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Our Oceans Need Sharks: A Comparative Analysis of Shark and Turtle Conservation Law in Australia and the United States

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I. INTRODUCTION

Many species within the world's oceans have become endangered or threatened in the past century because of human intervention in the ocean. These species must now coexist with humans and their threats. Turtles face the threat of "incidental takings by fisheries, development on nesting beaches, and general habitat alteration."[1] Similarly, sharks are facing global threats through fisheries, bycatch, and habitat alteration. The increasing amount of human exploitation of the seas, coupled with evidence of declines and population extinctions, may forewarn of increasing loss of coastal and oceanic biodiversity.[2] Effects on the turtle and shark populations cause a dip in biodiversity in the greater marine habitat. Each species that is on the verge of extinction, such as several species of sharks and turtles, causes a ripple effect in the ecosystem. The shark population has declined astronomically in the past years as they are "threatened by over-exploitation in high-seas fisheries, which is exacerbated for sharks by the high value of and demand for their fins."[3] In a process known as finning, the shark's fin is removed and the live carcass is thrown back into the ocean to die a slow death. Finning is a growing problem as Asian economies profit from the value of shark fin soup. Another means by which shark population has decreased is the serious problem of bycatch in which sharks are caught in longline, purse seine, and gillnet fisheries that are targeting more economical marine species, such as tuna. Twenty-one species of sharks are listed as endangered, vulnerable, or near threatened under the International Union for Conservation of Nature's Red List Status.[4]

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[1] Marjorie Palmer, *Turtle Power Down Under the Sea?: Comparative Domestic and International Legal Protection of Marine Turtles by Australia and the United States*, GA. J. INT'L. COMP. L., 115-149, (2008).

[2] Baum, et al., *Collapse and Conservation of Shark Populations in the Northwest Atlantic*, 229 Sci. 389 (2003).

[3] *Id.*

[4] Polidoro, et. al. *Status of the World's Marine Species,* ICUN (2008) http://cms data.iucn.org/downloads/status_of_the_world_s_marine_species.pdf.

A. Why Are Sharks Important?

Sharks, as a species, are crucial to the biodiversity of the marine ecosystem. The current system relies on each species within it to maintain the diversity. Sharks are a main predator within the ecosystem and without them the food chain would collapse. The extinction of the shark population would cause a ripple effect in which their prey would become too numerous and their prey's population would die out. Sharks are needed to maintain the biodiversity of the ecosystem.[5]

The model used for turtle conservation and recovery would be an accurate model for conserving and recovering the endangered shark species, as well. As sharks are crucial to the marine environment, action needs to be taken in the form of policies that parallel those that protect turtles. Specifically, the models of protection for turtles in both Australia and the United States can serve as examples for shark conservation and recovery policies. As sharks are migratory species like turtles, international efforts and treaties are also crucial to providing boundaries and regulations for sharks in the global arena. The future of sharks depends on effective domestic and international law equally.

II. Protection Under National Law

A. The Species Specific Approach: the United States

In 1973 the United States enacted the Endangered Species Act (ESA) as a means to protect species that were considered endangered or threatened.[6] The United States also uses a system of Marine Protect Areas (MPAs), which set up areas of protection for species.[7] The ESA is a "relatively expansive law, enacted to address the problem of species extinction."[8] The main purpose is to protect species whose survival is considered in danger and it is imperative to conserve and recover such species. It is the job of the Secretary of the Interior to craft plans of recovery for species labeled as endangered so that the "conservation and survival" of these species is maintained.[9] For each species that is in jeopardy, the Secretary of the Interior must "to the maximum extent prudent and determinable. . . designate any habitat of such species. . . to be a critical habitat."[10] Such an area is entitled an MPA which is "any area of the marine environment that has been re-

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[5] Griffin, et al, *Predators as Prey: Why Healthy Oceans Need Sharks,* OCEANA, July 2008, at 3.

[6] Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (1973).

[7] Exec. Order No. 13,158, 65 Fed. Reg. 105 34,909 (May 26, 2000).

[8] Palmer, *supra note* 1.

[9] Endangered Species Act, *supra note* 6.

[10] *Id.*

served by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein."[11] The MPAs seek to protect species from the detrimental human actions that have caused harm.

The National Oceanic and Atmospheric Administration (NOAA) is exclusively responsible for applying the ESA in the United States' waters, within 200 nautical miles of the coast.[12] The National Marine Fisheries Service (NMFS) can also issue regulations that protect species whose survival is in jeopardy, such as turtles and sharks.

Under the model for turtles, the ESA has a supplemental amendment for sea turtles that states that governments that trade seafood with the United States must have laws that protect the sea turtle population within their own oceans.[13] An amendment of the same to the ESA for shark populations would aid sharks as it has turtles because it would force the Asian countries that the United States trades with to enact shark conservation policies; the same Asian countries that are causing immense decline in the population because of finning. A shark amendment to the ESA would effectively regulate shark finning, the most detrimental human action to their survival. While the international community has not looked favorably on the turtle amendment, it has been successful for turtles and can be successful for sharks as well.

B.   The Strengths of Biodiversity: Australia

Australia enacted the Environment Protection and Biodiversity Conservation Act (EPBC) in 1999 as a means of increasing biodiversity in marine environments in a comprehensive and broad approach. The goal of the EPBC is to "promote ecologically sustainable development. . .and. . .conservation of biodiversity."[14] The Department of the Environment, Water, Heritage, and the Arts is in charge of orchestrating the EPBC and catering to environmental protection. The Department minister is also in charge of implemented recovery plans for the species that are considered threatened through eliminating

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[11] *All about Marine Protected Areas,* National Marine Protected Areas Center, http://marineprotectedareas.noaa.gov/aboutmpas/ The National Marine Protection Areas Center, stabled by the Departments of Commerce and the Interior, leads many federal, state, tribal, public, and other organizations to create a scientifically based MPA program that protects natural and cultural marine resources.
[12] National Oceanic and Atmospheric Administration, Endangered and Threatened Marine Species, http://www.nmfs.noaa.gov/aboutus/our_mission.html, (last visited on October 5, 2015).
[13] Endangered Species Act, supra note 6.
[14] Environment Protection and Biodiversity Conservation Act, 1991, https://www.environment.gov.au/epbc/about.

negative impacts and fostering recovery in the wild. Under the recovery stipulation, the Minister must also develop monitoring programs, habitat protection, adherence to existing agreements, and development of treaties with neighboring countries. The EPBC, as it is focused on biodiversity, also requires a reduction in bycatch, protection of all marine flora and fauna, and continental shelf organisms. It also established an assessment and approval process in which "activities that will or might significantly impact listed threatened species, migratory species, or an endangered ecological community, as well as any activities involving the marine environment, are subject to the assessment and approval process.[15] Not only are certain endangered or threatened species protected, but entire threatened ecological communities as well.[16] The Australian government also has the power to designate MPAs to protect species and conserve the greater marine environment as a means to further biodiversity. As biodiversity is the focus of the EPBC, both turtles and sharks are protected under Australian law.

III. INTERNATIONAL ROLES OF THE UNITED STATES AND AUSTRALIA IN AFFORDING LEGAL PROTECTION TO SHARKS:

A. *America's Commitment*

a. Sea Turtles

The United States, when affording protection to endangered species, uses a species specific approach to safeguard species on the verge of extinction. The Endangered Species Act is the foundation for environmental protection for species currently facing extinction in the territory of the United States.[17] The Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) are responsible for implementing and enforcing the rules set forth by the original Endangered Species Act and its subsequent amendments.[18] An amendment set forth in the ESA requires the Executive branch of the government strive to protect sea turtles by partaking in international treaties and agreements.[19] This amendment, the Sea Turtles Convention Amendment, asserts that it is the job of the Secretary of Commerce and the

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[15] Palmer, *supra note* 1; Robert, Blomquist, *Protecting Nature 'Down Under:' An American Law Professors View of Australia's Implementation of the Convention of Biological Diversity-Laws, Policies, Programs, Institutions, and Plans 1992-2000,* 227 Dick J. Environmental Law and Policy 324 (2000).

[16] Biodiversity Act, *supra note* 14; Blomquist, *supra note* 15.

[17] Endangered Species Act, *supra note* 6.

[18] Fish and Wildlife Service, https://fws.gov/endangered/about/index.html; National Marine Fisheries Service, http://www.nmfs.noaa.gov/.

[19] Sea Turtle Conservation Amendment of 1989, Pub. L. No. 101-162, 103 Stat. 1037, 1038 (1989).

Secretary of State to acquire international negotiations that protect sea turtles through the protection of the land and sea that they survive on as well as to "initiate negotiations with other nations to develop bilateral or multilateral sea turtle conservation agreements."[20] One of these agreements is the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC).[21] The IAC was created in 1996 in response to the growing need for Sea Turtle preservation between the American continents, and the United States joined in 2000.[22] The purpose of the IAC is "to promote the protection, conservation and re- covery of sea turtle populations and of the habitats on which they de- pend, based on the best available scientific evidence taking into account the environmental, socioeconomic, and cultural characteristics of the parties."[23] Specifically, the IAC regulates fishing practices and encourages the protection of the habitats of sea turtles.[24] The primary goal of the treaty is to restrict human actions that are detrimental to the survival of sea turtles.[25] Furthermore, the members of the IAC are encouraged to protect sea turtles through beach protection and protec- tion of areas in which sea turtles lay eggs.[26] While the IAC aids in the protection of sea turtles, it does not require specific actions – a fact of which some are critical.[27] However, one benefit of the treaty lies in its monitoring and compliance mechanisms.[28] The treaty requires its members to meet bi-annually to discuss their goals for sea turtle pro- tection and the extent to which those goals have been met.[29] Further- more, the IAC established a monitoring committee which analyzes the sea turtle populations and the issues affecting them and, thus, is able to set forth strategies to better protect the turtle populations.[30] New parties to the treaty are subscribed to stricter rules as they must meet annually to discuss their efforts on sea turtle conservation.[31] As an enforcer of the IAC, the United States maintains a global leadership position regarding sea turtle conservation.

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[20] *Id.*

[21] NOAA, *Inter-American Convention for the Protection and Conservation of Sea Turtles,* http://www.nmfs.noaa.gov/pr/species/turtles/iac.htm.

[22] *Id.*

[23] *Id.*

[24] Chris Wold, *The Status of Sea Turtles Under International Environmental Law and International Environmental Agreements,* 5 J. INT'L. WILDLIFE L. & POL'Y 11, § 5.4-5.4.1 (2002).

[25] *Id.*

[26] *Id.*

[27] *Id.*

[28] *Id.* at §5.4.3

[29] *Id.*

[30] *Id.*

[31] *Id.*

b. Sharks

The Endangered Species Act (ESA) currently contains several species of sharks: the Great Hammerhead, the Basking Shark, and the Dusky Shark, while numerous other species of sharks are being considered for listing as endangered or threatened.[32] Policies implemented in the ESA seek to not only protect the species but also to recover the species through the Cooperative Conservation with States programs which assists states who have agreements with the NMFS with recovery.[33]

In affording legal protection to sea turtles, an amendment to the Endangered Species Act required that the United States protect sea turtles through international negotiations and agreements. This amendment caused the United States to propose agreements with various other countries including the Convention for the Protection and Conservation of Sea Turtles (IAC).[34] The amendment that called for International action resulted in various acts of successful turtle protection through monitoring and compliance mechanisms. Likewise, an amendment to the ESA calling for rigorous protection of the endangered and threatened shark species would be advantageous. This proposed amendment would demand the initiation of international negotiations for shark protection and would, thus, increase the protections that sharks are granted in the waters around the world. Sea turtles can be used as a successful model for shark protection as they have many similarities: they share an environment (both near shore and reefs), the similar threat of humans, and similar practices as to their behavior. Considering the success of the amendment to the ESA for the protection of sea turtles, it can be easily suggested that a similar amendment would be successful in furthering the population of the shark species.

B. Australian Obligations for Species Protection

Australia utilizes a slightly different system as it focuses on the wider ecosystem through biodiversity to protect each species through the Environment Protection and Biodiversity Conservation Act (EPBC). The EPBC incorporates the Convention on Biological Diversity,[35] the Convention on the Conservation of Migratory Species of

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[32] National Oceanic and Atmospheric Administration, *Endangered and Threatened Marine Species*, http://www.nmfs.noaa.gov/pr/laws/esa/text.htm.

[33] National Oceanic and Atmospheric Administration, *Recovery of Species under the Endangered Species Act*, http://www.nmfs.noaa.gov/pr/recovery/.

[34] Sea Turtle Conservation Amendment, *supra note* 19.

[35] Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 143.

Wild Animals (CMS),[36] and the United Nations Convention on the Law of the Sea (UNCLOS).[37][38] The Biodiversity Convention does not specifically address any one species but rather requires "parties to the agreement to undertake efforts to protect species' habitats and the marine environment.[39] The convention suggests that those who agree to it do all they can to promote diversity through environmental sustainability and conservation as well as recover perilous ecosystems and designate protected marine areas.[40] Through the maintenance of struggling ecosystems, the species that live within those systems cannot only be protected but can recover from threatened or endangered status.[41] Additionally, the convention promotes the recovery of the endangered and threatened species themselves.[42] While the Convention on Biological Diversity aids the entire ecosystem through its conservation policies, which attempt to better the ecosystem as a whole, those policies can also be the downfall of the biodiversity convention, as it does not directly aid the various species that are threatened and endangered by giving them priority.[43]

The Convention on Migratory Species (CMS) is another agreement in which Australia participates. The CMS directly aids conservation, recovery, and protection for various types of sharks, including the Great White, which frequently migrates in and around the waters outside of Australia, especially in the Great Barrier Reef.[44] Australia

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[36] Convention on the Conservation of Migratory Species of Wild Animals, June 23, 1979, 1651 U.N.T.S. 28395.

[37] United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397.

[38] Australian Government Department of the Environment, *Environment Protection and Biodiversity Conservation Act 1999*, http://www.environment.gov.au/top ics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999, (last visited on November 3, 2015).

[39] Biological Diversity, *supra note* 35; Palmer, *supra note* 1.

[40] Biological Diversity, *supra note* 35.

[41] *Id.*

[42] *Id.*

[43] *Id.*

[44] Convention on Migratory Species, http://www.cms.int/sites/default/files/instru ment/CMS-text.en_.PDF; Parties to the Convention on the Conservation of Migratory Species of Wild Animals and Its Agreements as at October 2008, http:// www.cms.int/en/parties-range-states; The Great Barrier Reef is the world's largest reef and coral system composed of 2,900 reefs and 900 islands that stretch for 132,973 square miles. The Great Barrier Reef is situated northeast of Australia and is home to approximately 125 different species of Sharks. Unfortunately, due to human life and its effects, the coral reef has lost much of its coral in the last several decades. It is crucial that Australia attempt to recover and maintain the wonders of the Great Barrier Reef as it is the largest animal made structure in existence and is one of the 7 wonders of the world.

joined the CMS in 1991.[45] The CMS strives to unite governments to remedy the loss of migratory species.[46] The CMS seeks to aid the protection of endangered species by requiring countries comply with generalized agreements and create national laws to protect the migratory species.[47] Five species of sharks are listed in the appendix of species that deserve special attention: protection and recovery.[48] The CMS requires nations to "undertake restoration efforts and minimize adverse impacts on such species" so that they may recover from endangered or threatened status.[49] The CMS supplies funding to countries who undertake restoring endangered species such as the five species of sharks on the CMS list and, therefore, has promoted shark protection and recovery by creating restoration initiatives for shark species.[50] The funding the CMS has provided for endangered species and special rehabilitation projects has directly aided the threatened shark species that are included in the CMS appendices.[51] Additionally, the CMS allows for agreements with non-party states called Memoranda of Understanding in which these states can also further the protection and recovery of endangered species like the Great White Shark, the Basking Shark, the Whale Shark, and several species of Mako Sharks through creating rehabilitation projects.[52]

Australia is also a party to the United Nations Convention on the Law of the Sea (UNCLOS).[53] UNCLOS dictates that its members have an "obligation to protect and preserve the marine environment."[54] UNCLOS asserts that sovereign states have the duty and right to maintain and protect the species that are endangered or possibly threatened in their own coastal waters while preventing practices or activities that could infringe upon the safety of the species.[55] UN-

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[45] CMS, *supra* note 44.

[46] Richard Caddell, *International Law and the Protection of Migratory Wildlife: An Appraisal of Twenty-Five Years of the Bonn Convention,* 16 COLO. J. INT'L ENVTL. . L. & POL'Y 113, 115-116 (2005).

[47] CMS, *supra note* 44.

[48] The Convention on Migratory Species Appendices, http://www.cms.int/sites/de fault/files/document/Appendices_COP11_E_version5June2015.pdf, (last visited on Feb. 24, 2017).

[49] Marjorie Palmer, *supra note* 1.

[50] Convention on Migratory Species, *supra note* 44; Convention on Migratory Species Appendices, *supra note* 48.

[51] *Id.*

[52] *Id.*

[53] United Nations Convention on the Law of the Sea, *Table recapitulating the status of the Convention and of related Agreements,* http://www.un.org/depts/los/reference_files/status2010.pdf.

[54] United Nations Convention on the Law of the Sea, *supra note* 33; Marjorie Palmer, *supra note* 1.

[55] United Nations Convention on the Law of the Sea, *supra note* 33.

CLOS requires states to "protect and preserve rare or fragile ecosys-
tems as well as the habitat of. . . threatened or endangered species and
other forms of marine life."[56]

It can be seen that Australia is committed to the maintenance
and recovery of endangered species through biodiversity as it actively
partakes in international agreements and roles to protect all species,
including sharks, by protecting and enhancing the environment in
which they live. Australia's methods of biodiversity orchestrate the
implementation of international environmental laws and protections
for the greater ecosystem and, therefore, the many shark species that
live there, especially in the ecosystem of the Great Barrier Reef.[57]

C. *Mutual Responsibilities*

Australia and the United States both have international re-
sponsibilities and obligations to the marine environment and the pro-
tection of sharks. One such responsibility is to the Convention on
International Trade in Endangered Species of Wild Fauna and Flora
(CITES).[58] CITES was created as part of international efforts to ad-
dress the threat of international trade of endangered species as prod-
ucts in conjunction with the World Conservation Union.[59]
International trade posed a threat to the wild fauna and flora that was
being depleted and killed for trade. Thus, CITES was created in the
early 1970s to combat the devastation that trade was causing on
marine life. The United States became a party to CITES in 1974, with
Australia following in 1976.[60] CITES policy requires its parties "to
adopt. . .domestic legislation to ensure that [the treaty] is imple-
mented at the National level."[61] CITES directly forbids commercial
trade of species listed as endangered or threatened in Appendix 1 as
they are at risk of extinction or are deeply affected by trade and a lim-
ited trade of species listed under Appendix 2 as they are not as nearly

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[56] United Nations Convention on the Law of the Sea, *supra note* 33 (Article 194(5)
and 192).

[57] Great Barrier Reef, *supra note* 44.

[58] Convention on International Trade in Endangered Species of Wild Fauna and
Flora, *Discover CITES: What is CITES?,* https://www.cites.org/eng/disc/what.php,
(last visited on Feb. 10, 2017).

[59] *Id.*

[60] Convention on International Trade in Endangered Species of Wild Fauna and
Flora *Discover CITES: List of Contracting Parties,* https://cites.org/eng/disc/par
ties/chronolo.php?order=field_country_official_name&sort=asc, (last visited on
Feb. 10, 2017).

[61] What is CITES, http://www.ifaw.org/united-states/our-work/wildlife-trade/what
-cites, *supra note 58;* Marjorie Palmer, *supra note* 1.

depleted as a species.[62] Several species of sharks are listed as endangered or threatened and, therefore, are not allowed to be traded according to CITES policy. CITES seeks to eliminate the shark finning and trading system as it is detrimental to the shark population.[63] The goal of the ban on international trade is to eliminate the trading of species that are near extinction, such as sharks.

Through participation in national and international environmental and species protection programs, Australia and the United States are both trying to protect and recover sharks locally and internationally.

IV. COMPARATIVE EFFECTIVENESS:

A. Comparative Effectiveness of the ESA and the EPBC

The Endangered Species Act (ESA) of the United States and the Environment Protection and Biodiversity Conservation Act (EPBC) of Australia vary immensely in terms of objectives, scope, and judicial application. The issues of bycatch and habitat destruction are addressed differently by each country. While Australia focuses on the loss of biodiversity and the harms of global warming on the ecosystem, the United States mainly disregards these issues to focus on species-specific programs.

The ESA and the EPBC vary in substantial ways in terms of their stated purposes and objectives. The ESA of the United States sets out to ensure "a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and] to provide a program for the conservation of such. . . species."[64] While the EPBC in Australia takes a holistic approach that is more concerned with the protection of the entire ecosystem rather than a single species which "promotes the conservation of biodiversity."[65] However, one striking similarity between both the ESA and EPBC is that both policies allow the United States and Australia to complete the agreements and obligations set forth under International treaties regarding endangered species.[66] The ESA is a smaller-scale statute that seeks to address specific issues within the ecosystem such as en-

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[62] What is CITES, http://www.ifaw.org/united-states/our-work/wildlife-trade/what -cites.

[63] *See* http://www.ifaw.org/united-states/our-work/wildlife-trade/what-cites; *see also* Baum, et al., *Collapse and Conservation of Shark Populations in the Northwest Atlantic*, 229 Sci. 389-392, (2003).

[64] Endangered Species Act, Pub. L. No. 93-205, 87 Stat. 884 (1973).

[65] Environment Protection and Biodiversity Conservation Act 1999, No. 91, c.1, 3(1)(c), available at https://www.comlaw.gov.au/Details/c2004A00485.

[66] *Compare* 16 U.S.C. 1531(a)(5), *with,* Environment Protection and Biodiversity Conservation Act 1999, 3(1)(e).

dangered species, while the EPBC is a larger-scale comprehensive plan that addresses the ecosystem as a whole. The EPBC approach of biodiversity orchestrates Australia's "realization that effective environmental law must recognize the environment as the interconnected, intricate system that it is, rather than compartmentalizing individual environmental issues in a way that ignores this reality."[67]

The ESA varies from the EPBC in the terminology used to categorize the varied species that are experiencing a threatened existence. The ESA uses the terms "endangered" and "threatened" where endangered means any species that is "in danger of extinction throughout all or a significant portion of its range" and threatened means "any species which is likely to become an endangered species within the foreseeable future."[68] The EPBC uses a slightly different system as it creates three main categories: 'critically endangered,' 'endangered,' or 'vulnerable.'[69] This system allows for a greater precision in aiding these species through the betterment of policies that can prevent extinction. Under the EPBC a species is considered endangered if it "is facing a very high risk of extinction in the wild in the near future."[70] A vulnerable label under the EPBC constitutes that a species "is facing a high risk of extinction in the wild in the medium-term future."[71] However, the main difference is the critically endangered label, which is the final step before a species is declared "extinct in the wild."[72]

The EPBC and the ESA also differ in habitat protection. The EPBC requires listings of threatened ecological communities.[73] Furthermore, it establishes a provision for coastal waters as Marine Protected Areas (MPA's).[74] Australia's MPA's comprise one-third of the MPA's in the world and cover hundreds of thousands of square kilometers.[75] The United States has implemented a starkly different system, as the Secretary of the Interior controls the power to designate areas

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[67] Marjorie Palmer, *supra note 1*.

[68]   ESA, *supra note 64*.

[69] Environment Protection and Biodiversity Conservation Act, *supra note 65*, c.5, 179(3-5).

[70] Environment Protection and Biodiversity Conservation Act, *supra note 65*, c.5, 179(4).

[71] Environment Protection and Biodiversity Conservation Act, *supra note 65*, c.5, 179(5).

[72] Environment Protection and Biodiversity Conservation Act, *supra note 65*, c.5, 179.

[73] Environment Protection and Biodiversity Conservation Act, *supra note 65*, c.5, 181.

[74] *See* Environment Protection and Biodiversity Conservation Act, *supra note 65*, c.5, 344(1).

[75] *A Review of Recent Developments in Ocean and Coastal Law,* 12 OCEAN AND COASTAL L.J. 181, 201-02 (2006).

as habitats that are critical for the furthering of species that are considered endangered and to monitor the MPA's after their creation.[76] The MPA's of Australia have a goal of biodiversity while the United States does not recognize biodiversity as an objective of their MPA's.[77] Along with protecting the species that live within the MPA's, Australia recognizes that MPA's allow for ecotourism destinations, such as the Great Barrier Reef, while the United States remains unaware of the benefits of the MPA's.[78]

The ESA and the EPBC are also executed in different ways. Multiple governmental agencies and executive officials are involved in implementing the ESA, including the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, the Secretary of Commerce, the Secretary of the Interior, the Secretary of State, and the Secretary of the Treasury. On the other hand, the Australian Government's Department of the Environment is the chief body responsible for implementing the EPBC.[79]

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[76] *See generally* Environment Protection and Biodiversity Conservation Act, *supra note* 14; NAT'L MARINE PROTECTED AREAS CTR., ALL ABOUT MARINE PROTECTED AREAS [hereinafter MARINE PROTECTED AREAS]. http://marineprotectedareas.noaa.gov/aboutmpas/. The National Marine Protected Areas Center, established by the Departments of Commerce and the Interior, leads many federal, state, tribal, public, and other organizations to create a scientifically based MPA program that protects natural and cultural marine resources.

[77] *See* MARINE PROTECTED AREAS, *supra note* 76; Exec. Order No. 13, *supra note* 7.

[78] *See* MARINE PROTECTED AREAS, *supra note* 76.

[79] Josh Eagle, *Regional Ocean Governance: The Perils of Multiple-Use Management and the Promise of Agency Diversity,* 16 DUKE ENV. L. AND POL'Y F. 143, 150 (2006) ("NOAA's Office of Protected Resources applies the Marine Mammal Protection Act (marine mammals) and the Endangered Species Act (endangered fish, mammals, and seabirds."). *See* Environmental Species Act, Pub. L. No. 93-205, 87 Stat. 884 (1973). The Secretary of the Interior "shall establish and implement a program to conserve (A) fish or wildlife which are listed as endangered species or threatened species pursuant to section 4 of this Act; or (B) plants." *Id.* at § 5(a). The Secretary of the Interior shall work with the Secretary of State in encouraging "(1) foreign countries to provide for the conservation of fish or wildlife including endangered species and threatened species listed pursuant to section 4 of this Act; (2) the entering into of bilateral or multilateral agreements with foreign countries to provide for such conservation; and (3) foreign persons who directly or indirectly take fish or wildlife in foreign countries or on the high seas for importation into the United States for commercial or other purposes to develop and carry out with such assistance as he may provide, conservation practices designed to enhance such fish or wildlife and their habitat." *Id.* at § 8(b). The Secretary of Commerce, along with the Secretary of the Interior shall establish whether a species is either "threatened" or "endangered." *Id.* at § 4. The Secretary of Interior shall consult with the Secretary of the Treasury in implementing the ESA and reducing costs. *Id.* at § 11(e). *Cf.* AUSTRALIAN GOV'T, DEP'T OF THE ENVIRONMENT AND ENERGY, ABOUT THE EPBC ACT, https://www.environment.gov.au/epbc/about.

Another means by which the ESA and the EPBC vary is the extent by which their implementers address global warming and its effect on the environment. Australia's environmental protection agency, the Australian Department of Environment and Energy, asserts that its role is to "focus on national environmental issues by: implementing an effective response to climate change."[80] In contrast, while the United States Environmental Protection Agency notes that climate change is an issue, the National Oceanic and Atmospheric Administration and National Marine Fisheries Service do not seek to resolve climate change through marine resource policy.[81]

Additionally, the ESA and the EPBC differ in terms of how they are implemented by the executive branches of the governments of the United States and Australia. The Secretary of the Interior and the Secretary of Commerce implement the ESA by controlling the endangered and threatened species list while creating recovery plans for the species on the list.[82] Further, the National Oceanic and Atmospheric Administration utilizes the Endangered Species Act economically.[83] In Australia, the Department of Environment and Energy is in charge of implementing the EPBC, while the Commonwealth Environment Minister is in charge of developing recovery plans for endangered and threatened species. The differences in how the policies are implemented is caused by the differences in the governments, themselves.

The ESA and the EPBC vary in how they impact the fishing industry – an industry that plays an important role for endangered species. In the United States, the National Marine and Fisheries Service has issued regulations upon the fishing industry that have altered fishing practices and placed import bans on operations that involve disproportionately high levels of bycatch. These bans, while aggressive and effective, are not well-received among fishermen who utilize the nets that cause bycatch. Similarly, the plans set forth in Australia by the Commonwealth Environment Minister are overly ambitious as they set forth goals that are too precise to achieve recovery of each endangered species but rather are more suited to the task of biodiversity, as it emphasizes biodiversity benefits.[84]   The biodiversity ap-

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[80] Australian Government, Department of the Environment, Water, Heritage and the Arts, *supra note* 73.
[81] ENVIRONMENTAL PROTECTION AGENCY, 2006-2011 EPA STRATEGIC PLAN: CHARTING OUR COURSE 11 (2006), https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB2008108863.xhtml; NOAA Fisheries- Mission, http://www.nmfs.noaa.gov/what/mission.htm (last visited on Nov. 5, 2015).
[82] ESA, *supra* note 59.
[83] Eagle, *supra* note 73.
[84] COMMONWEALTH OF AUSTRALIA, ENVIRONMENT AUSTRALIA, RECOVERY PLAN FOR MARINE TURTLES IN AUSTRALIA 2 (2003), http://environment.gov.au/coasts/publication/turtle-recovery/pubs/marine-turtles.pdf.

proach in Australia not only helps the endangered species but also other marine species, organisms, and plant life.

The ESA and the EPBC both have proven to be effective models for sea turtle conservation and recovery. Likewise, the rules and regulations that have been effective in aiding the sea turtle populations can also be effective in assisting the endangered species of sharks. For example, the Sea Turtle Amendment can be a useful model for future amendments to the ESA in providing protection for varying shark species which are considered endangered under the ESA. On the other hand, as the EPBC focuses on biodiversity instead of a specific species, the EPBC has been advantageous to the shark population. The MPAs within Australia also have guaranteed safety and recovery to sharks. However, Australia's model could improve if a further amendment was added to the EPBC that was tailored specifically to shark conservation.

Australia and the United States have varied purposes and objectives set forth in their conservation policies and implement their statues differently through different entities. Both countries not only have different national law, but achieve their international obligations through a wide array of methods.

B. Comparative International Leadership of the United States and Australia

The United States and Australia both have achieved international leadership positions through their success in international agreements in providing legal protection to endangered species, as seen in the turtle model.

The United States effectively obtained a leadership role in its protection of sea turtles through its implementation of the IAC. The IAC's successful monitoring and compliance mechanisms provided that the sea turtle population is maintained and monitored.[85] The United States is primarily responsible for the creation of the IAC through their "bold and responsible leadership."[86]

Similarly, Australia contributed greatly to the international standards for endangered species protection. Australia has participated in international agreements for the protection of endangered and threatened species, such as the Biodiversity Convention, the Convention on Migratory Species, and the United Nations Convention on the Law of the Sea. As a party to the Biodiversity Convention, Australia has demonstrated its commitment to implementing biodiversity in its waters, as well as sustainable use practices.[87] In addition, the Con-

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[85] *See generally*, Wold, *supra* note 24, at 33-8.

[86] Palmer, *supra* note 1, at 144.

[87] *See generally* Biodiversity Convention, *supra* note 35; Wold, *supra* note 20.

vention on Migratory Species lists several species of turtles and sharks under its protection.[88] The Convention on Migratory Species also proclaims that parties "shall endeavor" "to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction."[89] The Convention on Migratory Species provides for education and public awareness to influence the public on the problems faced by endangered species as a means to ensure effective protection. Finally, as a party to the United Nations Convention on the Law of the Sea, Australia is required to adhere to high standards for conservation efforts for marine life.[90]

The United States and Australia are both parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[91] Through participation in CITES, the United States and Australia can prevent trade of both turtles and sharks on international markets. The international agreements to which both the United States and Australia are parties are valuable compliments to their national laws on the protection of endangered species.

C.   *The Future of Endangered Species: Suggestions for Change*

A comparison of the ESA and the EPBC demonstrates the weaknesses of each piece of legislation. The United States would benefit from adjusting the ESA to reflect Australia's focus on biodiversity. Each country could utilize their leadership positions better to protect species internationally.

The United States could also model its Marine Protected Areas to be more like Australia's. Because of Australia's focus on biodiversity, it utilizes Marine Protected Areas for the protection of endangered species. A focus on biodiversity in the United States would result in "better long-term results in the effort to shield endangered species from major threats and to protect the marine environment as a whole."[92] The loss of biodiversity is substantial in the United States. Additional MPAs could garner a more wide-spread support for the marine life within, especially for the endangered animals such as turtles and sharks. The United States can also benefit from stricter regulations on the fishing industry to eliminate bycatch effects on both turtles and sharks while aiding the entire marine ecosystem.

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[88] Convention on Migratory Species, *supra* note 36.
[89] Convention on Migratory Species, *supra* note 36, at Art. III, § 4.
[90] UNCLOS, *supra* note 33, at Art. 194, § 5 (requiring parties to take measures to "protect and preserve . . . the habitat of depleted, threatened or endangered species and other forms of marine life").
[91] *See* CITES: LIST OF CONTRACTING PARTIES, *supra* note 58.
[92] Palmer, *supra* note 1, at 146.

Due to the benefits that would accrue to both countries from incorporating methods from the other method, the best course of action would be to create a hybrid species specific-biodiversity approach to conservation law. This hybrid system would be able to utilize the advantages of both systems without the pitfalls they contain. The best way to implement this plan would be to have a basic biodiversity approach with stringent and specific methods for species identified as endangered. A system structured in this manner will increase the biodiversity and health of the whole ecosystem while putting measures in place to protect and rebound the endangered species.

V. CONCLUSION

This comparison of American and Australian efforts for protection of marine turtles demonstrates an effective model for shark conservation and recovery. The United States' method of species-specific conservation can be used to protect sharks by including an additional amendment to the ESA that provides for shark protection. Additional means of shark-specific conservation and recovery within the United States, such as that demonstrated by the turtle model, will aid the endangered and threatened populations of sharks. The biodiversity approach within Australia has been very successful in turtle conservation as it protects the ecosystem in which they reside. Furthermore, the Australian model, with additional laws to protect sharks, will also go a long way in saving the population of sharks that are at risk of extinction.

Mutual goals in the international community with the combined approaches of both the United States and Australia is a better means by which endangered populations of turtles and sharks can be conserved and recovered so that the marine ecosystem may be preserved. Together, linked with the international community, Australia and the United States have the power to address the national and global threats to sharks, as seen with their successful collaboration to save the turtle population. As we swim ahead, the best plan would be to create a system in which both methods, biodiversity and species-specific measures, are blended together to secure the advantages of both approaches.