

## TOP 10 NOMINATION FORM

**2020 Topic:** Illegal wildlife (plants and animals) trafficking and unsustainable trade

### Species must meet these qualifications:

- Must be native U.S. species or international species with significant U.S. demand
- Must be experiencing substantial decline (do not have to be threatened/endangered listed)
- Must be directly or indirectly impacted
  - Direct: exploited as trophies, pets, medicines, etc.
  - Indirect: impacted by imported exotics or imported disease vectors (e.g., chytrid)

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### Nominated Species (Common Name & Scientific Name):

Scalloped Hammerhead Shark

*Sphyrna lewini*

### Question 1: Threat to the Species

How is the species and/or its habitat threatened by illegal wildlife trafficking and/or unsustainable trade? Note the extent of the threat and whether it is direct or indirect. Include references to relevant scientific studies. Does the species face any associated political threats?

Scalloped hammerhead sharks have one distinct population segment (DPS) listed as endangered domestically (the Eastern Pacific DPS), one foreign DPS listed as endangered (the Eastern Atlantic DPS), and two DPSs listed as threatened (the Central & Southwest Atlantic DPS and Indo-West Pacific DPS). CITES Appendix II lists scalloped hammerheads throughout their range.

Every single listed scalloped hammerhead shark DPS is threatened due to “overutilization by industrial/commercial and recreational fisheries” and “high at-vessel fishing mortality.”<sup>1</sup>

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<sup>1</sup> See, <https://repository.library.noaa.gov/view/noaa/17835> at iii, showing Northwest Atlantic & Gulf of Mexico DPS facing “high at-vessel fishing mortality” as the most serious threat and “overutilization by industrial/commercial and recreational fisheries” as a moderate risk to the persistence of the DPS; Central & Southwest Atlantic DPS facing overutilization by industrial/commercial fisheries and high at-vessel fishing mortality as high risks to the persistence of the DPS, as well as “overutilization by artisanal fisheries, lack of adequate regulatory mechanisms, IUU fishing, and schooling behavior of the species” as additional moderate risks to the DPS; Indo-West Pacific DPS facing overutilization by industrial/commercial fisheries and high at-vessel fishing mortality as a high risk to the persistence of the DPS as well as habitat degradation, inadequacy of current regulatory mechanisms, and schooling behavior creating moderate risks to the DPS; Central Pacific DPS facing high at-vessel fishing mortality as the main threat, as well as overutilization by industrial/commercial fisheries which

According to the NMFS Scalloped Hammerhead Shark Status Review Report, high numbers of hammerhead sharks have been removed by longliners.<sup>2</sup> While longliners typically target tuna, sharks have become popular as incidental take.<sup>3</sup> For example, from 1983-1994, longliners based in Santos City, Sao Paulo State, Brazil began targeting sharks at least part of the time during their trips, and by 1993, sharks comprised about 60% of the total longline catch. The central Mexican shark fishery targets scalloped hammerheads, and has done so since the early 1940s.<sup>4</sup> From 1998 – 1999, for example, scalloped hammerheads made up 43.1% of the fishery’s total recorded catch.<sup>5</sup> Likewise, in the Gulf of Tehuantepec, scalloped hammerheads are the second most important species in the shark fishery, comprising around 29% of total shark catch.<sup>6</sup> Similarly, from 2004 – 2005, scalloped hammerheads comprised 64% of artisanal shark catch south of Oaxaca, Mexico.

To date, United States manufacturers sell hammerhead shark products to United States consumers, and shark meat routinely ends up in a range of consumer products.<sup>7</sup> Additionally, NMFS, the agency responsible for recovering threatened and endangered marine species, is actively encouraging consumption of domestically produced shark meat.<sup>8</sup>

Even if not specifically targeting scalloped hammerheads, the rise of a domestic market for shark meat is problematic for any listed shark species. With an increasing demand for shark meat, whether “direct” in the form of shark meat jerky, or “indirect,” as unlabeled fillers for pet food and cosmetics, the increase in shark meat supply is concerning because it gives the fishing industry an incentive to target all shark species, including threatened and endangered. For scalloped hammerheads, in particular, who are already facing a threat of extinction, any direct or indirect harvest of their numbers could be devastating to their recovery.

## Question 2: Role of the Species

What is the ecological and/or scientific importance of the species? Note if it is a keystone species and describe its role in its environment. Include references to relevant scientific studies.

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cause a moderate risk to the DPS; and the Eastern Pacific DPS, which faces overutilization by industrial/commercial and artisanal fisheries, as well as impacts of IUU fishing, high at-vessel mortality and schooling behavior of the species as high risk to the DPS, as well as lack of current adequate regulatory mechanisms, which create a moderate risk to the persistence of the DPS.

<sup>2</sup> NMS Status Review Report: Scalloped Hammerhead Shark (*Sphyrna lewini*), March 2013, at 43.

<sup>3</sup> *Id.* at 43.

<sup>4</sup> *Id.* at 44.

<sup>5</sup> *Id.* at 44.

<sup>6</sup> *Id.* at 44.

<sup>7</sup> See Diego Cardenosa study testing 87 pet food products and 24 cosmetic products, found here:

<https://www.forbes.com/sites/melissacristinamarquez/2019/09/08/there-may-be-shark-in-your-make-up-and-pet-food/#5d3507df7098> ; See also, advertisement for “Hammerhead Shark Jerky” on Amazon.com found here: <https://www.amazon.com/Newport-Jerky-Company-Hammerhead-Shark/dp/B01MYQ9XZ4>

<sup>8</sup> See NMFS News, U.S.-Caught Sharks Are A Sustainable Food Choice, October 22, 2019 found here: <https://www.fisheries.noaa.gov/feature-story/us-caught-sharks-are-sustainable-food-choice> )

Scalloped hammerhead sharks are the most abundant of hammerhead species, are highly mobile, and partly migratory, having been observed making migrations along continental margins as well as between oceanic islands in tropical waters.<sup>9</sup> Scalloped hammerhead sharks are high trophic level predators and opportunistic feeders with a diet that includes a wide variety of teleosts, cephalopods, crustaceans, and rays.<sup>10</sup> Like most shark species, scalloped hammerheads are generally considered a keystone species. This is because, as apex predators, they play an important role in the ecosystem by maintaining the populations of species “below” them in the food chain. Scalloped hammerhead sharks are able to maintain biodiversity through direct and indirect predation effects, and as such, changes to shark populations indicate larger shifts in marine ecosystems.

### **Question 3: Message**

What is the most important message about this species for decision-makers and the public?

Scalloped hammerhead sharks are particularly vulnerable to extinction due to unsustainable fishing practices, including targeted fishing and as bycatch, and the public should be aware of this in order to adapt their consumer practices to align with their environmental ethics.

Longline fishing practices targeting tuna have the effect of establishing a “de facto” shark fishery, which, combined with formal shark fisheries and an increased demand for shark meat as “filler” products, has created a unique and deadly situation for scalloped hammerheads. This iconic keystone species, which is already facing threats like habitat destruction, deposition of pollutants, lack of adequate regulatory mechanisms nationally and worldwide, global climate change, the species’ biological constraints, and more, is particularly threatened by commercial fishing, and as demand of shark meat increases, so do the threats facing scalloped hammerheads.

It is critical that the public is made aware of the delicate balance of the marine ecosystem and the important role played by apex predators, like the scalloped hammerhead shark.

### **Final Selections**

If my nomination is selected for inclusion in the report, I would like the first draft of the species profile for the report to be written by (choose one):

**\_X\_** You (ESC), and then my NGO will edit the profile and approve the final draft.

Me (my NGO). I understand that I (and other participating writers) will need to adhere to ESC’s writing guidelines.

**Deadline:** May 8, 2020

**Send to:** top10@endangered.org

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<sup>9</sup> NMS Status Review Report: Scalloped Hammerhead Shark (*Sphyrna lewini*), March 2013, at 4.

<sup>10</sup> *Id.* at 6.