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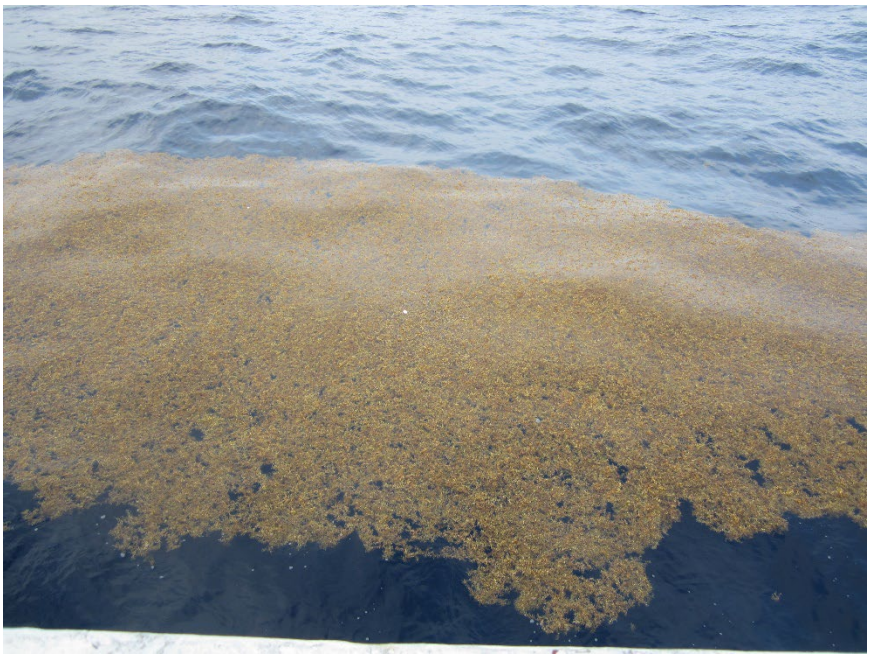
NOAA FISHERIES

Southeast Regional Office

Frequently Asked Questions Regarding Annual Inundations of *Sargassum* in the Southeastern United States



Floating mat of Sargassum. Credit: NOAA Teacher at Sea Program, NOAA Ship OREGON II

What is *Sargassum*?

Sargassum is a type of large brown algae where some species float, unattached to the seafloor. There are two floating species found in the Caribbean and North Atlantic: *Sargassum natans* and *S. fluitans.* They are found as individual clumps, small patches, large rafts, and weedlines which provide important habitat for many species of fishes, invertebrates, sea turtles, and sea birds. *Sargassum* can occur in very large quantities, depending on currents and other environmental factors. A region of the North Atlantic Ocean is known as the Sargasso Sea because of the large amounts of *Sargassum*. In fact, Christopher Columbus feared his ships would be trapped in the thick mats.

Is *Sargassum* essential fish habitat?

Yes. *Sargassum* is identified and described as essential fish habitat by the three regional fishery management councils and NOAA Fisheries in the southeastern United States and Caribbean. EFH is defined as waters and substrates necessary for fish for spawning, breeding, feeding and growth to maturity. *Sargassum'*s role as EFH is predominantly associated with species found in offshore marine waters. As *Sargassum* enters the nearshore environment, its EFH value diminishes until it eventually washes ashore.

Is *Sargassum* washed up onshore considered essential fish habitat?

No. Once *Sargassum* washes ashore on beaches or other coastal areas, it no longer performs the functions necessary to be considered EFH.

Does NOAA prohibit the harvest of *Sargassum* because it is essential fish habitat?

No. Like oysters and clams, which are also types of EFH, *Sargassum* may be harvested under certain circumstances but many factors must be taken into consideration. *Sargassum* may be proposed for harvest for use as a biofuel, agricultural feed supplement, or simply to remove excess biomass before it reaches nearshore and onshore areas. *Sargassum* in the water is still functioning as EFH and may contain juvenile and subadult individuals of other managed species which may have state and federal size and harvest restrictions. Also, sea turtles protected by the Endangered Species Act are known to use *Sargassum* as protection and to eat and find prey. State and local restrictions may limit how, when, and where *Sargassum* can be harvested.

How does NOAA Fisheries protect essential fish habitat?

Federal agencies must consult with NOAA Fisheries when their actions or activities may adversely affect essential fish habitat. Through this consultation process, we identify measures to avoid, reduce, or compensate for adverse impacts to EFH. Learn more about essential fish habitat and how we conduct consultations.

Is there a prohibition on the harvest of *Sargassum* in the Atlantic?

Yes. The broad definition of fish does allow *Sargassum* to be managed like a traditional finfish or shellfish by NOAA Fisheries. As such, the South Atlantic Fishery Management Council decided to regulate fishing for *Sargassum.* Approved in 2003, the final rule for the *Sargassum* fishery management plan prohibits the harvest of *Sargassum* in federal waters (generally 3 miles or farther from shore) south of the North Carolina/South Carolina border. It also:

- Limits harvest off North Carolina to 5,000 pounds (wet weight) per year
- Limits harvest to November through June
- Requires observers onboard any vessel harvesting *Sargassum*
- Prohibits harvest within 100 miles of shore
- Implements harvesting gear specifications

The restrictions are limited to federal waters offshore North Carolina, South Carolina, Georgia, and Florida's east coast.

Can *Sargassum* be harvested from state and territorial waters?

NOAA Fisheries does not restrict the removal of *Sargassum* from state and territorial waters; however, state and territorial regulations vary and are not addressed here. Additionally, given its close association with Endangered Species Act-listed sea turtles, especially post-hatchlings and small juveniles, harvest of *Sargassum* poses a high likelihood for incidental take of sea turtles. Therefore, anyone harvesting *Sargassum* needs an incidental take permit. Anyone harvesting *Sargassum* without an incidental take permit could be subject to prosecution.

Can *Sargassum* be harvested from beaches?

NOAA Fisheries does not restrict the removal of *Sargassum* washed ashore on beaches. However, because protected sea turtles and birds nest on coastal beaches there may be federal, state, territorial, or local restrictions on how, when, and where *Sargassum* may be removed.

Is *Sargassum* critical habitat?

Sargassum has been designated as Critical Habitat for loggerhead sea turtles under the Endangered Species Act. It is considered Critical Habitat for loggerhead sea turtles only within specified boundaries as described in the designation. The *Sargassum* Critical Habitat is split into two units, one for the Atlantic Ocean, and one for the Gulf of Mexico. Critical Habitat designations affect only federal agency actions or federally funded or permitted activities; interagency consultation is required on activities that may affect the Critical Habitat.

Is *Sargassum* washed up onshore considered Critical Habitat?

No. Only *Sargassum* within the specific unit boundaries is part of the designated Critical Habitat. At no point do unit boundaries get closer to shore than the 10 meter depth contour line. However, as with harvest or manipulation of *Sargassum* anywhere, care must be taken to avoid harmful interactions with listed sea turtles, especially hatchlings and small juveniles that associate with *Sargassum*.

Why does *Sargassum* periodically occur in large quantities?

Sargassum occurs every year in the Caribbean Sea, Gulf of Mexico, and tropical Atlantic, but the amount can vary significantly from year to year. *Sargassum* does not extend as a blanket (or blob) covering the full surface of the ocean in these regions. Instead, it floats in patches that range in size from a few centimeters to hundreds of meters. Some of these patches reach coastal areas, including beaches, ports, and even intake systems for drinking water. The area that these patches cover has been significantly larger in recent years.

Does NOAA Fisheries consider *Sargassum* a harmful algal bloom?

In offshore marine waters, *Sargassum* provides valuable habitat for many species of fish, invertebrates, and sea turtles. When *Sargassum* proliferates to high concentrations and winds and currents push it into the nearshore environment, it can be a nuisance. It can be harmful to marine and aquatic ecosystems, coastal communities, and human health. Dead and decaying accumulations of *Sargassum* on beaches can produce toxic compounds or other biological, chemical, and physical impacts. Such large accumulations may be identified as harmful algal blooms.

What are some local impacts that an overabundance of *Sargassum* can cause?

Out at sea, *Sargassum* is an important habitat for fish, sea turtles, and other marine organisms, but as it accumulates close to the coastlines it can smother valuable corals, seagrass beds, and beaches. As it washes ashore the seaweed can cause ecological and economic damage. As it begins to decay *Sargassum* produces hydrogen sulfide gas, which smells of rotten eggs, repelling beachgoers and affecting the tourism industry. *Sargassum* can also impact navigation, block water intakes at power and desalination plants, and impact benthic ecosystems after it sinks to the bottom of the ocean.

What is NOAA doing about *Sargassum*?

Sargassum is covered by the Harmful Algal Bloom and Hypoxia Research and Control Act, which gives NOAA authority to research, forecast, and identify approaches for control, prevention, and mitigation. It also gives NOAA a mechanism to coordinate with other agencies via an Interagency Working Group. NOAA conducts and funds studies on *Sargassum*, and develops tools with state/federal/university partners to monitor and track its movements.

Useful Links:

https://www.aoml.noaa.gov/obs-for-blue-economy/#sargassum

https://www.aoml.noaa.gov/tracking-sargassum/

https://www.aoml.noaa.gov/chasing-sargassum/

https://safmc.net/fishery-management-plans/sargassum/

https://myfwc.com/research/about/programs/ear/sargassum/

https://www.science.org/doi/10.1126/science.aaw7912

https://www.thecoralreefresearchhub.com/wp-content/uploads/2021/10/Sargassum-Invasion-of-Coastal-Environments-A-Growing-Concern-Clifford-Louime-06-02-2017.pdf

https://blogs.ifas.ufl.edu/miamidadeco/2023/04/20/the-2023-sargassum-blob-dispelling-myths/

Sargassum blooms in the Caribbean alter the trophic structure of the sea urchin *Diadema antillarum*