/CMS/CoP12/doc.26.2.7).

CMS Parties adopted the Concerted Action in November 2017 to respond to the global population decline of whale sharks. The CMS Secretariat noted a key concern was that protective legislation was lacking in at least seven “hotspots” of the whale shark’s 120 Range States, including Gabon, Madagascar, Mozambique, Pakistan, Peru, Portugal (Azores), and Tanzania. To support implementation of the Concerted Action, SSL is providing the Secretariat with (1) Country Reports for each of these seven hotspot Range States based on corresponding gap analyses and (2) this overarching Legislative Review and Recommendations for Implementation report applicable to all whale shark Range States.

SSL thanks the International Environmental Law Project (IELP) for its extensive assistance with this project. IELP is a legal clinic at Lewis & Clark Law School that works to develop, implement, and enforce international environmental law. IELP focuses on a range of issues, including wildlife conservation, climate change, and matters relating to trade and the environment, and provides support to the Secretariats of CMS and the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES).

### **Table of Contents**

I.	Introduction and Methodology . . . . .	2
II.	Overview of the Concerted Action for the Whale Shark . . . . .	4
III.	International Efforts To Conserve and Manage Whale Sharks . . . . .	5
	A. Convention on Migratory Species . . . . .	6
	1. Appendix I Species . . . . .	6
	2. Appendix II Species . . . . .	8
	B. Memorandum of Understanding on the Conservation of Migratory Sharks . . . . .	10
	C. Western and Central Pacific Fisheries Commission (WCPFC). . . . .	10
	D. International Commission for the Conservation of Atlantic Tunas (ICCAT) . . . . .	13
	E. Indian Ocean Tuna Commission (IOTC) . . . . .	14
	F. Inter-American Tropical Tuna Commission (IATTC) . . . . .	16
	G. Convention on International Trade in endangered Species (CITES) . . . . .	17

1.	Catches in the Territorial Sea or EEZ — Appendix I Species . . . . .	18
2.	Catches in the Territorial Sea or EEZ — Appendix II Species . . . . .	19
3.	Catches on the High Seas — Appendix I and II Species . . . . .	19
4.	Trade in Appendix III Species . . . . .	21
H.	MARPOL . . . . .	21
IV.	Summary of the Country Reports . . . . .	22
A.	The CMS Prohibition Against Taking . . . . .	23
B.	Fisheries Legislation . . . . .	25
C.	Habitat Conservation . . . . .	26
D.	Tourism . . . . .	27
E.	Pollution . . . . .	28
F.	CITES . . . . .	28
1.	The Definition of “Specimen” . . . . .	28
2.	Permit Requirements . . . . .	29
V.	Recommendations . . . . .	30

## I. Introduction and Methodology

The whale shark is classified as “endangered” on the IUCN Red List of Threatened Species,<sup>1</sup> and its global population continues to decline<sup>2</sup> due to national and international trade in fins and other products, as well as directed fisheries catches, bycatch, and vessel strikes.<sup>3</sup> Due to its conservation status, governments have taken action nationally and internationally to conserve and manage the whale shark. The Convention on the Conservation of Migratory Species of Wild Animals (CMS)<sup>4</sup> has included the whale shark in Appendix I,<sup>5</sup> a listing that prohibits most takes of the species,<sup>6</sup> and in Appendix II,<sup>7</sup> which recognizes the species’ unfavourable conservation status.<sup>8</sup> Based on a proposal from the Philippines,<sup>9</sup> the CMS Parties also adopted a concerted action for whale sharks that calls on Parties to implement approximately 30 specific actions to protect whale sharks.<sup>10</sup> Among those actions is a call to:

Strengthen existing policies and legislation, develop new legislation where necessary, for the effective conservation of whale sharks, including measures to protect key habitats and alleviate threats.<sup>[11]</sup>

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<sup>1</sup> S.J. Pierce & B. Norman, *Rhincodon typus*, in THE IUCN RED LIST OF THREATENED SPECIES (2016), available at <http://www.iucnredlist.org/details/19488/0>.

<sup>2</sup> *Id.* at “Current Population Trend.”

<sup>3</sup> *Id.* at “Use and Trade” and “Major Threat(s).”

<sup>4</sup> Convention on the Conservation of Migratory Species of Wild Animals, June 23, 1979, 1651 U.N.T.S. 333 (entered into force Nov. 1, 1983), available at <http://www.cms.int/en/convention-text> [hereinafter CMS].

<sup>5</sup> CMS, Appendices I & II of CMS, <http://www.cms.int/en/page/appendix-i-ii-cms>.

<sup>6</sup> CMS, *supra* note 4, at art. III(5).

<sup>7</sup> CMS, Appendices I & II of CMS, <http://www.cms.int/en/page/appendix-i-ii-cms>.

<sup>8</sup> CMS, *supra* note 4, at arts. IV, V.

<sup>9</sup> Philippines, Proposal for Concerted Action for the Whale Shark (*Rhincodon typus*), Already Listed on Appendix II of the Convention, UNEP/CMS/COP12/Doc.26.2.7, available at <https://www.cms.int/en/document/proposal-concerted-action-whale-shark-rhincodon-typus>.

<sup>10</sup> CMS, Concerted Action for the Whale Shark (*Rhincodon typus*), UNEP/CMS/Concerted Action 12.7, at 8–13 (2017), available at [http://www.cms.int/sites/default/files/document/cms\\_cop12\\_ca.12.7\\_whale%20shark\\_e.pdf](http://www.cms.int/sites/default/files/document/cms_cop12_ca.12.7_whale%20shark_e.pdf).

<sup>11</sup> *Id.* at Annex, Activity 5.4.

Policies and legislation could, for example, include measures to alleviate threats from pollution<sup>12</sup> and the development of management plans for marine sanctuaries and other marine protected areas to benefit whale sharks.<sup>13</sup>

Parties might implement these specific actions either through domestic legislation or through pre-existing international or regional treaty obligations. For example, the whale shark is included in Appendix II of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES),<sup>14</sup> which requires CITES Parties to issue permits or certificates prior to trade in whale shark specimens.<sup>15</sup> Other international regimes also affect the conservation and management of whale sharks, including a number of regional fisheries management organizations (RFMOs).

A component of the Concerted Action for the Whale Shark is an assessment of inconsistencies in the level of protection amongst range States. Section II of this report begins by summarizing the legal aspects of the Concerted Action for the Whale Shark adopted at CMS COP12. To contextualize the legislative and policy action in Range States, Section III reviews the obligations included in international and regional treaties that are relevant for whale shark conservation. Section IV of this report then summarizes key aspects of the domestic legislation of seven range States that have been identified as whale shark “hot spots”—Gabon, Pakistan, Peru, Tanzania, Mozambique, Portugal (Azores), and Madagascar. SSL has conducted gap analyses and prepared separate corresponding Country Reports for each of these seven hotspot Range States.

The review of domestic legislation includes an assessment of legislation designed to

- implement the CMS prohibition against taking;
- address known threats to whale sharks, such as fisheries (directed fisheries, bycatch, entanglement), marine pollution (particularly plastics), tourism, and unsustainable trade through CITES implementation; and
- promote habitat conservation through marine protected areas or other strategies.<sup>16]</sup>

The legislative assessment found innovative legislation that can help conserve the whale shark (and other CMS species). It also found significant gaps in legislation, in particular, legislation that does not fully implement the prohibition against taking Appendix I species or regulate shark-watching excursions. Based on this summary, Section V recommends a number of legislative actions that CMS Parties can take to improve the conservation status of the whale shark while also more effectively implementing the Parties’ international obligations under CMS, CITES, and relevant RFMOs.

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<sup>12</sup> *Id.*

<sup>13</sup> *Id.* at Activity 5.7.

<sup>14</sup> Convention on International Trade in Endangered Species of Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087, 993 U.N.T.S. 243 (entered into force July 1, 1975), available at <https://cites.org> [hereinafter CITES].

<sup>15</sup> *Id.* at art. IV(3), IV(5) (describing the permit rules for export and introduction from the sea of Appendix II specimens).

<sup>16</sup> By the terms of the consultancy, “relevant legislation” is limited to (a) wildlife legislation and regulation; (b) fisheries legislation and regulations; (c) CITES implementing legislation; (d) marine conservation legislation (e.g., legislation establishing shark sanctuaries and no-fishing zones); and (e) if necessary, legislation that establishes maritime jurisdictions.

## II. Overview of the Concerted Action for the Whale Shark

At the Twelfth Meeting of the Conference of the Parties (COP12) in 2017, the CMS Parties included the whale shark in Appendix I, which requires Parties to prohibit the taking of animals of the species, except under limited circumstances.<sup>17</sup> It also requires Parties to, among other things, endeavor to remove barriers to migration.<sup>18</sup> Whale sharks, however, are adversely affected by a range of threats, including bycatch, entanglement in fishing nets, and plastics pollution, as well as the proximity of tourist vessels.<sup>19</sup>

Consequently, the Philippines proposed,<sup>20</sup> and the Parties adopted, the Concerted Action to take collective action to address these impacts.<sup>21</sup> The Concerted Action directs Parties to undertake a range of research and monitoring activities to better understand the connectivity of whale shark populations, the scale of bycatch, and the impacts of pollution on whale sharks.<sup>22</sup> It asks Parties to identify threats to whale sharks from tourism and to develop tourism guidelines.<sup>23</sup> In addition, it calls for greater coordination among RFMOs to ban the setting of purse seines on whale sharks<sup>24</sup> and share information, including through greater deployment of observers to obtain more information.<sup>25</sup>

In light of these threats and activities, Activity 5 of the Concerted Action directs the Parties to undertake a number of specific legal actions. These include banning all targeted fishing of whale sharks,<sup>26</sup> developing plans and measures for marine protected areas and other ecosystem-based protection for whale sharks,<sup>27</sup> identifying inconsistencies in the level of protection given to whale sharks,<sup>28</sup> and strengthening existing policies and legislation to conserve whale sharks effectively, including measures to protect key habitats and alleviate threats.<sup>29</sup> To help ascertain the extent to which Parties are implementing these legal actions, this report puts those legal actions in the context of what is already required by international treaties before looking at the relevant legislation of the seven “hotspot” Range States noted above.

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<sup>17</sup> CMS, *supra* note 4, at art. III(5). For a more complete discussion of the prohibition against taking, see *infra* Section III.A.

<sup>18</sup> *Id.* at art. III(4). For a more complete discussion of the requirements for an Appendix I species, see *infra* Section III.A.

<sup>19</sup> *Concerted Action for the Whale Shark*, *supra* note 10, at 2–3.

<sup>20</sup> Philippines, *supra* note 9.

<sup>21</sup> See generally *Concerted Action for the Whale Shark*, *supra* note 10. Concerted actions are defined as priority conservation actions that “involve measures that are the collective responsibility of Parties acting in concert.” CMS, *Concerted Actions*, Resolution 12.28, ¶ 1(a) (2017), available at [http://www.cms.int/sites/default/files/document/cms\\_cop12\\_res.12.28\\_concerted-actions\\_e.pdf](http://www.cms.int/sites/default/files/document/cms_cop12_res.12.28_concerted-actions_e.pdf).

<sup>22</sup> *Id.* at Annex, Activity 1.

<sup>23</sup> *Id.* at Annex, Activity 2.

<sup>24</sup> *Id.* at Annex, Activity 5.8.

<sup>25</sup> *Id.* at Annex, Activity 3.

<sup>26</sup> *Id.* at Annex, Activity 5.2.

<sup>27</sup> *Id.* at Annex, Activity 5.7.

<sup>28</sup> *Id.* at Annex, Activity 5.1.

<sup>29</sup> *Id.* at Annex, Activity 5.4.

### III. International Efforts To Conserve and Manage Whale Sharks

As shark populations decline, a number of multilateral environmental agreements (MEAs) and RFMOs are adopting measures to regulate trade in and catch of sharks, as well as to manage sharks. This section reviews the rules established by the following MEAs and RFMOs:

- The CMS, because the whale shark is included in both CMS Appendix I and II; a number of other shark species are included in Appendix I and/or II;
- The Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MOU) because this non-binding legal instrument recommends that the Signatories adopt a number of conservation obligations that have been multilaterally agreed;
- The Western and Central Pacific Fisheries Convention (WCPFC Convention) because its members in the Western and Central Pacific Fisheries Commission (WCPFC) have adopted binding conservation and management measures relating to setting purse seine nets on whale sharks; it also has a range of measures relating to other shark species;
- The International Convention for the Conservation of Atlantic Tuna, because its members in the International Commission for the Conservation of Atlantic Tuna (ICCAT) have adopted several binding measures to protect whale sharks and other shark species;
- The Indian Ocean Tuna Commission (IOTC) because it also has adopted a number of measures to protect sharks;
- Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL) because it addresses the discharge of garbage, including plastics and fishing nets, into the marine environment from ships; and
- CITES due to its role in managing international trade in whale sharks and other shark species.

This report does not review other MEAs and RFMOs that may indirectly relate to shark conservation. The United Nations Convention on the Law of the Sea (UNCLOS)<sup>30</sup> and the Convention on Biological Diversity,<sup>31</sup> for example, do not impose management obligations on Parties. The Convention for the Conservation of Southern Bluefin Tuna<sup>32</sup> has only a non-binding resolution recommending that its members comply with all current binding and non-binding measures aimed at protecting sharks from fishing adopted by the IOTC, WCPFC, and ICCAT;<sup>33</sup> these measures are assessed in this report. In addition, this report does not review the International

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<sup>30</sup> The United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S 3, U.N. Doc. A/CONF.62/122 (entered into force Nov. 16, 1994), *available at*

[http://www.un.org/depts/los/convention\\_agreements/convention\\_overview\\_convention.htm](http://www.un.org/depts/los/convention_agreements/convention_overview_convention.htm).

<sup>31</sup> Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S 79 (1992) (entered into force Dec. 29, 1993), *available at* <https://www.cbd.int/convention/text/>.

<sup>32</sup> Convention for the Conservation of Southern Bluefin Tuna, May 10, 1993, 1819 U.N.T.S. 360, (entered into force May 20, 1994), *available at* <https://www.ccsbt.org/en/content/basic-documents-commission>.

<sup>33</sup> CCSBT, Recommendation to Mitigate the Impact on Ecologically Related Species of Fishing for Southern Bluefin Tuna, ¶ 2 (2011) *available at* [https://www.ccsbt.org/sites/ccsbt.org/files/userfiles/file/docs\\_english/operational\\_resolutions/Recommendation\\_ER\\_S.pdf](https://www.ccsbt.org/sites/ccsbt.org/files/userfiles/file/docs_english/operational_resolutions/Recommendation_ER_S.pdf).

Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks),<sup>34</sup> an entirely voluntary program implemented through nationally-defined conservation and management plans,<sup>35</sup> or the General Fisheries Commission for the Mediterranean (GFCM),<sup>36</sup> which has competence only with respect to fisheries of the Mediterranean and Black Seas.<sup>37</sup>

## A. Convention on Migratory Species

CMS places species in two Appendices. Appendix I includes “endangered” migratory species.<sup>38</sup> Appendix II includes (1) migratory species that have an unfavourable conservation status and which require international agreements for their conservation and management and (2) migratory species that have a conservation status that would significantly benefit from the international cooperation that could be achieved by an international agreement.<sup>39</sup> Species may be included in both Appendices.<sup>40</sup>

The CMS Parties have included a number of shark species, including the whale shark, sawfishes, basking shark, *Manta* spp. and *Mobula* spp., among others, in both Appendix I and Appendix II.<sup>41</sup> Other shark species, including the thresher sharks (*Alopias* spp.), are included only in Appendix II.<sup>42</sup> Thus, to implement CMS adequately for all shark species, Parties must have legislation that implements the provisions for both Appendix I and II species.

### 1. Appendix I Species

CMS imposes significant obligations on Parties with respect to Appendix I species. The Parties must prohibit the “take” of specimens of Appendix I species, except in limited circumstances (e.g., scientific purposes or to accommodate traditional subsistence users of such species), provided that the exception is precise as to content and limited in space and time.<sup>43</sup> In addition, such taking should not operate to the disadvantage of the species.<sup>44</sup> CMS defines “take” broadly to include “taking, hunting, fishing, capturing, harassing, deliberate killing, or attempting to engage in any such conduct.”<sup>45</sup>

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<sup>34</sup> Food & Agric. Org. United Nations, International Plan of Action for the Conservation and Management of Sharks, available at <http://www.fao.org/docrep/006/X3170E/x3170e03.htm>.

<sup>35</sup> *Id.* at ¶¶ 10, 18–22.

<sup>36</sup> The General Fisheries Commission for the Mediterranean (GFCM) was established under the provisions of Article XIV of the FAO Constitution. See Food & Agric. Org. of the U.N., General Fisheries Commission for the Mediterranean (GFCM), <http://www.fao.org/gfcm/en/>. Agreement for the Establishment of the General Fisheries Commission for the Mediterranean, preamble para. 16 (entered into force Feb. 20 1952), available at <http://www.fao.org/gfcm/background/legal-framework/en/>.

<sup>37</sup> Agreement for the Establishment of the General Fisheries Commission for the Mediterranean, *supra* note 37, at arts. 3, 4.

<sup>38</sup> CMS, *supra* note 4, at art. III.

<sup>39</sup> *Id.* at art. IV(1).

<sup>40</sup> *Id.* at art. IV(2).

<sup>41</sup> *Id.*, Appendix I & II, <http://www.cms.int/en/page/appendix-i-ii-cms>.

<sup>42</sup> *Id.*

<sup>43</sup> *Id.* at art. III(5).

<sup>44</sup> *Id.*

<sup>45</sup> *Id.* at art. I(1(i)).

The question of whether bycatch is a “take” under CMS is an important one. The prohibition against “taking” could be interpreted as including unintentional taking, such as bycatch; by placing the word “deliberate” only in front of “killing,” the drafters appear to have intended to prohibit “hunting, fishing, capturing, harassing” that is not necessarily deliberate because those terms are not modified by “deliberate.” Such an interpretation is consistent with the principle of *noscitur a sociis*. This rule of interpretation states that a word should be interpreted by considering the words with which it is associated in the context.<sup>46</sup> If the drafters had intended only deliberate taking to be prohibited, they would have inserted “deliberate” at the beginning of the list of types of taking; that is, they would have defined “taking” to mean “deliberate taking, hunting, fishing, capturing or harassing.”

The negotiating history supports this interpretation. The last pre-conference draft in December 1978 did not include the word “deliberate.” Instead, it defined “taking” as “taking, hunting, fishing, killing, or capturing.”<sup>47</sup> However, in the draft that began the negotiating conference, the drafters inserted the word “deliberate” before “killing” and “harassing”; they also added the term “capturing” before the word “deliberate.”<sup>48</sup> This change came after the United Kingdom proposed the inclusion of “deliberate” before “killing or capturing,” stating that “[u]nintentional killing—such as treading on or running over—must be eliminated from the list of prohibitions.”<sup>49</sup> The text adopted, however, defines “taking” as “taking, hunting, fishing, capturing, harassing, deliberate killing, or attempting to engage in such conduct.”<sup>50</sup> The drafters provisionally approved<sup>51</sup> and then adopted this text “without discussion.”<sup>52</sup>

In other words, the drafters first inserted the word deliberate to modify both killing and harassing. The drafters then moved the term “harass” so that it was not modified by the term “deliberate.” The purposeful insertion of “deliberate” to modify “killing” but not “harassing” supports the conclusion that *unintentional* takes resulting from hunting, fishing, and capturing are prohibited by Article III(5) of the Convention. Unintentional killing, such as hitting an Appendix I bird with your car while you drive or having an Appendix I bird fly into your window, is not prohibited.

However, it is also possible and perhaps more likely that the drafters did not think the word “deliberate” was needed to modify the other words, believing that hunting, fishing, capturing, and harassing required deliberate, intentional action. While this is arguably true for hunting, fishing,

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<sup>46</sup> This rule is also known as *ejusdem generis*. OPPENHEIM’S INTERNATIONAL LAW 1280 (Sir Robert Jennings & Sir Arthur Watts eds., 9th ed. 1992).

<sup>47</sup> Second Revised Draft Convention on the Conservation of Migratory Species of Wild Animals, with Explanatory Notes, art. I.1(f) (December 1978).

<sup>48</sup> Conference to Conclude a Convention on the Conservation of Migratory Species of Wild Animals, RT 2, art. I(a) (June 18, 1979). This text and brackets persisted though RT 2/Rev. 1, at art. I(1)(g) (June 18, 1979) (defining “taking” as “taking, hunting, fishing, capturing, deliberate killing or harassing, or attempting to engage in such conduct.”).

<sup>49</sup> United Kingdom, Proposed Amendment to the Second Draft Dated December 1978, PL 3 (June 11, 1979). The United Kingdom also proposed that “deliberate disturbance” be prohibited. *Id.*

<sup>50</sup> CMS, *supra* note 4, at art. I(1)(i).

<sup>51</sup> Conference to Conclude a Convention on the Conservation of Migratory Species of Wild Animals, SumPl 10, at 1 (June 21, 1979).

<sup>52</sup> Conference to Conclude a Convention on the Conservation of Migratory Species of Wild Animals, SumPl 14, at 1 (June 22, 1979).

and capturing, it is not necessarily true for harassing. Activities not intended to harass an animal, such as noise or tourism activities, can certainly harass an animal by disrupting its normal behavior.<sup>53</sup>

Importantly, the Parties have never made a determination that unintentional fishing, capturing, or harassing are prohibited by CMS. Given the number of sharks caught as bycatch in tuna and other fisheries important to many CMS Parties, they may choose not to include sharks in Appendix I if bycatch is prohibited. The large number of shark species in Appendix I suggests that the Parties have implicitly adopted the second interpretation of “taking”; that is, that hunting, fishing, capturing, and harassing require deliberate action and therefore did not need to be expressly modified by the word “deliberate.”

In addition to the take prohibition, the Parties must also endeavor to conserve and, where feasible and appropriate, restore those habitats of the species that are of importance in removing the species from danger of extinction.<sup>54</sup> Additionally, they must endeavor to prevent, remove, compensate for or minimize, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species,<sup>55</sup> and otherwise prevent, reduce or control factors that are endangering or are likely to further endanger the species.<sup>56</sup>

These obligations are qualified by the phrases “shall endeavor” and “where feasible and appropriate.” Nonetheless, Parties are not free to refrain from taking any action. Thus, if plastics or other pollution adversely affects whale sharks, they must do something to mitigate such factors that are endangering or further endangering the species.

## 2. Appendix II Species

CMS does not impose any direct responsibilities on Parties with respect to Appendix II species. Instead, Parties are directed to develop AGREEMENTs under Article IV(3) or agreements under Article IV(4). Collectively, these are referred to as Agreements, with the “A” capitalized. The main distinction between these two types of Agreements is that Article IV(3) AGREEMENTs must relate to Appendix II migratory species, whereas Article IV(4) agreements may relate to species not included in the Appendices provided that they “periodically cross one or more national jurisdiction

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<sup>53</sup> The U.S. National Research Council, for example, stated that, with respect to impacts of noise on marine mammals, “[b]ehavioral responses range from subtle changes in surfacing and breathing patterns, to cessation of vocalizations, to active avoidance or escape from the region of the highest sound levels.” NATIONAL RESEARCH COUNCIL, OCEAN NOISE AND MARINE MAMMALS 90 (2003), available at <https://www.nap.edu/read/10564/chapter/5#90>.

<sup>54</sup> CMS, *supra* note 4, at art. III(4)(a).

<sup>55</sup> *Id.* at art. III(4)(b).

<sup>56</sup> *Id.* at art. III(4)(c).

boundaries.”<sup>57</sup> States have negotiated a number of non-binding Memoranda of Understanding under Article IV(4)<sup>58</sup> and seven binding Agreements under both Article IV(3)<sup>59</sup> and IV(4).<sup>60</sup>

To conserve and manage such species, the Parties to a binding Agreement or Signatories to a non-binding MOU typically develop Action Plans that include conservation or management actions for Parties or Signatories to implement. In the case of sharks, many CMS Parties, as well as some non-Party range States such as the United States, negotiated the Sharks MOU, described in Section B below.

The CMS Parties have also adopted resolutions that bear on the Concerted Action for Whale Sharks. Resolution 12.20, *Management of Marine Debris*, calls on CMS Parties to, among other things, address the issue of abandoned and discarded fishing gear and to reduce the amount of sea-based marine debris.<sup>61</sup> The disposal of fishing gear and plastics is discussed further with respect to MARPOL in Section III.H, below.

CMS Parties have also urged Parties to adopt appropriate measures, including legislation and binding regulations, to promote ecologically sustainable wildlife watching.<sup>62</sup> These measures should help ensure that wildlife watching activities do not have negative impacts on the long-term survival of populations and habitats and should have only minimal impact on the behavior of those animals being watched.<sup>63</sup> These measures should also include licensing and training of tourism operators and other specific measures to minimize the impact on wildlife.<sup>64</sup> The Parties supported their resolution on wildlife watching with species-specific guidelines.<sup>65</sup> With respect to elasmobranchs, such as whale sharks, the guidelines recommend (1) banning the use of motorized vessels such as jet skis and hovercraft because they are too fast to avoid collisions with sharks, (2) requiring the use of propeller

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<sup>57</sup> *Id.* at art. IV(4).

<sup>58</sup> Links to all of these agreements can be found at CMS, Memoranda of Understanding, <http://www.cms.int/en/cms-instruments/mou>.

<sup>59</sup> Agreement on Africa-Eurasian Migratory Waterbirds, June 16, 1995, art. I(3) (entered into force Nov. 1, 1999) (“This Agreement is an AGREEMENT within the meaning of Article IV, paragraph 3, of the Convention [on Migratory Species].”); Agreement on the Conservation of Albatrosses and Petrels, June, 19 2001, 2258 UNTS 257, art. I(5) (entered into force Feb. 1, 2004) (“This Agreement is an AGREEMENT within the meaning of Article IV (3) of the Convention [on Migratory Species].”); Agreement on the Conservation of Gorillas and Their Habitats, Oct. 26 2007, 2545 UNTS 55, art. I(4) (entered into force June 1, 2008); Agreement on the Conservation of Populations of European Bats, Dec. 4, 1991, 1863 UNTS 101, art. II(1) (entered into force Jan. 16, 1994). Links to all of these AGREEMENTs can be found at CMS, Agreements, <http://www.cms.int/en/cms-instruments/agreements>.

<sup>60</sup> Agreement on the Conservation of Cetaceans in the Black Sea and the Mediterranean Sea and Contiguous Atlantic Area, Nov. 24 1996, 2183 UNTS 303, art. I(4) (entered into force June 1, 2001) (“This Agreement is an agreement within the meaning of Article IV, paragraph 4, of the Convention.”); Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas, Mar. 17, 1992, 1772 UNTS 217, art. 8(1) (entered into force Mar. 29, 1994); Agreement on the Conservation of Seals in the Wadden Sea, Oct. 16, 1990, art. I (entered into force Oct. 1, 1991). Links to all of these agreements can be found at CMS, Agreements, <http://www.cms.int/en/cms-instruments/agreements>.

<sup>61</sup> CMS, *Management of Marine Debris*, Resolution 12.20, ¶¶ 12–13 (2017), available at [http://www.cms.int/sites/default/files/document/cms\\_cop12\\_res.12.20\\_marine\\_debris\\_e.pdf](http://www.cms.int/sites/default/files/document/cms_cop12_res.12.20_marine_debris_e.pdf).

<sup>62</sup> CMS, *Sustainable Boat-Based Marine Wildlife Watching*, Resolution 11.29, ¶ 1 (Rev.COP12), available at [http://www.cms.int/sites/default/files/document/cms\\_cop12\\_res.11.29%28rev.cop12%29\\_e.pdf](http://www.cms.int/sites/default/files/document/cms_cop12_res.11.29%28rev.cop12%29_e.pdf).

<sup>63</sup> *Id.* at ¶ 3.

<sup>64</sup> *Id.* at ¶¶ 4–7.

<sup>65</sup> *Id.* at Annex, *Species-Specific Guidelines for Boat-Based Wildlife Watching* (2017), available at [http://www.cms.int/sites/default/files/document/cms\\_cop12\\_res.11.29%28rev.cop12%29\\_annex\\_e.pdf](http://www.cms.int/sites/default/files/document/cms_cop12_res.11.29%28rev.cop12%29_annex_e.pdf).

guards to reduce the risk of injuring sharks, (3) prohibiting the feeding of animals, and (4) limiting the number of hours per day for wildlife watching.<sup>66</sup>

## **B. Memorandum of Understanding on the Conservation of Migratory Sharks**

The Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MOU) is a non-binding CMS agreement with the goal of achieving and maintaining a favourable conservation status for migratory sharks, including the whale shark, included in its Annex 1.<sup>67</sup> It seeks to achieve this goal primarily through the adoption and implementation of a conservation plan.<sup>68</sup> The conservation plan includes a number of activities that Signatories are asked to implement. These activities include assessing and prioritizing threats to sharks, including whale sharks;<sup>69</sup> disseminating traditional knowledge on sharks and their habitats;<sup>70</sup> and taking concrete actions to conserve sharks, such as prohibiting the take of sharks, developing programs to monitor shark bycatch, and ensuring mortality rates do not exceed levels that could result in a significant decline.<sup>71</sup> It also recommends that the Signatories designate marine conservation areas for habitat critical to sharks;<sup>72</sup> work to reform, phase out, and eliminate subsidies resulting in unsustainable use of sharks;<sup>73</sup> and, among many other things, enhance institutional capacities and competencies in shark identification, management and conservation techniques.<sup>74</sup> As stated, these measures are non-binding. Nonetheless, these measures represent a comprehensive strategy for conserving and managing sharks.

## **C. WCPFC**

The WCPF Convention<sup>75</sup> establishes the WCPFC to manage and conserve tuna and other fish stocks<sup>76</sup> of significant commercial value across a huge swath of the Pacific Ocean—an area covering about twenty percent of Earth’s surface.<sup>77</sup> Currently, the WCPFC consists of twenty-six

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<sup>66</sup> *Id.* at 26.

<sup>67</sup> Memorandum of Understanding on the Conservation of Migratory Sharks, Feb. 12, 2010, at ¶ 5 (entered into force Mar. 2010), available at <https://www.cms.int/sharks/en/document/memorandum-understanding-conservation-migratory-sharks> [hereinafter Sharks MOU].

<sup>68</sup> *Id.* at Annex 3.

<sup>69</sup> *Id.* at Annex 3, Activity 1.6.

<sup>70</sup> *Id.* at Annex 3, at Activity 2.6.

<sup>71</sup> *Id.* at Annex 3, at Activities 4.2, 4.3, and 4.4.

<sup>72</sup> *Id.* at Annex 3, at Activity 9.1.

<sup>73</sup> *Id.* at Annex 3, at Activity 8.1.

<sup>74</sup> *Id.* at Annex 3, at Activity 14.2.

<sup>75</sup> Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Sept. 5, 2000, 2275 U.N.T.S. 40532 [hereinafter WCPF Convention] (entered into force June 19, 2004) available at <https://www.wcpfc.int/system/files/text.pdf>.

<sup>76</sup> *Id.* at art. 2.

<sup>77</sup> W. & CENT. PAC. FISHERIES COMM’N, *Frequently Asked Questions and Brochures*, <https://www.wcpfc.int/frequently-asked-questions-and-brochures> (last updated Mar. 3, 2010). The Convention Area is defined in article 3 of the Convention and comprises all waters of the Pacific Ocean bounded to the south and to the east by a line drawn

from the south coast of Australia due south along the 141° meridian of east longitude to its intersection with the 55° parallel of south latitude; thence due east along the 55° parallel of south latitude to its intersection with the 150° meridian of east longitude; thence due south along the

members, seven participants, and seven cooperating non-members, collectively referred to as “CCMs.”<sup>78</sup> None of the CCMs include our target States (Gabon, Madagascar, Mozambique, Pakistan, Peru, Portugal, or Tanzania), but all are shark range States. In addition to setting total allowable catches and other rules for various tuna species, the WCPFC has established a number of obligations relating to shark species caught as bycatch.

For example, the WCPFC has identified several key shark species<sup>79</sup> for which CCMs must require their vessels to retain fins constituting no more than 5% of the weight of sharks on board.<sup>80</sup> CCMs must adopt measures “to prohibit their fishing vessels from retaining on board, transshipping, landing, or trading any fins harvested in contravention” of this “fin-to-carcass” ratio.<sup>81</sup> To reduce bycatch in tuna fisheries, CCMs must take measures “to encourage the release of live sharks that are caught incidentally and are not used for food or other purposes.”<sup>82</sup>

Stricter Conservation and Management Measures (CMMs) apply to silky sharks<sup>83</sup> and oceanic whitetip sharks.<sup>84</sup> These CMMs prohibit vessels flagged by CCMs from “retaining on board, transshipping, storing on a fishing vessel, or landing . . . in whole or in part” any silky or oceanic whitetip shark in the fisheries covered by the Convention.<sup>85</sup> Vessels must release any oceanic whitetip shark that is caught “as soon as possible” and in a manner that causes “as little harm to the shark as possible.”<sup>86</sup>

The WCPFC has also adopted a CMM related to whale sharks. This CMM prohibits the vessels of CCMs from setting a purse seine net on a whale shark to catch tuna if they see the shark

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150° meridian of east longitude to its intersection with the 60° parallel of south latitude; thence due east along the 60° parallel of south latitude to its intersection with the 130° meridian of west longitude; thence due north along the 130° meridian of west longitude to its intersection with the 4° parallel of south latitude; thence due west along the 4° parallel of south latitude to its intersection with the 150° meridian of west longitude; thence due north along the 150° meridian of west longitude.

WCPF Convention, *supra* note 76, at art. 3. A map of the Convention Area can be found at <https://www.wcpfc.int/system/files/Map.pdf>.

<sup>78</sup> Members of the WCPFC are Australia, China, Canada, Cook Islands, EU, Federated States of Micronesia, Fiji, France, Indonesia, Japan, Kiribati, Republic of Korea, Republic of Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America, and Vanuatu. Participants include American Samoa, Commonwealth of N. Mariana Islands, French Polynesia, Guam, New Caledonia, Tokelau, Wallis and Futuna. Cooperating non-members have included, from time to time, Ecuador, El Salvador, Mexico, Panama, Liberia, Thailand, and Vietnam. WCPFC, About WCPFC, at <https://www.wcpfc.int/about-wcpfc>.

<sup>79</sup> The key species are the blue shark (*Prionace glauca*), silky shark (*Carcharhinus falciformis*), oceanic whitetip shark (*Carcharhinus longimanus*), species of Mako shark (genus *Isurus*), species of thresher sharks (genus *Alopias*), four species of hammerhead shark (genus *Sphyrna*), and porbeagle (*Lamna nasus*) south of 20°S latitude. WCPFC, *Conservation and Management Measure for Sharks*, CMM 2010-07, ¶ 4, fn. 2 (2010), available at <https://www.wcpfc.int/system/files/CMM%202010-07%20%5BSharks%5D.pdf>.

<sup>80</sup> *Id.* at ¶ 7.

<sup>81</sup> *Id.* at ¶ 9.

<sup>82</sup> *Id.* at ¶ 10.

<sup>83</sup> WCPFC, *Conservation and Management Measure for Silky Sharks*, CMM 2013-08, ¶ 1, (2013).

<sup>84</sup> WCPFC, *Conservation and Management Measure for Oceanic Whitetip Shark*, CMM 2011-04, ¶ 1, (2011).

<sup>85</sup> CMM 2013-08, *supra* note 83, at ¶ 1; CMM 2011-04, *supra* note 84, at ¶ 1.

<sup>86</sup> CMM 2013-08, ¶ 2; CMM 2011-04, ¶ 2.

before starting to set the net.<sup>87</sup> This measure applies on the high seas and exclusive economic zones (EEZs) of the Convention Area.<sup>88</sup> However, CCMs with vessels fishing in EEZ of CCMs north of 30°N may implement either this measure or “compatible measures consistent with the obligations under this measure.”<sup>89</sup> If a whale shark is caught, the vessel master must take “all reasonable steps” to ensure the shark’s release and report the incident.<sup>90</sup>

A second CMM defines Fish Aggregating Devices (FADs) as including a whale shark.<sup>91</sup> During the FAD closure period, which runs for variable periods of time depending on the decision of the WCPFC,<sup>92</sup> a purse seine vessel is prohibited from conducting any part of a set within one nautical mile of a FAD.<sup>93</sup>

In the Convention’s longline fisheries, the WCPFC specifically contemplates targeted fishing of sharks. For longliners targeting sharks, the relevant CCM must develop a management plan that includes a total allowable catch or other measures that limit shark catches to “acceptable levels.”<sup>94</sup> These plans must also demonstrate how the fisheries “aim to avoid or reduce catch and maximises live release” of silky and oceanic whitetip sharks caught incidentally.<sup>95</sup>

To avoid bycatch of sharks in longline fisheries, CCMs must ensure that their vessels either do not use or carry wire trace as branch lines or leaders or do not use branch lines running directly off the longline floats or drop lines, known as shark lines.<sup>96</sup> Branch lines are those parts of the fishing line that include the bait.<sup>97</sup> Sharks can bite through monofilament branch lines but not steel lines. Scientists have shown that monofilament lines are better for limiting bycatch and improving

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<sup>87</sup> WCPFC, *Conservation and Management Measure for Protection of Whale Sharks from Purse Seine fishing Operations*, CMM 2012-04, ¶ 1, (2012)

<sup>88</sup> *Id.*

<sup>89</sup> *Id.* at ¶ 3.

<sup>90</sup> *Id.* at ¶ 4.

<sup>91</sup> A FAD is defined as

any object or group of objects, of any size, that has or has not been deployed, that is living or non-living, including but not limited to buoys, floats, netting, webbing, plastics, bamboo, logs and whale sharks floating on or near the surface of the water that fish may associate with[.]

WCPFC, *Conservation and Management Measure on the Application of High Seas FAD Closures and Catch Retention*, CMM 2009-02, ¶ 3 (2009), available at <https://www.wcpfc.int/system/files/CMM%202009-02%20%5BFAD%20Closure%20and%20Catch%20Retention%5D.pdf>.

<sup>92</sup> WCPFC, *Conservation and Management Measure for Bigeye, Yellowfin and Skipjack Tuna in the Western and Central Pacific Ocean*, CMM 2016-01, ¶¶ 14–18 (2016), available at [https://www.wcpfc.int/system/files/Att%20O\\_CMM%202016-01%20CMM%20for%20Bigeye%20Yellowfin%20and%20Skipjack%20Tuna.pdf](https://www.wcpfc.int/system/files/Att%20O_CMM%202016-01%20CMM%20for%20Bigeye%20Yellowfin%20and%20Skipjack%20Tuna.pdf).

<sup>93</sup> CMM 2009-02, *supra* note 92, at ¶ 4.

<sup>94</sup> WCPFC, *Conservation and Management Measure for Sharks*, CMM 2014-05, ¶ 2 (2014).

<sup>95</sup> *Id.*

<sup>96</sup> *Id.* at ¶ 1.

<sup>97</sup> *Id.* at Figure 1.

catches of the target species.<sup>98</sup> Thus, if wire traces are used, it seems likely that the vessel intends to catch sharks in addition to tuna, swordfish, or other target species.<sup>99</sup>

#### D. ICCAT

As early as 2003, the ICCAT<sup>100</sup> directed its members and cooperating non-members (collectively referred to as CPCs) to report their shark catches by gear type and their landings and trade in shark products.<sup>101</sup> ICCAT followed up this non-binding resolution two years later with a binding recommendation directing the CPCs to report their shark catches.<sup>102</sup> In addition, the new recommendation requires CPCs to take the necessary measures to ensure that their fishers “fully utilize their entire catches of sharks” caught in the Convention Area.<sup>103</sup> ICCAT defines “full utilization” as “retention by the fishing vessel of all parts of the shark excepting head, guts and skins, to the point of first landing.”<sup>104</sup> Consistent with this requirement of full utilization, the recommendation further requires that CPCs ensure that their vessels not possess fins that total more than 5% of the weight of sharks onboard, up to the first point of landing.<sup>105</sup> It also prohibits all fishing vessels from retaining on board, transshipping or landing any fins harvested in contravention of these rules.<sup>106</sup> In 2007, ICCAT directed the CPCs to take measures to reduce fishing mortality in fisheries targeting porbeagle (*Lamna nasus*) and North Atlantic shortfin mako sharks (*Isurus oxyrinchus*).<sup>107</sup>

By 2009, ICCAT moved away from fin-to-carcass ratios towards retention bans. For example, in 2009 ICCAT prohibited CPCs from “retaining onboard, transshipping, landing, storing, selling, or offering for sale any part or whole carcass of bigeye thresher sharks (*Alopias superciliosus*),” except for the Mexican small-scale coastal fishery with a catch of fewer than 110 fish.<sup>108</sup> This recommendation further directed CPCs to require that their vessels record catches of

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<sup>98</sup> SPC-OFP, Preliminary analysis of potential impacts of wire traces on shark catches in WCPO tuna longline fisheries, WCPFC-SC9-2013/ SC9-WCPFC9-09, at 1 (2013) (“the number of sharks that are on the line when it comes to the side of the boat is higher when wire traces are used.”), available at <https://www.wcpfc.int/system/files/SC9-WCPFC9-09-IP-Sharks-and-wiretraces.pdf>.

<sup>99</sup> Pew Charitable Trusts, Fact Sheet, Banning Wire Leaders: A Practical Solution for Reducing Shark Bycatch in Pelagic Longlines, (June 11, 2012), available at <http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2012/06/11/banning-wire-leaders-a-practical-solution-for-reducing-shark-bycatch-in-pelagic-longlines>.

<sup>100</sup> International Convention for the Conservation of Atlantic Tunas, May 14, 1966, 673 U.N.T.S. 63, 20 U.S.T. 2887, art. III(1), available at <http://www.iccat.es/> (entered into force Mar. 21, 1969) [hereinafter ICCAT Convention].

<sup>101</sup> ICCAT, *Shark Fishery*, Resolution 03–10, ¶ 1 (2003), available at [https://www.iccat.int/Documents/Recs/COMPENDIUM\\_ACTIVE\\_2017\\_ENG.pdf](https://www.iccat.int/Documents/Recs/COMPENDIUM_ACTIVE_2017_ENG.pdf).

<sup>102</sup> ICCAT, *Conservation of Sharks Caught in Association with Fisheries Managed by ICCAT*, Recommendation 04–10, ¶ 1 (2005), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2004-10-e.pdf>.

<sup>103</sup> *Id.* at ¶¶ 2. The “Convention area” is defined as “all waters of the Atlantic Ocean, including the adjacent Seas.” ICCAT Convention, *supra* note 101, at art. 1.

<sup>104</sup> Recommendation 04/10, *supra* note 103, at ¶ 2.

<sup>105</sup> *Id.* at ¶ 3.

<sup>106</sup> *Id.* at ¶ 5.

<sup>107</sup> ICCAT, *Sharks*, Supplemental Recommendation 07–06, ¶ 2 (2007), available at [https://www.iccat.int/Documents/Recs/COMPENDIUM\\_ACTIVE\\_2017\\_ENG.pdf](https://www.iccat.int/Documents/Recs/COMPENDIUM_ACTIVE_2017_ENG.pdf).

<sup>108</sup> ICCAT, *Conservation of Thresher Sharks Caught in Association with Fisheries in the ICCAT Convention Area*, Recommendation 09–07, ¶ 1 (2009), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2009-07-e.pdf>.

other *Alopias* species.<sup>109</sup> ICCAT later adopted similar prohibitions for oceanic whitetip sharks<sup>110</sup> and hammerhead sharks.<sup>111</sup> For silky sharks, retention, landing, and transshipment are banned but sale is not expressly prohibited.<sup>112</sup> For hammerhead, silky, and porbeagle sharks, CPCs must require their vessels to promptly release sharks unharmed.<sup>113</sup> CPCs must also require their vessels to implement data collection programs to ensure the reporting of catch, effort, size, and discard data.<sup>114</sup>

These prohibitions include some exceptions. Developing coastal CPCs may allow hammerhead and silky sharks to be caught for local consumption, provided that they do not increase their catches and that they take measures to ensure that the sharks do not enter international commercial trade.<sup>115</sup> The silky shark prohibition does not apply to CPCs whose domestic law requires that all dead fish be landed, requires that fishermen do not derive profit from such fish, and prohibits directed silky shark fisheries.<sup>116</sup>

Lastly, ICCAT adopted a recommendation to minimize entanglement of sharks and other species with FADs. It requires CPCs to replace by 2016 existing FADs with non-entangling FADs.<sup>117</sup>

## E. IOTC

The IOTC<sup>118</sup> has also established rules relating to whale sharks specifically and sharks more generally. For example, it requires IOTC members and cooperating non-members (collectively referred to as CPCs) to prohibit their flagged vessels from intentionally setting a purse seine net around a whale shark in the IOTC area of competence,<sup>119</sup> if it is sighted prior to the

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<sup>109</sup> *Id.* at ¶ 4.

<sup>110</sup> ICCAT, *Conservation of Oceanic Whitetip Sharks Caught in Association with Fisheries in the ICCAT Convention Area*, Recommendation 10–07, ¶ 1 (2010), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2010-07-e.pdf>.

<sup>111</sup> ICCAT, *Conservation of Hammerhead Sharks (Family Sphyrnidae) Caught in Association with Fisheries in the ICCAT Convention Area*, Recommendation 10–08, ¶ 1 (2010), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2010-08-e.pdf>.

<sup>112</sup> ICCAT, *Conservation of Silky Sharks Caught in Association with Fisheries in the ICCAT Convention Area*, Recommendation 11–08, ¶ 1 (2009), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-08-e.pdf>.

<sup>113</sup> Recommendation 10–08, *supra* note 112, at ¶ 2, Recommendation 11–08, *supra* note 113, at ¶ 2. ICCAT, *Porbeagle Caught in Association with ICCAT Fisheries*, Recommendation 15–06, ¶ 1 (2015).

<sup>114</sup> Recommendation 10–08, *supra* note 112, at ¶ 3; Recommendation 11–08, *supra* note 113, at ¶ 4; ICCAT, *Shortfin Mako Caught in Association with ICCAT Fisheries*, Recommendation 14–06, ¶ 1; Recommendation 15–06, *supra* note 114, at ¶ 2; ICCAT, *Management Measures for the Conservation of Atlantic Blue Shark Caught in Association with ICCAT Fisheries*, Recommendation 16–12, ¶ 5 (2016), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2016-12-e.pdf>.

<sup>115</sup> Recommendation 10–08, *supra* note 112, at ¶ 3; Recommendation 11–08, *supra* note 113, at ¶ 4.

<sup>116</sup> Recommendation 11–08, *supra* note 113, at ¶ 6.

<sup>117</sup> ICCAT, *Multi-annual Conservation and Management Programme for Tropical Tunas*, Recommendation 16–01, ¶ 24 (2016), available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2016-01-e.pdf>.

<sup>118</sup> Agreement for the Establishment of the Indian Ocean Tuna Commission, Nov. 25, 1993, 1927 U.N.T.S. 329, art. 1, available at <http://www.iotc.org/sites/default/files/documents/2012/5/25/IOTC%20Agreement.pdf> (entered into force Mar. 27, 1996) [hereinafter IOTC Convention].

<sup>119</sup> The IOTC Convention Area is

commencement of the set.<sup>120</sup> If a whale shark is unintentionally encircled in a purse seine net within the IOTC's convention area, the vessel must take "all reasonable steps" to ensure the shark's safe release, while also taking into account crew safety, and report the incident with details of the interaction, the location of the encirclement, and steps taken to ensure the animal's safe release.<sup>121</sup> Vessels using other gear types when fishing for tuna and tuna-like species associated with whale sharks must report all interactions with whale sharks to the relevant authority.<sup>122</sup> However, CPCs that have national and sub-national legislation protecting whale sharks are exempt from reporting whale shark interactions to the IOTC.<sup>123</sup>

Concerning sharks generally, the IOTC has adopted a binding resolution to consider a prohibition on retaining, transshipping, landing, or storing any part or whole carcass of a shark.<sup>124</sup> For the moment, the IOTC applies this prohibition only to oceanic whitetip sharks.<sup>125</sup> CPCs shall require their vessels to "promptly" release the sharks unharmed "to the extent practicable."<sup>126</sup> They must also "encourage" their fishers to record incidental catch and live releases of oceanic whitetip sharks.<sup>127</sup> Previously, the IOTC established similar rules for thresher sharks in the family *Alopiidae* but also prohibited the sale of these sharks.<sup>128</sup>

For species that may be landed, CPCs must take the necessary measures to ensure that their fishers "fully utilise their entire catches of sharks," with the exception of those subject to an IOTC ban.<sup>129</sup> The IOTC defines "full utilisation" as "retention by the fishing vessel of all parts of the shark excepting head, guts and skins, to the point of first landing."<sup>130</sup> The IOTC then provides two options for fulfilling this requirement. First, CPCs may prohibit the removal of shark fins on board vessels and the "landing, retention on-board, transshipment and carrying of shark fins which are not naturally attached to the shark carcass until the first point of landing."<sup>131</sup> Second, if the first

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the Indian Ocean (defined for the purpose of this Agreement as being FAO statistical areas 51 and 57 as shown on the map set out in Annex A to this Agreement) and adjacent seas, north of the Antarctic Convergence, insofar as it is necessary to cover such seas for the purpose of conserving and managing stocks that migrate into or out of the Indian Ocean.

*Id.* at art. II.

<sup>120</sup> IOTC, *Conservation of Whale Sharks (Rhincodon typus)*, Resolution 13/05, ¶ 2 (2013), available at <http://www.iotc.org/cmm/resolution-1305-conservation-whale-sharks-rhincodon-typus>.

<sup>121</sup> *Id.* at ¶ 3.

<sup>122</sup> *Id.* at ¶ 4.

<sup>123</sup> *Id.* at ¶ 9.

<sup>124</sup> IOTC, *Scientific and Management Framework on the Conservation of Shark Species Caught in Association with IOTC Managed Fisheries*, Resolution 13/06, ¶ 1 (2013), available at [http://www.iotc.org/sites/default/files/documents/compliance/IOTC\\_-\\_Compendium\\_of\\_ACTIVE\\_CMMs\\_26\\_November\\_2016\\_Designed.pdf](http://www.iotc.org/sites/default/files/documents/compliance/IOTC_-_Compendium_of_ACTIVE_CMMs_26_November_2016_Designed.pdf).

<sup>125</sup> *Id.* at ¶ 3.

<sup>126</sup> *Id.* at ¶ 4.

<sup>127</sup> *Id.* at ¶ 5.

<sup>128</sup> IOTC, *Conservation of Thresher Sharks (Family Alopiidae) Caught in Association with Fisheries in the IOTC Area of Competence*, Resolution 12/09 (2012), available at [http://www.iotc.org/sites/default/files/documents/compliance/IOTC\\_-\\_Compendium\\_of\\_ACTIVE\\_CMMs\\_26\\_November\\_2016\\_Designed.pdf](http://www.iotc.org/sites/default/files/documents/compliance/IOTC_-_Compendium_of_ACTIVE_CMMs_26_November_2016_Designed.pdf).

<sup>129</sup> IOTC, *Conservation of Sharks Caught in Association with Fisheries Managed by IOTC*, Resolution 17/05, ¶ 2 (2017), available at [http://www.iotc.org/sites/default/files/documents/compliance/cmm/iotc\\_cmm\\_1705.pdf](http://www.iotc.org/sites/default/files/documents/compliance/cmm/iotc_cmm_1705.pdf).

<sup>130</sup> *Id.*

<sup>131</sup> *Id.* at ¶ 3(a).

option is not adopted, then CPCs must require their vessels to not have onboard fins that total more than 5% of the weight of sharks onboard, up to the first point of landing.<sup>132</sup> CPCs must also prohibit the purchase, offer for sale and sale of shark fins that have been removed or retained in contravention of this resolution.<sup>133</sup>

## F. IATTC

The IATTC<sup>134</sup> manages tuna and tuna-like species in areas of the Pacific Ocean adjacent to and southeast of the WCPFC Convention Area.<sup>135</sup> It, too, has rules concerning shark conservation and management. For example, for all sharks, members and cooperating non-members (collectively referred to as CPCs) must prohibit their vessels from having onboard fins totaling more than 5% of the weight of sharks onboard, up to the first point of landing, and must prohibit their vessels from retaining onboard, transshipping, landing or trading in any fins harvested in contravention of this rule.<sup>136</sup> Each CPC must also submit annual report data for “catches, effort by gear type, landing and trade of sharks by species, where possible, in accordance with IATTC reporting procedures, including available historical data.”<sup>137</sup>

A separate resolution prohibits, from 2017 to 2019, vessels of CPCs from retaining onboard, transshipping, landing, or storing, in part or whole, carcasses of silky sharks caught by purse-seine vessels in the IATTC Convention Area.<sup>138</sup> In addition, CPCs must require their longline vessels whose fishing licenses do not include sharks as a fishing target but catch sharks incidentally to limit bycatch of silky sharks to a maximum of 20% of the total catch by fishing trip in weight.<sup>139</sup> Longline vessels that set the majority of their hooks at depths less than 100 meters and fish for species other than swordfish must limit their catch of silky sharks of less than 100 cm total length to 20% of the total number of silky sharks caught during the trip.<sup>140</sup> CPCs must also prohibit their vessels from fishing in silky shark pupping areas, as identified by the IATTC.<sup>141</sup> In multi-species fisheries using surface longlines that have captured more than 20% of silky sharks in weight on average, CPCs must prohibit the use of steel leaders for three consecutive months each year.<sup>142</sup>

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<sup>132</sup> *Id.* at ¶ 3(b).

<sup>133</sup> *Id.* at ¶ 7.

<sup>134</sup> Inter-American Tropical Tuna Convention, May 31, 1949, 80 U.N.T.S. 3, U.S.T. 230, T.I.A.S. 2044, art. 1 (entered into force Mar. 3, 1950) available at: <http://www.iattc.org/IATTCDocumentsENG.htm> [hereinafter IATTC Convention]. The IATTC Convention was updated by the Convention for Strengthening the Inter-American Tropical Tuna Convention, June 27, 2003 (entered into force on Aug. 27 2010), available at: <https://www.iattc.org/IATTCdocumentationENG.htm> [hereinafter Antigua Convention]. Not all Parties to the IATTC Convention have ratified the Antigua Convention and thus the two conventions are in effect.

<sup>135</sup> IATTC Convention, *supra* note 135, at art. II(1); Antigua Convention, *supra* note 135, at art. III.

<sup>136</sup> IATTC, *Conservation of Sharks Caught in Association with Fisheries in the Eastern Pacific Ocean*, Resolution C-05-03, ¶¶ 3–4 (2005), available at <http://www.iattc.org/PDFFiles/Resolutions/IATTC/English/C-03-05%20Data%20provision%20resolution.pdf>.

<sup>137</sup> *Id.* at 11.

<sup>138</sup> IATTC, *Conservation Measures for Shark Species, With Special Emphasis on the Silky Shark (Carcharhinus falciformis)*, for the Years 2017, 2018, and 2019, Resolution C-16-06, ¶ 1 (2016), available at <http://www.iattc.org/PDFFiles/Resolutions/IATTC/English/C-16-06-Conservation-of-sharks.pdf>.

<sup>139</sup> *Id.* at ¶ 2.

<sup>140</sup> *Id.* at ¶ 3.

<sup>141</sup> *Id.* at ¶ 5.

<sup>142</sup> *Id.* at ¶ 6.

As of January 1, 2018, Members must require their purse seine vessels to promptly release unharmed any sharks caught, except those retained aboard the vessel, and they must prohibit their vessels from towing whale sharks out of a purse seine net with tow ropes.<sup>143</sup> Members must prohibit longline vessels flying their flag and targeting tuna or swordfish in the Convention Area from using “shark lines”—lines that hang higher in the water than the lines used for catching tuna or swordfish.<sup>144</sup> CPCs shall require their fishers to collect and submit catch data for silky and hammerhead sharks.<sup>145</sup>

With respect to whale sharks, CPCs shall prohibit their vessels from setting a purse seine net on a school of tuna associated with a live whale shark if the animal is sighted prior to the commencement of the set.<sup>146</sup> If a whale shark is not deliberately encircled in the purse-seine net, then the vessel must ensure that all reasonable steps are taken to ensure its safe release and report the details of the catch and release.<sup>147</sup>

### **G. Convention on International Trade in Endangered Species (CITES)**

CITES regulates international trade in species of conservation concern;<sup>148</sup> it does not regulate the management or catch of species. Those species threatened with extinction and which may be affected by trade are placed in Appendix I.<sup>149</sup> Appendix II includes those species that may become threatened with extinction if trade is not strictly regulated.<sup>150</sup> Parties may also unilaterally include species in Appendix III to prevent or restrict the species’ exploitation and where cooperation of other Parties is needed to control trade.<sup>151</sup>

The heart of CITES lies in its permit system. Prior to trade in specimens of species included in the Appendices, Parties must make a variety of permit findings.<sup>152</sup> The type of permit and the permit findings vary depending on whether the species is included in Appendix I, II, or III and whether a specimen of a listed species is being imported, exported, or “introduced from the sea” (described below). For marine species like sharks, then, the permit requirements will depend on whether the specimen was caught (1) in the territorial seas or EEZ of a coastal State or (2) on the high seas.

One particularly important CITES provision is its definition of “specimen” because CITES Management Authorities must issue permits for trade in “specimens” of species included in the

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<sup>143</sup> IATTC, *Management of Sharks Species*, Resolution C-16-05, ¶¶ 3, 5 (2016), available at <http://www.iattc.org/PDFFiles/Resolutions/IATTC/English/C-16-05-Management-of-sharks.pdf>.

<sup>144</sup> *Id.* at ¶ 4.

<sup>145</sup> *Id.* at ¶ 2.

<sup>146</sup> IATTC, *Amendment of Resolution C-15-03 on the Collection and Analysis of Data on Fish-aggregating Devices*, Resolution C-16-01, ¶ 12, available at <http://www.iattc.org/PDFFiles/Resolutions/IATTC/English/C-16-01-FADs-Amendment-C-15-03.pdf>.

<sup>147</sup> *Id.* at ¶ 13.

<sup>148</sup> CITES, *supra* note 14, at arts. II–V. “Trade” is defined as “export, re-export, import and introduction from the sea.” *Id.* at art. I(c).

<sup>149</sup> *Id.* at art. II(1).

<sup>150</sup> *Id.* at art. II(2).

<sup>151</sup> *Id.* at art. II(3).

<sup>152</sup> *Id.* at arts. III–V.

CITES Appendices. CITES defines “specimen” to mean any plant or animal, whether dead or alive, plus “any readily recognizable parts or derivatives.”<sup>153</sup> Resolution Conf. 9.6 (Rev. CoP16), defines “readily recognizable part or derivative” to mean “any specimen which appears from an accompanying document, the packaging or a mark or label, or from any other circumstances, to be a part or derivative of an animal or plant of a species included in the Appendices.”<sup>154</sup>

The Parties have placed all species of sawfishes from the family *Pristidae*, which are also known as carpenter sharks, in Appendix I and more than 25 species of shark, including the whale shark, in Appendix II.<sup>155</sup> Colombia and Brazil have placed several species of freshwater stingrays in Appendix III.<sup>156</sup>

### 1. Catches in the Territorial Sea or EEZ — Appendix I Species

Pursuant to UNCLOS, coastal States have sovereignty over their territorial sea<sup>157</sup> and sovereign rights to exploit, conserve, and manage natural resources within their EEZ.<sup>158</sup> Consistent with UNCLOS, CITES considers catches of CITES-listed species within a coastal State’s territorial sea or EEZ to be catches within that State’s jurisdiction.

Consequently, two situations may arise with respect to catches of Appendix I sharks in the territorial seas and EEZs of coastal States. First, if a specimen is caught in the territorial sea or EEZ of a State and landed in that State, CITES is not implicated because no international trade is involved. The coastal State does not need to issue any permits.

Second, if the specimen is caught in the territorial sea or EEZ of one State and exported to another State, whether directly from the vessel that caught the specimen or after landing it in the coastal State, then the State in which the specimen was caught must issue an export permit.<sup>159</sup> Prior to such exports, the State of export may issue an export permit only if an import permit has been issued by the State of import.<sup>160</sup> Importantly, the State of import may not issue an import permit if the import is for primarily commercial purposes.<sup>161</sup> Consequently, imports, for example, of “toothed” rostrums of a sawfish for sale as souvenirs are prohibited. The import of a sawfish may be for non-commercial purposes; for example, a fisherman who has caught a sawfish and wants to return to his or her country of residence with his “trophy” may do so provided he obtains the relevant permits.

Prior to trade in any Appendix I specimen, both the State of import and State of export must determine that the trade will not be detrimental to the survival of the species. The State of import must determine that the *purpose* of the import is not detrimental to the survival of the

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<sup>153</sup> *Id.* at art. I(b).

<sup>154</sup> CITES Resolution Conf. 9.6 (Rev. CoP16), ¶ 1 (last revised 2016), available at <https://www.cites.org/sites/default/files/document/E-Res-09-06-R16.pdf>.

<sup>155</sup> CITES, Appendices I, II, and III (valid from Apr. 4, 2017), <https://cites.org/eng/app/appendices.php>.

<sup>156</sup> *Id.*

<sup>157</sup> UNCLOS, *supra* note 31, at art. 2.

<sup>158</sup> *Id.* at art. 56(1).

<sup>159</sup> CITES, *supra* note 14, at art. III(2).

<sup>160</sup> *Id.* at art. III(2)(d).

<sup>161</sup> *Id.* at art. III(3)(c).

species.<sup>162</sup> That inquiry requires the State of import to determine, for example, whether collection of shark fins or rostrums for personal use would encourage trade to the detriment of the species. The State of export must determine whether the export will be detrimental to the survival of the species.<sup>163</sup> This finding focuses on the impacts of removal from the wild.<sup>164</sup> If either State cannot affirmatively declare that the trade is not detrimental, then the trade is prohibited.

In addition, prior to issuing an export permit, the State of export must determine that that specimen was “not obtained in contravention of the laws of that State for the protection of fauna and flora.”<sup>165</sup> This is known as the “legal acquisition” finding. For marine species, indicators of legal acquisition may include the vessel’s license, which may or may not allow the taking of protected species.

Lastly, for living specimens, the State of import and State of export must make findings related to the humane treatment of the specimens. The State of export must be satisfied that the living specimen will be “so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment.”<sup>166</sup> The State of import must be satisfied that the proposed recipient of a living specimen “is suitably equipped to house and care for it.”<sup>167</sup>

## 2. Catches in the Territorial Sea or EEZ — Appendix II Species

The requirements for trade in Appendix II specimens are less strict than for Appendix I specimens. Most significantly, the State of import is not required to issue an import permit for trade in specimens of these species, and, consequently, imports for primarily commercial purposes are not prohibited. The State of export, however, must still issue an export permit. Prior to issuing an export permit, the State of export must determine that the trade will not be detrimental to the survival of the species, that the specimen was legally acquired, and, for any living specimen, that the specimen will be prepared and shipped so as to minimize the risk of injury, damage to health or cruel treatment.<sup>168</sup>

## 3. Catches on the High Seas — Appendix I and II Species

CITES also establishes rules for the issuance of permits and certificates for specimens taken in the marine environment beyond the jurisdiction of any State; that is, the “high seas.”<sup>169</sup> CITES refers to such trade as “introduction from the sea.”<sup>170</sup> For introductions from the sea, CITES

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<sup>162</sup> *Id.* at art. III(3)(a).

<sup>163</sup> *Id.* at art. III(2)(a).

<sup>164</sup> CITES, Resolution 16.7 (Rev. CoP17), *Non-detriment Findings*, available at <https://cites.org/sites/default/files/document/E-Res-16-07-R17.pdf>.

<sup>165</sup> CITES, *supra* note 14, at art. III(2)(b).

<sup>166</sup> *Id.* at art. III(2)(c).

<sup>167</sup> *Id.* at art. III(3)(b).

<sup>168</sup> *Id.* at art. IV(2).

<sup>169</sup> CITES, *Introduction from the Sea*, Resolution 14.6 (Rev. CoP16), ¶ 1 (defining “the marine environment not under the jurisdiction of any State” to mean “those marine areas beyond the areas subject to the sovereignty or sovereign rights of a State consistent with international law, as reflected in the United Nations Convention on the Law of the Sea.”).

<sup>170</sup> CITES, *supra* note 14, at art. I(e).

requires the “State of introduction” to issue certificates of introduction from the sea (IFS certificates).<sup>171</sup> The Parties struggled to reach consensus on which State constituted the State of introduction: the flag State or the port State. Consequently, the Parties developed different permit rules depending on the identities of the flag State and the port State.

1. *Situation 1: An IFS certificate* is required when the flag State of the vessel that caught the Appendix I or II specimen on the high seas is the same as the State into which the specimen is transported.<sup>172</sup> For either an Appendix I or II specimen, only a single IFS certificate must be issued. If the specimen is an Appendix I specimen, the State of introduction must find that the introduction will not be detrimental to the survival of the species involved, that the specimen is not to be used for primarily commercial purposes, and that the proposed recipient of a living specimen is suitably equipped to house and care for it.<sup>173</sup> For Appendix II specimens, the State of introduction must determine that the introduction will not be detrimental to the survival of the species involved and that any living specimen will be so handled as to minimize the risk of injury, damage to health or cruel treatment.<sup>174</sup>

2. *Situation 2: An export permit* is required when the flag State of the vessel that caught the Appendix I or II specimen on the high seas is different from the State into which the specimen is transported. In this case, the flag State must issue an export permit. For an Appendix I specimen, the State into which the specimen is transported (i.e., the port State) must also issue an import permit.<sup>175</sup> The import and export permit requirements for trade are the same as described in subsections 1 and 2, above.

Recall that for the export of Appendix I and II specimens, the State of export must determine that the specimen was “not obtained in contravention of the laws of that State for the protection of fauna and flora.”<sup>176</sup> Although this is colloquially referred to as the “legal acquisition” finding, it refers only to the laws of the State of export. It does not refer to the binding rules of RFMOs or to any illegal, unreported, or unregulated (IUU) fishing. Given the growing prevalence of RFMO rules regulating the catch of sharks and other species and the continuing problems of IUU fishing, the Parties recommended that prior to the issuance of any permits or certificates for trade in specimens caught on the high seas that the relevant States “take into account” whether the specimen was acquired and landed

in a manner consistent with applicable measures under international law for the conservation and management of living marine resources, including those of any other treaty, convention or agreement with conservation and management measures for the marine species in question; and ii) through any illegal, unreported or unregulated (IUU) fishing activity.<sup>177</sup>

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<sup>171</sup> *Id.* at arts. III(5), IV(6).

<sup>172</sup> Resolution 14.6 (Rev. CoP16), *supra* note 170, at ¶ 2(a).

<sup>173</sup> CITES, *supra* note 14, at art. III(5).

<sup>174</sup> *Id.* at art. IV(6).

<sup>175</sup> *Id.* at ¶ 2(b).

<sup>176</sup> *Id.* at arts. III(2)(b), IV(2)(b).

<sup>177</sup> Resolution 14.6 (Rev. CoP16), *supra* note 170, at ¶ 3.

Very few permits and certificates have been issued for trade in specimens caught on the high seas. For that reason, whether these rules are being implemented or whether these rules are sufficient to ensure specimens are acquired consistently with the rules of RFMOs is unclear. Nonetheless, because whale sharks and other sharks are caught on the high seas as well as territorial waters and exclusive economic zones, States of import and export must incorporate the full range of CITES rules in their domestic implementing legislation.

#### 4. Trade in Appendix III Species

The rules for trade in Appendix III specimens are less rigorous. If a State has included the species in Appendix III, then it may issue an export permit only after determining that the specimen was legally acquired and that any living specimen is so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment.<sup>178</sup> Other Parties that are countries of origin for the species must issue certificates of origin prior to export, but CITES does not require any particular permit findings to be made.<sup>179</sup> States of re-export must issue certificates prior to re-export.<sup>180</sup>

#### H. MARPOL

The International Convention for the Prevention of Pollution from Ships (MARPOL) includes an array of provisions, protocols, and annexes regulating and preventing pollution of the marine environment by ships from operational or accidental causes.<sup>181</sup> Annex V of MARPOL prohibits the disposal of plastics and other garbage, including fishing nets, into sea. More specifically,

discharge into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products is prohibited.<sup>182</sup>

Annex V defines “plastic” broadly to mean

a solid material which contains as an essential ingredient one or more high molecular mass polymers and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure. Plastics have material properties ranging from hard and brittle to soft and elastic. For the purposes of this annex, “all plastics” means all garbage that consists of or

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<sup>178</sup> CITES, *supra* note 14, at art. V(2).

<sup>179</sup> *Id.* at art. V(3).

<sup>180</sup> *Id.* at art. V(4).

<sup>181</sup> For more about MARPOL, see Int’l Maritime Org., History of MARPOL (International Convention for the Prevention of Pollution from Ships),

<http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofMARPOL/Pages/default.aspx>.

<sup>182</sup> Int’l Maritime Org., Resolution MEPC.201(62), Amendments to the Annex of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships (Revised MARPOL, Annex V), at Regulation 3 (adopted July 15, 2011; entered into force on 1 January 2013), *available at*

[http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Garbage/Documents/2014%20revision/RESOLUTION%20MEPC.201\(62\)%20Revised%20MARPOL%20Annex%20V.pdf](http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Garbage/Documents/2014%20revision/RESOLUTION%20MEPC.201(62)%20Revised%20MARPOL%20Annex%20V.pdf).

includes plastic in any form, including synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products.<sup>183</sup>

It also defines “fishing gear” broadly to mean “any physical device or part thereof or combination of items that may be placed on or in the water or on the sea-bed with the intended purpose of capturing, or controlling for subsequent capture or harvesting, marine or fresh water organisms.”<sup>184</sup> However, it exempts the accidental loss of synthetic fishing nets from this prohibition, provided that “all reasonable precautions” have been taken to prevent the loss.<sup>185</sup> Subsequent guidelines clarify that fishing gear “released into the water with the intention for later retrieval, such as FADs, traps and static nets,” should not be considered garbage or accidental loss in the context of Annex V.<sup>186</sup>

Nonetheless, if a vessel accidentally loses or discharges fishing gear that “poses a significant threat to the marine environment or navigation,” it must report the incident to the flag State and the coastal State where the loss or discharge occurred.<sup>187</sup> While governments have discretion to define the type of gear that might pose a significant threat,<sup>188</sup> examples of lost or abandoned fishing gear that could fall into this category include “whole or nearly whole large fishing gear or other large portions of gear.”<sup>189</sup>

#### IV. Summary of the Country Reports

As part of this report, a review of the laws of seven CMS Parties known to have populations of whale sharks—Gabon, Madagascar, Mozambique, Pakistan, Peru, Portugal (Azores), and Tanzania—was undertaken to identify legislation that could provide a model for whale shark conservation as well as areas of concern for whale shark conservation. The review of legislation followed the main concepts identified in the Concerted Action for the Whale Shark by assessing implementation of

- the prohibition against taking of CMS Article III(5);
- habitat protection, fisheries, and pollution laws as a means to implement CMS Article III(4); and
- tourism legislation due to the surge in shark tourism.

The reviews are not exhaustive or necessarily complete. First, the review assessed the laws of just seven Parties; there are approximately 120 States and territories that are Range States of the

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<sup>183</sup> *Id.* at Regulation 1.13.

<sup>184</sup> *Id.* at Regulation 1.6.

<sup>185</sup> *Id.* at Regulation 7.1.3.

<sup>186</sup> See also Int’l Maritime Org., Resolution MEPC.219(63), 2012 Guidelines for the Implementation of MARPOL Annex V, § 1.7.8 (stating that fishing gear intended for later retrieval is not considered to be garbage) (adopted March 2, 2012), available at [http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Garbage/Documents/2014%20revision/RESOLUTION%20MEPC.219\(63\)%20Guidelines%20for%20the%20Implementation%20of%20MARPOL%20Annex%20V.pdf](http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Garbage/Documents/2014%20revision/RESOLUTION%20MEPC.219(63)%20Guidelines%20for%20the%20Implementation%20of%20MARPOL%20Annex%20V.pdf).

<sup>187</sup> MARPOL Annex V, *supra* note 183, at Regulation 10.6.

<sup>188</sup> Resolution MEPC.219(63), *supra* note 187, at § 2.2.2.1.

<sup>189</sup> *Id.* at § 2.2.2.2.

whale shark. Second, even for the seven Parties, the broad scope of the Concerted Action for the Whale Shark made that task challenging. For example, the Concerted Action identifies a number of threats to whale sharks, including targeted fishing, bycatch, pollution, and proximity of tourism vessels, that Range States can prevent or minimize with appropriate national legislation. National wildlife legislation or protected areas legislation might regulate or prohibit directed fishing for whale sharks, which squarely addresses the threat of overexploitation from the direct taking of the species. Fishing legislation might limit negative impacts on whale sharks by regulating the use of fishing gear, establishing strict bycatch rules and limitation, and by ensuring adequate monitoring of shark entanglements and collisions. Fisheries legislation or tourism-specific legislation might limit the negative impacts from tourism interactions with whale sharks. Other legislation might address marine debris (including plastics) and otherwise limit adverse impacts to whale shark habitat. A combination of wildlife legislation, fisheries legislation and CITES-specific legislation may regulate trade in CITES-listed specimens.

Despite this complexity, the reviews highlight bright spots where Parties have implemented laws that “go the extra mile” to protect whale sharks. They also identify a number of concerns—concerns that may have implications beyond whale shark conservation.

### **A. The CMS Prohibition Against Taking**

The reviews identified four problems associated with implementation of the CMS prohibition against taking found in Article III(5). First and most significant, legislation failed to implement completely the prohibition against taking of Appendix I species. As noted in Section III.A.1 of this report, the CMS prohibition against taking found in Article III(5) is broad, covering activities typically considered “taking”: hunting, fishing, capturing, deliberate killing. But it also includes “harassing” and “attempting” to engage in any of these forms of taking.

The legislation of the Parties reviewed typically only partially implements the taking prohibition. Most frequently, they fail to prohibit “harassing” or “attempting” to take an Appendix I animal. The failure to prohibit harassment is particularly worrisome for whale sharks because many countries are focusing tourism on shark diving and in particular diving for and swimming with whale sharks. Some evidence indicates that unregulated diving can have adverse impacts on whale sharks.<sup>190</sup> At least two of the Parties reviewed have legislation to avoid harassment of cetaceans from tourism<sup>191</sup> but similar legislation has not been adopted for sharks.

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<sup>190</sup> SJ Pierce et al., *Developing a Code of Conduct for Whale Shark Interactions in Mozambique*, 20 AQUATIC CONSERVATION 782 (2010), available at <https://onlinelibrary.wiley.com/doi/pdf/10.1002/aqc.1149> (documenting avoidance behavior by whale sharks due to human interactions). *But see* R. L. Sanzogni, et al., Multi-Year Impacts of Ecotourism on Whale Shark (*Rhincodon typus*) Visitation at Ningaloo Reef, Western Australia, PLOS ONE 10(9) (2015), available at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127345> (finding no evidence that interactions with tourists affected the likelihood of whale shark re-encounters).

<sup>191</sup> Regional Legislative Decree No. 9/99 regulating whale watching within Azorian waters, amended and republished by the Regional Legislative Decrees n° 10/2003/A of March 22, and No 13/2004 /A of March 23, available at [http://pt.artazores.com/legislacao/DLR9.99.A\\_observCet\\_Com.Alt\\_DLR10.03.pdf](http://pt.artazores.com/legislacao/DLR9.99.A_observCet_Com.Alt_DLR10.03.pdf); Zanzibar Tourism Regulations (2014), §§ 41–46, available at [http://www.zanzibartourism.go.tz/images/joomlart/documents/Tourism\\_Regulations.pdf](http://www.zanzibartourism.go.tz/images/joomlart/documents/Tourism_Regulations.pdf).

The second problem relates to the failure of legislation to implement the narrow scope of exceptions to the prohibition against taking. Some legislation, for example, allows exceptions for public display,<sup>192</sup> a purpose clearly not contemplated by Article III(5). Other exceptions were written more broadly than Article III(5) but the competent authority had discretion to refuse exceptions. Thus, the legislation itself might not comply with CMS but implementation might.

The third problem related to the geographic scope of the prohibition against taking. CMS requires Range states to apply the prohibition throughout its territory and with respect to vessels flying its flag and operating on the high seas.<sup>193</sup> The reviewed laws often stated clearly that they applied within the national territory and waters under national jurisdiction, but were silent as to applicability on the high seas.<sup>194</sup>

The fourth problem was simply identifying whether the whale shark (or any other CMS Appendix I animal) was protected. Laws variously referred to “protected species,” “endangered species,” or “threatened species” without clearly defining those species in relation to CMS Appendix I.

The Pakistani province of Balochistan, which has authority to implement CMS in its territory and up to 12 nautical miles from its coastline, provides a model for implementing the CMS prohibition against taking and overcoming three of the four problems identified above. It does so by using the language of Article III(5) *verbatim*:

The Government shall prohibit the taking of wild animals belonging to Appendix-I of CMS with exceptions, if the taking is for—

- (a) scientific purposes;
- (b) the purpose of enhancing the propagation or survival of the affected species;  
and
- (c) accommodating the needs of traditional subsistence users of such species;  
or extraordinary circumstances so require:

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<sup>192</sup> The Fisheries Act, Act No. 22 (2003) (Mainland Tanzania), § 56 [hereinafter FSA], *available at* <http://extwprlegs1.fao.org/docs/pdf/tan53024.pdf>.

<sup>193</sup> CMS defines “Range State” as follows:

“Range State” in relation to a particular migratory species means any State (and where appropriate any other Party referred to under subparagraph (k) of this paragraph) that exercises jurisdiction over any part of the range of that migratory species, or a State, flag vessels of which are engaged outside national jurisdictional limits in taking that migratory species;

CMS, *supra* note 4, at art. I(h).

<sup>194</sup> *See, e.g.*, Law n.º 5/2017 amending and republishing Law n.º 16/2014, de of 20 June, Law on Protection, Conservation and Sustainable Use of Biological Diversity (Biodiversity Law), art. 2, *available at* <http://extwprlegs1.fao.org/docs/pdf/moz168082.pdf>.

Provided that such exceptions are precise as to the content and are limited in space and time and such taking will not operate to the disadvantage of the species.<sup>195</sup>

Balochistan's legislation then defines "taking" to mean "taking, removing, hunting, shooting, capturing, killing, or harassing of a wild animal or fishing in a protected area or attempting to engage in any such act."<sup>196</sup>

An important aspect of Balochistan's legislation is that it refers to all species included in Appendix I. In this way, Balochistan is not required to amend lists of species each time the CMS Parties include new species in Appendix I. Legislation always remains current with respect to those species to which the take prohibition applies.

## **B. Fisheries Legislation**

All seven CMS Parties regulate fishing activities in all jurisdictional waters of the State or relevant subnational jurisdiction. In addition, they all require licensing of foreign and domestic vessels to fish and provisions allowing for inspection of vessels, logbooks, and other documentation.<sup>197</sup> Legislation also provides fisheries managers with broad authority to manage fisheries through closed seasons and areas, gear restrictions, and other fisheries management tools.<sup>198</sup>

Finning of whale sharks caught in directed fisheries is prohibited by CMS Article III(5) and, consequently, additional legislation prohibiting finning of whale sharks is required. Whale sharks might be caught as bycatch, thus CMS Parties should also consider a ban on finning so as to discourage finning and to implement the binding regulations of RFMOs that ban finning or require that fins weigh no more than 5% of the total shark catch.<sup>199</sup> The Azores, through EU legislation, bans finning. The EU has adopted a "fins-attached" policy that requires fishers that catch sharks to retain the shark's carcass.<sup>200</sup> Peru adopted a similar "fins-attached" policy in

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<sup>195</sup> The Balochistan (Wildlife Protection, Preservation, Conservation and Management) Act, No. 15 of 2014, Gazette of Balochistan Extraordinary, § 59(2), Mar. 28, 2014, *available at* [http://balochistan.gov.pk/index.php?option=com\\_docman&task=cat\\_view&gid=1383&Itemid=100449](http://balochistan.gov.pk/index.php?option=com_docman&task=cat_view&gid=1383&Itemid=100449).

<sup>196</sup> *Id.* at § 2(iiii).

<sup>197</sup> *See, e.g.*, Decree N° 71-238 of May 8, 1971, regulating fishing with the use of trawl nets in the territorial sea (Madagascar), at art. 1, p. 537 of the Regional Compendium of Fisheries Legislation (Indian Ocean Region), *available at* <http://www2.ecolex.org/server2neu.php/libcat/docs/LI/MON-046948.pdf>; The Deep Sea Fishing Authority Act Regulations (2009), Government Notice No. 48 (United Republic of Tanzania) [hereinafter: DSFA Regulations] at § 10, *available at* <http://extwprlegs1.fao.org/docs/pdf/tan153970.pdf>; The Exclusive Fishery Zone (Regulation of Fishing) Act, No. 32 of 1975 (Pakistan), Mar. 1, 1975, *available at* <http://extwprlegs1.fao.org/docs/pdf/pak4811.pdf> [hereinafter EFZA].

<sup>198</sup> *See, e.g.*, Law 2015-053, Code of Fishing and Aquaculture (Madagascar), art. 22, *available at* <http://extwprlegs1.fao.org/docs/pdf/Mad162704.pdf> [hereinafter Fishing Code]; Law n.º 4/96 of January 4 (Law of the Sea) (Mozambique), at arts. 48, 72, *available at* <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC022054/>.

<sup>199</sup> *See supra* Section III.C–F (concerning the management measures of RFMOs).

<sup>200</sup> The fins-attached regulation applies to "vessels in maritime waters under the sovereignty or the jurisdiction of Member States." Council Regulation (EC) No 1185/2003 of 26 June 2003 on the removal of fins of sharks on board vessels, art. 3(1), *available at* <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003R1185-20130706>.

2016.<sup>201</sup> The laws of the other CMS Parties did not appear to implement the “fin to carcass ratios” adopted by the WCPFC, ICCAT, IOTC, and the IATTC.<sup>202</sup>

Some States also allowed the encirclement of whale sharks by purse seiners to capture tuna.<sup>203</sup> Some, but not all, RFMOs prohibit encirclement of whale sharks, as noted in Section III.C–F. Even if not prohibited by an RFMO, as in the WCPFC, IATTC and IOTC, a prohibition against encirclement is one way of implementing the obligation of CMS Article III(4) to endeavor, as appropriate, to prevent, remove, or minimize the adverse effects of activities that seriously impede or prevent the migration of the species, and to prevent, reduce or control factors that are endangering or are likely to further endanger the species. In addition, most of the jurisdictions do not require immediate or safe release of whale sharks caught as bycatch.<sup>204</sup> It is also not clear whether the States reviewed require full utilization of whale sharks when they are caught and unable to be released. Whether vessels need to report interactions with whale sharks differs from State to State, with some requiring all interactions to be reported and others not imposing any reporting requirements.

Some States reviewed have taken other steps to help protect species, although perhaps not specifically to address the bycatch of whale sharks. For example, some have prohibited the use of driftnets or gillnets of certain sizes or placed at certain depths.<sup>205</sup> Mainland Tanzania also provides that “[n]o person shall erect, construct, use or maintain in the territorial waters any net or other fishing gear which unduly obstructs the passage of fish.”<sup>206</sup>

### C. Habitat Conservation

The legislation of all of the Parties reviewed include extensive provisions relating to habitat conservation. Protected areas come in a variety of forms, from strict preservation to multiple use. Moreover, the designation of, say, a national park imposes a different set of requirements from State to State.

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<sup>201</sup> Decreto Supremo N° 021-2016-PRODUCE, Decreto Supremo que Establece Medidas de Ordenamiento para la Pesquería del Recurso Tiburón (2016), *available at* <https://busquedas.elperuano.pe/download/url/decreto-supremo-que-establece-medidas-de-ordenamiento-para-l-decreto-supremo-n-021-2016-produce-1448564-3>.

<sup>202</sup> *See supra* Section III.C–F.

<sup>203</sup> Other States, such as Peru, specifically ban this practice. Resolución Ministerial N° 329-2017-PRODUCE, Establecen Medidas de Conservación a Ser Aplicadas en la Pesquería del Atún, at Art. 8 (2017), *available at* <https://busquedas.elperuano.pe/normaslegales/establecen-medidas-de-conservacion-a-ser-aplicadas-en-la-pes-resolucion-ministerial-n-329-2017-produce-1543128-1/>.

<sup>204</sup> The United Republic of Tanzania requires the “immediate release,” but not necessarily the safe release, of whale sharks provided that they fall within the definition of “rare fish”. DFSA Regulations, *supra* note 198, at § 10(1)(b). Peru, in contrast, requires that fishermen who incidentally capture a whale shark return the shark “to its natural habitat immediately, without harming the specimen, ensuring all reasonable steps are taken to ensure its safe release.” Resolución Ministerial N° 331-2017-PRODUCE, Prohíben la Extracción de la Especie Tiburón Ballena, en Aguas Marinas de la Jurisdicción Peruana, Así Como su Desembarque, Transporte, Retención, Transformación y Comercialización, at Art. 2 (2017), *available at* <https://busquedas.elperuano.pe/normaslegales/prohiben-la-extraccion-de-la-especie-tiburon-ballena-en-agu-resolucion-ministerial-n-331-2017-produce-1544007-1/>.

<sup>205</sup> *See, e.g.*, The Fisheries Act Regulations (Mainland Tanzania) (2005), §52, *available at* <http://extwprlegs1.fao.org/docs/pdf/tan168703.pdf>.

<sup>206</sup> *Id.* at §51 (“[n]o person shall erect, construct, use or maintain in the territorial waters any net or other fishing gear which unduly obstructs the passage of fish”).

That said, each Party has adopted marine protected areas of one kind or another. Most of these MPAs have not been adopted explicitly for whale sharks, although some of them include whale sharks. Whale sharks are poorly represented in Mozambique's MPA system,<sup>207</sup> although that is probably true for other jurisdictions as well.

#### D. Tourism

Many Range States rely on tourism, particularly marine tourism, as an important source of income and development. The recent surge in shark-related tourism has intensified the need for regulation of these activities.

The seven Parties reviewed vary widely in their regulation of tourism activities. Some Parties have requirements for certification and registration of tourism operators<sup>208</sup> or dive instructors and operators.<sup>209</sup> At least one party regulates ecotourism by requiring (among other things) environmental impact statements and licenses for ecotourism projects and imposing sanctions for noncompliance with regulatory requirements.<sup>210</sup> Another Party has a voluntary Code of Conduct<sup>211</sup> that primarily addresses safety and liability issues, but also prohibits feeding of sharks, although baiting was permitted. The Code of Conduct further recommends that guides direct tourists back to the boat if a shark shows signs of disturbance and recommends that dive operators report any information to regional authorities relevant to the conservation and protection of sharks and rays. This paucity of shark-related legislation contrasts with whale-watching tourism, where legislation is much more developed.<sup>212</sup>

The broad authority given to managers of protected areas typically allows them to ban the use of high-speed vessels such as jet skis and hovercraft, require the use of propeller guards to reduce the risk of injuring sharks, and implement other aspects of the CMS boat-based wildlife watching

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<sup>207</sup> Marcos A.M. Pereira et al., *Mozambique Marine Ecosystems Review*, 44 (2014), available at [http://www.fondationensemble.org/wp-content/uploads/2014/12/Mozambique\\_Marine\\_Review\\_Final\\_12-01-2014.pdf](http://www.fondationensemble.org/wp-content/uploads/2014/12/Mozambique_Marine_Review_Final_12-01-2014.pdf)

<sup>208</sup> The Pakistan Tourist Guides Act, No. 26 of 1976, The Gazette of Pakistan Extraordinary, May 18, 1976, available at [http://www.na.gov.pk/uploads/documents/1493790357\\_598.pdf](http://www.na.gov.pk/uploads/documents/1493790357_598.pdf); Law n° 95-017 relating to the Code of Tourism (Madagascar), available at <http://www.droit-afrique.com/upload/doc/madagascar/Madagascar-Loi-1995-17-tourisme.pdf>; The Tourism Act (2008) (Mainland Tanzania), at §8, available at <http://www.rttz.org/wp-content/uploads/2011/07/The-Tourism-Act-2008.pdf>.

<sup>209</sup> Decreto-Lei no. 16/2007 de 22 de Janeiro (Azores), arts. 13–17, available at [http://pt.artazores.com/legislacao/DL%2016.2007%20%20Mergulho\\_DR.pdf](http://pt.artazores.com/legislacao/DL%2016.2007%20%20Mergulho_DR.pdf).

<sup>210</sup> See, e.g. Decree No. 88/2009 of December 31 (Mozambique).

<sup>211</sup> Código de conduta para mergulho com tubarões pelágicos e jamantas nos Açores (2012), available at [http://servicos-sraa.azores.gov.pt/grastore/DRAM/Codigo\\_Conduta\\_Tubaroes.pdf](http://servicos-sraa.azores.gov.pt/grastore/DRAM/Codigo_Conduta_Tubaroes.pdf).

<sup>212</sup> Regional Legislative Decree No. 9/99, *supra* note 192; Zanzibar Tourism Regulations, *supra* note 192, at §§ 41–46. On the other hand, not every State maintains whale-watching regulations. In Peru, for instance, neither the General Law of Tourism nor its implementing regulation explicitly deals with whale-watching or other forms of marine tourism. See Ley N° 29408, Ley General de Turismo (2009), available at <http://extwprlegs1.fao.org/docs/pdf/per89826.pdf>; Decreto Supremo N° 003-2010-MINCETUR, Reglamento de la Ley General de Turismo (2010), available at [https://www.mincetur.gob.pe/wp-content/uploads/documentos/turismo/funciones\\_y\\_normatividad/normatividad/essna/reglamento\\_ley\\_general\\_de\\_turismo.pdf](https://www.mincetur.gob.pe/wp-content/uploads/documentos/turismo/funciones_y_normatividad/normatividad/essna/reglamento_ley_general_de_turismo.pdf). The good news is that Peru is working on a regulation to govern observation of marine wildlife. See SERFOR, PowerPoint Presentation in the Protected Species Subgroup of the Multisectoral Commission for Environmental Management of the Marine Coastal Zone (April 11, 2018) (on file with authors).

guidelines for elasmobranchs.<sup>213</sup> While management plans or regulations specific to those protected areas may implement those guidelines, or some aspects of them, the reviewed legislative and regulatory schemes did not generally apply them to areas inhabited by whale sharks.

## E. Pollution

While each of the Parties appears to regulate oil and noxious substances from vessels, most did not clearly regulate the disposal of plastics and fishing gear, as required by MARPOL Annex V. Here, Peru is something of an exception. Although its implementing legislation is somewhat unwieldy, Peru has taken steps to incorporate the requirements of Annex V.<sup>214</sup> In addition, Madagascar and the United Republic of Tanzania have legislation prohibiting the abandonment of fishing gear. Madagascar requires every fishing vessel to retrieve all fishing gear used or lost.<sup>215</sup> The United Republic of Tanzania, within its EEZ, prohibits any person from leaving any fishing gear or “any other non-biodegradable object used for the harvesting of fishery resources” after the fishing operation ends,<sup>216</sup> subject to an exception for emergency situations.<sup>217</sup> In Mozambique, vessels must, except under limited circumstances, deposit all wastes at a port reception facility.<sup>218</sup> This law, however, might only relate to wastes found in MARPOL Annexes I and II since the relevant decree specifically refers to those two annexes, but not Annex V.

## F. CITES

CITES has had a national legislation project since 1992.<sup>219</sup> For that reason, CITES Parties appear to have CITES-specific legislation or regulations. Nonetheless, CITES implementation is not without its problems.

### 1. Specimen

Most of the laws reviewed include very broad definitions of “specimen,” the key term to determine the scope of a Party’s CITES regulatory authority, since CITES requires permits for trade in specimens of species included in the CITES Appendices. Madagascar, for example, defines “specimen” in Law n° 2005-018 as

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<sup>213</sup> For more on the CMS guidelines for boat-based wildlife watching, see *supra* Section III.A.2.

<sup>214</sup> See Normas para Prevenir y Controlar la Contaminación por Basuras Procedentes de Buques, Resolución Directoral N° 0510-99IDCG (1999), available at <http://extwprlegs1.fao.org/docs/pdf/per18702.pdf>; Resolución Directoral N° 1293-2012 MGP/DCG, Aprueban Incorporación a las Normas Nacionales de Enmiendas a los Anexos I, II, III, IV y V del Convenio Internacional para Prevenir la Contaminación por los Buques, 1973 y Su Protocolo de 1978 (MARPOL 73/78) Enmendado (2012), available at <https://busquedas.elperuano.pe/normaslegales/aprueban-incorporacion-a-las-normas-nacionales-de-enmiendas-resolucion-directoral-n-1293-2012-mgpdcg-890050-7/>.

<sup>215</sup> Law 2015-053, *supra* note 199, at art. 58.

<sup>216</sup> The Deep Sea Fishing Authority Act Regulations (2009), Government Notice No. 48 [hereinafter: DSFA Regulations] at § 25(3), available at <http://extwprlegs1.fao.org/docs/pdf/tan153970.pdf>.

<sup>217</sup> *Id.* at § 25(5).

<sup>218</sup> Decree No. 45/2006 of 30 November 2006 on Regulations for the Prevention of Pollution and Protection of the Marine and Coastal Environment, art. 8(1), available at <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC111422> [hereinafter Pollution Decree].

<sup>219</sup> For more on the CITES national legislation program, see CITES, National Laws for Implementing the Convention, <https://cites.org/legislation>.

any animal or plant, alive or dead, belonging to species listed under Appendices I, II, III, or IV, seeds of plants or eggs of animals, or any part or derivative, whether or not included in other products, as well as any other commercial product that contains parts or derivatives of animals or plants of these species when such parts of products are apparent in the official document, packaging, brand, label, or any other element.<sup>[220]</sup>

Madagascar’s definition of a specimen seems to be broad enough to cover the scope of CITES, including the Parties’ definition of “readily recognizable parts.” The definition does not directly refer to “any *readily recognizable* parts or derivatives,” but Madagascar defines “specimen” in relation to parts and products “apparent in the official document, packaging, brand.” This could be understood to cover “readily recognizable” parts as defined by Resolution Conf. 9.6 (Rev. CoP16).<sup>221</sup>

The Azores also defines “specimen” broadly to include “any living or dead organism, including gametes, propagules, seeds, eggs, larvae or as well as any part or product derived therefrom.”<sup>222</sup> It further defines “specimen” to include any other products “susceptible of being identified as parts or products” derived from organisms “according to the information provided by the accompanying document, the packaging, a mark or label or any other element.”<sup>223</sup> With this broad definition, the Azores fully implements the definition of “specimen” included in CITES and Resolution Conf. 9.6 (Rev. CoP16).

## 2. Permit Requirements

As discussed in Section III.G, the heart of CITES is its permit system. Not only must Parties issue permits, but they must make the appropriate findings prior to issuing permits.

The legislation reviewed largely implements the CITES permit requirements,<sup>224</sup> with a couple of exceptions. The CITES regulations for Mozambique do not require the Management Authority to make a finding that the export will not be detrimental to the survival of the species involved (the “non-detriment finding” or NDF),<sup>225</sup> a crucial finding to ensure the sustainability of any trade.

In addition, Mainland Tanzania does not define IFS and thus, it seems, does not provide for the issuance of IFS certificates.<sup>226</sup> Madagascar’s legislation contemplates the issuance of IFS

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<sup>220</sup> Law n° 2005-018 on the International Trade of Wild Species of Fauna and Flora (Madagascar), at art. 3 (2005) (defining “specimen”).

<sup>221</sup> See *supra* Section III.G.

<sup>222</sup> Regional Legislative Decree No 15/2012/A, Legal Regime of Nature Conservation and Biodiversity Protection, 1626 Official Gazette, 1st Series, No. 66, at art. 3(nn) (April 2, 2012), *available at* <http://extwprlegs1.fao.org/docs/pdf/por111020.pdf> [hereinafter Biodiversity Decree].

<sup>223</sup> *Id.*

<sup>224</sup> Law n° 2005-018, *supra* note 217.

<sup>225</sup> See Decree No. 34/2016 of August 24 (Mozambique), art. 2 [hereinafter CITES Regulations].

<sup>226</sup> The Wildlife Conservation Act (2009), Act No. 5 of 2009 [hereinafter WCA], *available at* <http://extwprlegs1.fao.org/docs/pdf/tan97858.pdf>.

certificates any time a specimen of an Appendix II species is caught on the high seas.<sup>227</sup> As such, it does not recognize that the CITES Parties have defined as export the introduction of a specimen taken on the high seas by a vessel flagged by one State and introduced into the jurisdiction of a different State.<sup>228</sup>

Pakistan has adopted a couple of provisions that exceed CITES requirements and might be valuable for helping to ensure that trade in whale shark specimens, should it occur, is sustainable. First, Pakistan requires an import permit for an import of an Appendix II specimen.<sup>229</sup> Second, it requires a non-detriment finding that is broader than contemplated by CITES. According to CITES, an NDF need only take into account the survival of the specific species being exported. Pakistan's law goes further by requiring the Scientific Authority to consider the effect that the export will have on "other species of fauna and flora."<sup>230</sup> This could include population imbalances that result from removing an animal from the wild, the shrinking of food sources, and how other species respond to that species' removal. Taking a wider look at the export affords both the specific species and related species more protection than provided by CITES.

## V. Recommendations

As indicated in Section IV, the seven CMS Parties considered have legislation that implements many aspects of the Concerted Action for the Whale Shark. That said, improvements could be made. It is possible that some of these improvements could be made in other Range States. With that in mind, this report offers a number of recommendations.

### *Recommendation 1: Adopt legislation specific to CMS.*

The legislation review did not reveal any legislation, except that of Balochistan, that included provisions specifically designed to implement CMS. As a result, it was sometimes not clear if a species was protected by relevant legislation, which for a marine fish species like the whale shark could take the form of wildlife legislation or fisheries legislation. With respect to these forms of legislation, there appears to have been an attempt to include CMS-like protections and Appendices in various forms, such as through definitions of "threatened species," which often led to gaps in the prohibition against taking.

A far more effective strategy is to adopt legislation that is specific to CMS. In this way,

- terms such as "taking" would be defined consistently with the CMS definition;
- the list of species protected by the legislation would accurately reflect the CMS Appendices; and
- the application of the prohibition against taking could be made to apply to nationally-

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<sup>227</sup> Law n° 2005-018, *supra* note 217, at art. 16(f).

<sup>228</sup> Resolution 14.6 (Rev. CoP16), *supra* note 170.

<sup>229</sup> The Pakistan Trade Control of Wild Fauna and Flora Act, No. 14 of 2012, The Gazette of Pakistan Extraordinary, May 8, 2012, § 3, available at <http://extwprlegs1.fao.org/docs/pdf/pak164599.pdf>.

<sup>230</sup> *See id.* at § 5(a).

flagged vessels on the high seas without the need to amend other laws or regulations.

Recommendations 2, 3, and 4 offer sample language for implementing CMS-specific legislation.

***Recommendation 2: Ensure that legislation applies to vessels on the high seas.***

At least two strategies can be used to ensure that legislation applies the prohibition against taking throughout a State’s territory, as well as to vessels under the jurisdiction of the State.

***Option 1***

*The legal regime established in this Law is applicable to all species included in CMS Appendix I existing*

- (a) in the national territory and in waters under national jurisdiction, and*
- (b) outside national jurisdictional limits with respect to vessels flagged by [name of State] that are engaged in taking animals of such species.*

***Option 2***

*It is prohibited for any person subject to the jurisdiction of [name of State] to take wild animals of species included in CMS Appendix I, . . .*

*“Person” means*

- (a) any private person or legal entity, including vessels flagged by [name of State]; and*
- (b) any officer, employee, agent, department, or instrumentality of the national government, or political subdivision thereof, or of any foreign government.*

***Recommendation 3: Ensure that legislation fully implements the CMS Article III(5) prohibition against taking of Appendix I-listed species.***

As noted in Section IV.A, above, Balochistan has CMS-specific legislation that nicely implements the CMS prohibition against taking. This provision could be improved in one important way. As written, it appears that the government must adopt additional regulations to prohibit taking. It would be more effective for the law to be written so as to prohibit taking expressly. The following language could be used to accomplish this:

*It is prohibited for any person subject to the jurisdiction of [name of State] to take wild animals belonging to Appendix I of CMS. Exceptions may be made to this prohibition only if:*

- (a) the taking is for scientific purposes;*

*(b) the taking is for the purpose of enhancing the propagation or survival of the affected species;*

*(c) the taking is to accommodate the needs of traditional subsistence users of such species; or*

*(d) extraordinary circumstances so require;*

*provided that such exceptions are precise as to content and limited in space and time. Such taking should not operate to the disadvantage of the species.*

*“Taking” means taking, hunting, fishing, capturing, harassing, deliberate killing, or attempting to engage in any such conduct;*

Drafting legislation in this way has the following advantages:

- Regulations do not need to be promulgated to effectuate the prohibition against taking, as appeared to be the case with Balochistan’s legislation.
- Additional legislative or administrative acts are not required to update the list of species included in Appendix I.
- The prohibition against taking applies to anyone regardless of nationality provided that they are within the territory of the country and to vessels flying the flag of the State. Nonetheless, to eliminate any doubt as to the reach of the taking prohibition, we suggest including the definition of “person” set forth in Recommendation 2.

***Recommendation 4: Ensure that legislation includes the complete list of species included in CMS Appendix I.***

The text provided in Recommendation 3 may be sufficient in some jurisdictions to apply the taking prohibition to all CMS Appendix I species. However, in many jurisdictions, wildlife-related protective legislation, including that containing a prohibition against taking under CMS, does not apply to a species unless the species has been included in a list accompanying the legislation or the species list is published in the Government Gazette or an equivalent official publication. In these circumstances, one of the inclusion of the following legislative language would eliminate uncertainty concerning which species fall within the scope of the law:

*It is prohibited for any person subject to the jurisdiction of [State] to take wild animals belonging to CMS Appendix I.*

***Option 1***

1. *Schedule 1, which is attached to this Act, lists all species included in CMS Appendix I.*

2. *The Minister has the right to add or delete any species from Schedule 1 when the species occurs within the national jurisdiction of the country, but any such amendment(s) must be consistent with [State's] commitments as a Party to CMS.*

### **Option 2**

1. *The Minister shall by order publish the Schedule to this Act.*
2. *The Schedule to this Act is automatically amended when amendments to CMS Appendices I enter into force. These amendments shall be published in the Gazette as soon as possible after their adoption by the Conference of the Parties. The official website of the Convention is the official reference for the Appendices.*

### **Recommendation 5: Adopt legislation that prohibits setting purse seine nets on whale sharks.**

Most of the tuna RFMOs have adopted binding conservation and management measures that prohibit setting purse seine nets on whale sharks. Parties, regardless of whether they are members of these RFMOs, should adopt legislation that prohibits setting purse seine nets on whale sharks. Of the Parties reviewed, Peru stands out for its implementation of this prohibition.<sup>231</sup> As the language of measures adopted by the RFMOs is very similar, it could be considered to represent an international standard. Parties could implement this standard as follows:

1. *This measure shall apply to*
  - (a) *all fishing vessels fishing within the territorial sea or exclusive economic zone of [name of State]; and*
  - (b) *all fishing vessels flying the flag of [name of State] while operating in areas beyond national jurisdiction.*
2. *It is illegal for all fishing vessels referred to in paragraph 1 to intentionally set a purse seine net around a whale shark if it is sighted prior to the commencement of the set.*
3. *In the event that a whale shark is unintentionally encircled in the purse seine net, the master of the vessel shall:*
  - (a) *take all reasonable steps to ensure its safe release, while taking into consideration the safety of the crew. These steps shall follow the best practice guidelines for the safe release and handling of whale sharks developed by the IOTC Scientific Committee (2013) or endorsed by the*

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<sup>231</sup> Resolución Ministerial N° 329-2017-PRODUCE, Establecen Medidas de Conservación a Ser Aplicadas en la Pesquería del Atún, at Art. 8 (2017), available at <https://busquedas.elperuano.pe/normaslegales/establecen-medidas-de-conservacion-a-ser-aplicadas-en-la-pes-resolucion-ministerial-n-329-2017-produce-1543128-1/>.

*Western and Central Pacific Fisheries Commission (“Guidelines for Safe Release of Encircled Animals including Whale Sharks,” 2015), as appropriate;*

*(b) report the incident to the relevant authority of [name of State], with the following information:*

- (1) the number of individuals;*
- (2) a short description of the interaction, including details of how and why the interaction occurred, if possible;*
- (3) the location of the encirclement;*
- (4) the steps taken to ensure safe release;*
- (5) an assessment of the life status of the animal on release, including whether the whale shark was released alive but subsequently died.*

*4. Fishing vessels using other gear types shall report all interactions with whale sharks to the relevant authority of [name of State] and include all the information outlined in paragraph 3(b)(1–5).*

***Recommendation 6: Adopt legislation that prohibits shark finning.***

Shark finning continues to be a conservation concern for most shark species. Consequently, CMS Parties should adopt legislation that bans shark finning. The legislation of the European Union<sup>232</sup> provides a model:

- 1. It shall be prohibited to remove shark fins on board vessels, and to retain on board, tranship or land shark fins.*
- 2. Without prejudice to paragraph 1, in order to facilitate on-board storage, shark fins may be partially sliced through and folded against the carcass, but shall not be removed from the carcass before landing.*
- 3. It shall be prohibited to purchase, offer for sale or sell shark fins which have been removed on board, retained on board, transhipped or landed in contravention of this Law.*

Additional provisions, including definitions of “sharks” and “fins,” are useful for clarifying the scope of the provisions. Again, the legislation of the European Union provides a model:

*For the purposes of this Law, the following definitions shall apply:*

- 1. “shark fins” means any fins of sharks including caudal fins, but excluding the pectoral fins of rays, which are a constituent part of raywings;*

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<sup>232</sup> Council Regulation (EC) No 1185/2003, *supra* note 201.

2. “shark” means any fish of the taxon *Elasmobranchii*;

***Recommendation 7: Adopt legislation that prohibits the direct catch of sharks.***

Global shark populations have declined precipitously – with populations of large shark species having dropped by as much as 90% in certain areas.<sup>233</sup> Such losses is believed to significantly alter energy flow throughout ecosystems.<sup>234</sup> To ensure appropriate ecosystem balance, banning the capture of sharks altogether would be prudent. Legislation from the Bahamas could be used as a model:

In 2011, the Bahamas Fisheries Resources (Jurisdiction and Conservation) Act (Chapter 244) was amended to read:

*PART VA SHARK*

*Bahamas Fisheries Resources (Jurisdiction and Conservation) (Amendment) Regulations, 2011*

*36A. Prohibition on possessing, fishing for or landing shark or shark parts.*  
*Subject to Regulation 36D, no person shall possess, fish for or land, any shark or shark parts within The Bahamas or within the Exclusive Fishery Zone of The Bahamas.*

*368. Prohibition on the sale of shark, shark parts or shark products.*  
*No person shall sell any shark, shark parts or shark products within The Bahamas or within the Exclusive Fishery Zone of The Bahamas.*

*36C. Prohibition on export or import of shark, shark parts or shark products.*  
*Subject to Regulation 36D, no person shall export from, or import into, The Bahamas—*

- (a) any shark;*
- (b) shark parts; or*
- (c) shark products.*

....

*36E. Catch and release of sharks.*

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<sup>233</sup> University of Miami Shark Research. Ecosystem Impacts of Overfishing: Assessing the cascading ecosystem impacts of marine predator declines as a result of overfishing, available at <https://sharkresearch.rsmas.miami.edu/research/projects/ecosystems-impacts-of-overfishing/>

<sup>234</sup> Hammerschlag N, Barley SC, Irschick DJ, Meeuwig JJ, Nelson ER, Meekan MG (2018) [Predator declines and morphological changes in prey: evidence from coral reefs depleted of sharks](#). Marine Ecology Progress Series 586:127-139.

*A person who hooks or catches a shark while fishing shall promptly release the shark into the sea unharmed.*"<sup>[235]</sup>

***Recommendation 8: Adopt legislation that includes the presumption that sharks found on board a foreign vessel in national waters are presumed to have been caught in such national waters.***

An oft-stated excuse for having prohibited catch on board a foreign vessel is that the prohibited catch was “caught elsewhere.” Palau offers very powerful model legislation to bolster prosecution of poaching cases by shifting the burden to fishermen to prove that the catch was indeed caught elsewhere. In this regard, Palau’s National Code provides:

*There shall be a presumption that any fish found on board a foreign vessel was caught and retained in violation of Title 27.*<sup>[236]</sup>

***Recommendation 9: Adopt legislation that requires immediate release of whale sharks caught as bycatch.***

As the Concerted Action notes, bycatch is one of the major contemporary threats to whale sharks. Requiring immediate release of whale sharks that are inadvertently caught could help minimize this threat. Palau legislation provides a useful model (but see also Bahamas Fisheries Legislation described above):

*In the event of bycatch, Section 181 of the Palau National Code provides: If any shark is inadvertently caught or captured, it shall be immediately released, whether dead or alive; if the shark is caught or captured alive, it shall be released in the manner that affords it the greatest opportunity for survival.<sup>[237]</sup> As used in Section 181, “the manner that affords . . . the greatest opportunity for survival” is that manner specified in the “Best Practices Guidelines” developed by the Ministry of Natural Resources, Environment and Tourism.<sup>[238]</sup>*

***Recommendation 10: Adopt protected areas specifically for whale sharks.***

Recognizing that most, if not all, States have protected areas legislation that allows for various types of protection, Parties should focus their efforts on establishing protected areas specifically for whale sharks. At a minimum, the State agency in charge of these protected areas should impose whale shark protections in management plans and prohibit fishing throughout the protected areas (or at least in zones where there is a higher incidence of whale shark sightings).

***Recommendation 11: Adopt legislation that prohibits the abandonment and disposal of fishing nets.***

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<sup>235</sup> Fisheries Resources (Jurisdiction and Conservation) (Amendment) Regulations, 2011.

<sup>236</sup> See 27 PNC § 191(c).

<sup>237</sup> 27 PNC § 181(a).

<sup>238</sup> Palau National Marine Sanctuary Transition Regulations § 6.10.

To avoid entanglement in nets and to fulfill their CMS Article III(4) obligations (and their MAPROL Annex V obligations), Parties should adopt legislation that prohibits the abandonment of fishing nets. The legislation of Madagascar and the United Republic of Tanzania could be used as a model:

*It is illegal for any person or entity subject to the jurisdiction of [name of State] to abandon or dispose of fishing gear of any kind or any non-biodegradable object used for the harvesting of fishery resources.*

***Recommendation 12: Adopt legislation that prohibits the disposal of plastics into the marine environment.***

Disposal of fishing nets is just one aspect of the type of pollution that can harm whale sharks. Plastics also pose a problem. Plastic grocery bags used in cities, whether urban or coastal, find their ways to oceans. Parties should adopt legislation that taxes or prohibits the use of plastic grocery bags and other single-use plastics.

As discussed in Section III.H, disposal of plastic bags and other forms of plastic from vessels is prohibited by MARPOL Annex V. To benefit whale sharks, CMS Parties should adopt legislation that fully implements the MARPOL prohibition, including the relevant definitions, against discharges of plastics from vessels, regardless of whether they are Parties to MARPOL Annex V.

***Recommendation 13: Adopt legislation that requires registration of boat-based tourism operators.***

By adopting legislation that requires registration of boat-based tourism operators, Parties can track the number of operators engaged in boat-based and shark-specific wildlife tourism. The registration should require the operators to report on numbers of tourists served and the location of tourism operations.

***Recommendation 14: Adopt legislation that requires reporting of whale shark encounters by boat-based tourism operators.***

By adopting legislation that requires boat-based tourism operators to report all whale shark encounters, Parties can obtain valuable information on areas inhabited by whale sharks. Given the dearth of information about whale sharks and other sharks, such reporting can contribute meaningfully to our understanding of sharks.

***Recommendation 15: Adopt legislation for sharks that implements the CMS guidelines for boat-based wildlife watching.***

Given the increasing interest in shark diving and swim-with-the-shark programs, Parties that are shark Range States should adopt legislation that implements the CMS boat-based wildlife watching guidelines for elasmobranchs. The guidelines should apply in all areas where whale sharks (and other shark species) are known to congregate or that they otherwise occupy regularly. Since not

all of these areas will be included in protected areas, the adoption of the guidelines may be better placed in tourism legislation or shark-specific legislation so that the guidelines apply outside as well as inside protected areas in locations where sharks are known to congregate or that they otherwise occupy regularly.

As noted in Section III.A.2 above, the CMS guidelines recommend (1) banning the use of motorized vessels such as jet skis and hovercraft because they are too fast to avoid collisions with sharks, (2) requiring the use of propeller guards to reduce the risk of injuring sharks, (3) prohibiting the feeding of animals, and (4) limiting the number of hours per day for wildlife watching. In addition to these four guidelines, the legislation should also limit the number of vessels that can approach whale sharks at the same time, limit the number of divers that can be in the water at the same time, and specify actions to take when animals appear disturbed or harassed by the presence of vessels or divers.

***Recommendation 16: Ensure that CITES implementing legislation includes a broad definition of “specimen.”***

Parties should adopt the definition of “specimen” included in CITES and the corresponding definition of “readily recognizable part and derivative found in Resolution 9.6 (Rev. CoP16). The definitions referenced in Section IV are adequate. To be even more precise, the legislation could include the following definitions:

*“Specimen” means:*

- (i) any animal or plant, whether alive or dead;*
- (ii) in the case of an animal: for species included in Appendices I and II, any readily recognizable part or derivative thereof; and for species included in Appendix III, any readily recognizable part or derivative thereof specified in Appendix III in relation to the species; and*
- (iii) in the case of a plant: for species included in Appendix I, any readily recognizable part or derivative thereof; and for species included in Appendices II and III, any readily recognizable part or derivative thereof specified in Appendices II and III in relation to the species;*

*“Readily recognizable part or derivative,” as used in this Law, includes any specimen which appears from an accompanying document, the packaging or a mark or label, or from any other circumstances, to be a part or derivative of an animal or plant of a species included in the Appendices, unless such part or derivative is specifically exempted from the provisions of the Convention.*

Bear in mind that the words “Appendix” and “Appendices” may need to be changed if your State includes the species in “Schedules” or “Annexes.”

***Recommendation 17: Ensure that CITES implementing legislation includes all permit requirements.***

To ensure that all permit requirements are included in CITES implementing legislation, CITES Parties should simply adopt the language from Articles III, IV, and V of CITES *verbatim*. This recommendation should be read in conjunction with the next recommendation to ensure that certificates of introduction from the sea and export permits are issued consistently with CITES Resolution 14.6 (Rev. CoP16).

***Recommendation 18: Ensure that CITES implementing legislation adopts the definition of “introduction from the sea” found in CITES and the legal framework for introduction from the sea included in CITES Resolution 14.6 (Rev. CoP16).***

The concept of IFS is unique to CITES, and the Parties have interpreted it in a way that is not intuitive from a reading of the Convention itself. Thus, Parties should adopt legislation that includes the definition of IFS found in the Convention as interpreted by CITES Resolution 14.6 (Rev. CoP16), as well as the corresponding definition of “marine environment not under the jurisdiction of any State” and legal framework found in that resolution for determining whether a specimen was legally acquired. The legislative provisions could be drafted as follows:

***Definitions***

*“Introduction from the sea” means the transportation into [name of State] of specimens of any CITES Appendix I or II species which were taken in the marine environment not under the jurisdiction of any State by a vessel flagged [by this State];*

*“Export” means*

*(a) the act of taking any specimen out of any place under the jurisdiction of [name of this State], and*

*(b) the transportation of specimens of any CITES Appendix I or II species which were taken in the marine environment not under the jurisdiction of any State by a vessel flagged by [name of State] and transported into another State;*

*“Import” means*

*(a) means to land on or attempt to land on, bring into or introduce into, any place subject to the jurisdiction of [name of State] any specimen of species included in the CITES Appendices;*

*(b) the transportation of specimens of any CITES Appendix I or II species which were taken in the marine environment not under the jurisdiction of any State by a vessel registered by another State and transported into [this State];*

*“Marine environment not under the jurisdiction of any State” means those marine areas beyond the areas subject to the sovereignty or sovereign rights of a State consistent with international law, as reflected in the United Nations Convention on the Law of the Sea;*

### ***Legal Framework***

*In the case of specimens of species included in CITES Appendix I or II taken in the marine environment not under the jurisdiction of any State, the Management Authority shall satisfy itself that the provisions of this Law [that implements CITES] are met by taking into account whether or not the specimen was or will be acquired and landed:*

- (a) in a manner consistent with applicable measures under international law for the conservation and management of living marine resources, including those of any other treaty, convention or agreement with conservation and management measures for the marine species in question; and*
- (b) through any illegal, unreported or unregulated (IUU) fishing activity;*

*prior to issuing a certificate of introduction from the sea, export permit, or import permit, as relevant.*