

BALANCING SHRIMP PRODUCTION WITH SEA TURTLE PROTECTION

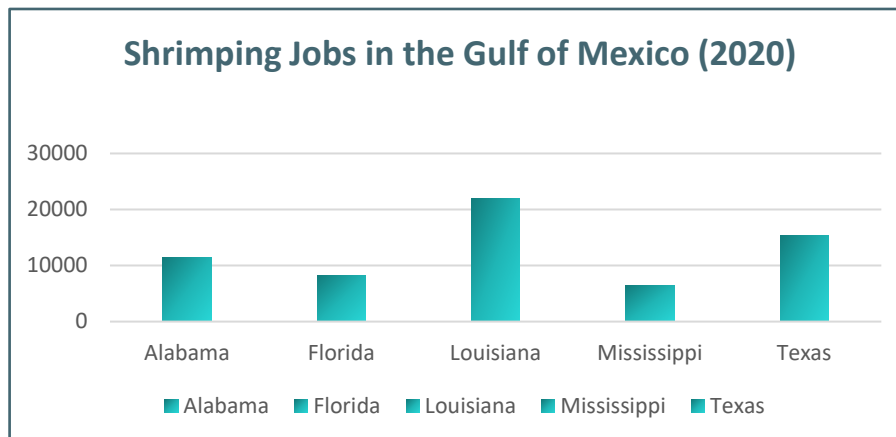
By Lauren Wilson¹ and Kristina Alexander

Shrimp and sea turtles are valuable natural resources of the Gulf of Mexico, but certain shrimping practices and unregulated imports may be putting both at risk.

Background

The Gulf is home to five species of sea turtles: hawksbill, leatherback, Kemp’s ridley, loggerhead, and green. All five species are listed as threatened or endangered under the federal Endangered Species Act (ESA).

The Gulf of Mexico also supplies at least 86 percent of commercially caught white shrimp and 94 percent of commercially caught brown shrimp in the United States; Gulf white shrimp harvests are valued at \$6.5 billion and brown shrimp at \$8 billion since 1980.²



The two resources are related. Sea turtles can get caught in shrimping nets and drown. When an unintended fish or animal is caught during fishing, it is known as bycatch or an “incidental take.” According to the National Marine

Source: [NMFS](#)

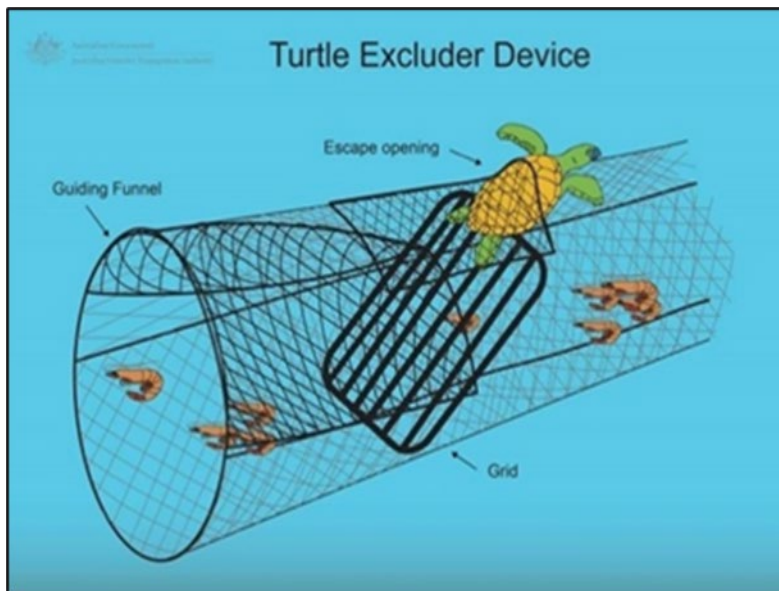
¹ Lauren Wilson is a Legal Research Intern with the Harte Research Institute for Gulf of Mexico Studies and a Third Year Law Student at the University of Mississippi School of Law.

² Ben Posadas, [Dockside and Wholesale Prices of White Shrimp, Mississippi Marketmaker](#) Vol. 10, No. 6 (June 8, 2020); Ben Posadas, [Dockside and Wholesale Prices of Brown Shrimp, Mississippi Marketmaker](#) Vol. 10, No. 5 (May 28, 2020). Louisiana (29.9% of all brown shrimp; 43.8% white) and Texas (45.2% of all brown shrimp; 27.1% white) produce the most wild-caught shrimp among U.S. states.

Fisheries Service (NMFS), the federal agency that regulates both shrimping and sea turtles, getting caught “in fishing gear is the primary anthropogenic source of sea turtle injury and mortality in U.S. waters.” Harming or killing an ESA-listed species is against the law. Bycatch also harms the ecosystem. In 2013 an estimated 62 percent of the total catch from shrimp skimmer trawls in the Gulf of Mexico was discarded as bycatch – 242 million pounds of sea life killed or injured that year.³

To address the problem, NMFS established regulations to allow shrimping if certain measures were put in place to limit sea turtle bycatch. Those measures include devices that allow turtles to escape from nets, known as turtle excluder devices (TEDs), as well as setting time limits for how long nets can be in the water. In an early version of the rule, vessels smaller than 25 feet had tow time limits of 90 minutes for inshore waters, while all shrimp trawlers greater than 25 feet had to install qualified TEDs.⁴ If the conservation measures in those regulations (now found at 50 CFR 223.206; 50 CFR 224.104) are followed, takes of sea turtles during shrimp trawling are permitted (meaning the shrimper has not violated the ESA).

NMFS has found that qualified TEDs are 97 percent effective in keeping turtles out of shrimp trawls. TEDs are grates placed in nets allowing larger animals such as sea turtles to escape while smaller marine life pass through the device into the net.



Source: [NMFS](#)

The rules were controversial from the start. When the mandatory use of TEDs took effect in 1989, Texas shrimpers blockaded Galveston, Corpus Christi, Port Aransas, and Lydia Ann ship channels, and shrimpers in Louisiana blocked access to the Port of Lake Charles.⁵ The protests were called off once the federal government agreed to discuss the provisions.

After a few years, the regulations changed ... becoming stricter.

³ Benjamin Carr et al., *TEDs for All Trawls: A Net Positive for Fishermen and Sea Turtles*, Oceana, p.3 (May 2016).

⁴ In 1989 the rule was found at 50 C.F.R. § 227.72(e).

⁵ David Barron, [Protesting Shrimpers Ease Blockade along Texas Coast](#), UPI (July 23, 1989).

Tow time limits were lowered to 55 minutes from April through October and 75 minutes the rest of the time. Shrimp trawlers – pusher-head, skimmer, or butterfly wing – were required to use approved TEDs unless they followed the tow time limits.⁶

2016 Proposed Regulations

In March 2016, NMFS announced its intent to revise the sea turtle conservation regulations affecting shrimpers from North Carolina to Texas. The revision was in response to a lawsuit claiming NMFS was not doing enough to protect sea turtles from shrimping nets.⁷

During the nearly 30 years since they were introduced, NMFS had found that tow time limits were “inherently difficult to enforce.”⁸ Instead, NMFS proposed requiring TEDs in all shrimp trawl nets – skimmer trawl, pusher-head trawl, and butterfly trawl. According to NMFS, this would mean “most shrimp trawlers operating in the southeastern United States” would be required to have approved TEDs. Also, NMFS proposed changing the design of approved TEDs to have a 3-inch grid opening rather than 4-inch. The tow time definition would be revised to require those vessels not required to install TEDs to lift the entire net and frame from the water within each tow time to check for ensnared turtles.

According to NMFS, 5,837 shrimp vessels used skimmer, pusher-head, or butterfly trawls in 2016, primarily in the Gulf of Mexico, with just 177 of those vessels in the South Atlantic. NMFS acknowledged that shrimpers work on “small economic margins” due to lower shrimp prices and higher fuel prices. NMFS predicted the average shrimp loss from using a TED to be 6.21 percent. It did not expect that shrimpers would operate longer to offset the losses caused by using TEDs and that some operators would be put out of business.

NMFS conducted five public scoping meetings in April of 2016. Comments and information gathered during this process were incorporated into a draft environmental impact statement (EIS). Seven different alternatives were considered. The draft EIS was published along with the proposed rule on December 16, 2016.

The 2019 Final Rule

After allowing for a public comment period, the rule was revised. Instead of requiring all shrimp trawl vessels to use TEDs, the 2019 Rule applies only to skimmer trawl vessels that are 40 feet

⁶ 50 C.F.R. § 223.206(d) (2015). Licensed bait shrimpers were exempt. Note that flounder trawlers are also subject to gear and tow time restrictions.

⁷ *Oceana, Inc. v. Pritzker*, 125 F. Supp. 3d 232 (D.D.C. 2015).

⁸ *81 Fed. Reg. 91097, 91098* (Dec. 16, 2016) (shrimpers using butterfly trawls in the Biscayne Bay in Miami would not be subject to the regulation; different rules apply to inshore waters of Georgia and South Carolina)..

or greater. Vessels of any size using pusher-head or butterfly trawls would not need to use TEDs. Also, vessels without TEDs would have to empty all the catch on the deck within the tow time period rather than raise the nets completely from the water. The smaller grid design, however, became final.

While the 2019 Rule reduced how many vessels were impacted, the conservation benefits remained relatively significant, according to NMFS. For example, the larger vessels that were still required to install TEDs use as many as four nets compared to just one for smaller vessels. Also, according to NMFS, the 2019 Rule could be implemented more quickly as fewer TEDs would need to be manufactured. However, NMFS anticipated that the 2019 Rule would protect fewer turtles: saving 801 to 1,158 turtles annually, compared to 1,730 to 2,500 turtles the proposed rule would have protected each year.

The 2019 Rule originally was supposed to take effect on April 1, 2021. However, on March 31, 2021, NMFS postponed the effective date until August 1, 2021, due to supply chain issues and because the COVID-19 pandemic made holding in-person TED training sessions difficult.

Conservation Issues

NMFS was sued within days of its decision to change the effective date. While the 2019 Rule was expected to have a positive impact on sea turtle conservation, it received mixed responses from conservation groups. Both Oceana⁹ and the Center for Biological Diversity criticized the final rule for not doing as much to protect sea turtles as the proposed version. In fact, the Center for Biological Diversity sued, claiming that by exempting over 80 percent of shrimping vessels, the rule did not achieve its intended effects.¹⁰ Its suit further claimed that the big changes between the 2016 proposed rule and the 2019 Final Rule violated both the Administrative

SKIMMER TRAWLS

Source: World Wildlife Fund, Bycatch (2023)

Skimmer trawls are vessels that push nets through the water, rather than dragging them, with something known as a tickler chain weighted to “skim” along the bottom. Because they scoop up everything, skimmer trawls increase the likelihood of bycatch. The net does not have to be lifted from the water to be emptied, as does an otter trawl. NMFS estimates that 93 percent shrimping effort in shallow coastal waters (not counting otter trawls) is by skimmer trawls.

⁹ See Oceana, Commerce Department Takes Step to Prevent Sea Turtle deaths in Gulf and Atlantic Shrimp Trawl Nets (Dec. 19, 2019) (describing the final rule as “a step in the right direction,” but noting that the proposed rule “would have protected more than 1,000 additional turtles per year”).

¹⁰ Center for Biological Diversity v. NMFS, No. CV 21-930, 2022 WL 4235013 (D.D.C. Sept. 14, 2022).

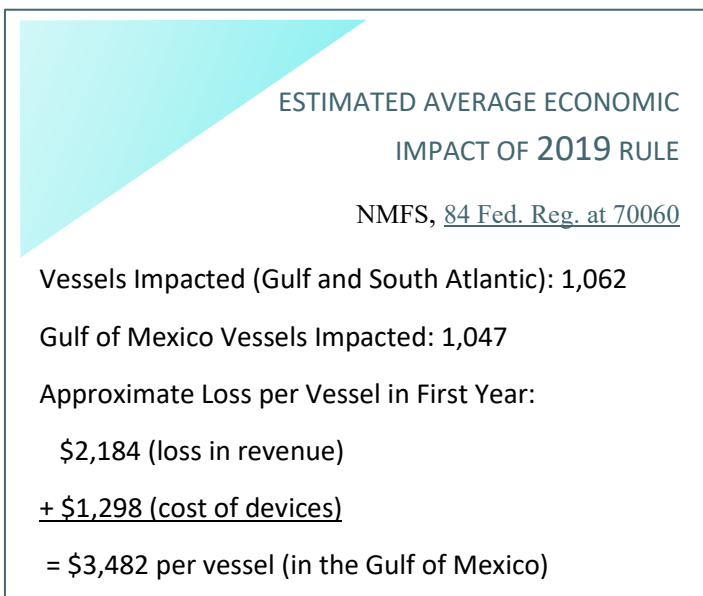
Procedure Act and the National Environmental Policy Act. The federal court ruled in favor of NMFS, stating that the agency followed the correct legal guidelines when creating and promulgating the rule. However, the case is under appeal.

Timing and Economic Issues

On August 11, 2021, ten days after the rule took effect, Louisiana sued NMFS, seeking a further delay, claiming its shrimpers needed more time to come into compliance. The court granted an extension which prevented the rule from being enforced in Louisiana inshore waters until February 1, 2022.¹¹ Shrimpers in other states still had to comply with the 2019 Rule, however.

Louisiana also sought to have the rule voided, claiming the 2019 Rule failed to consider the economic impacts the state would face following its implementation. The Louisiana shrimping industry has struggled with both competing with cheaper imported shrimp and facing hardships caused by the COVID-19 pandemic, according to the state. In its suit, Louisiana claimed that the 2019 Rule would have major consequences on its shrimpers' profit margins.

In fact, NMFS acknowledged [financial impacts of installing TEDs](#). According to the agency's



estimates, each TED costs \$325 for vessels smaller than 60 feet and \$550 for larger vessels. In addition to the cost of the device, it is estimated that shrimpers would experience an average drop of 6.21 percent in shrimp harvests as a result of using a TED.

The lawsuit was dismissed due to Louisiana's failure to establish how the state's marine resources (rather than its shrimpers) would be harmed by the rule.¹² The court never reached the economic issues raised by the state because it found those alleged harms would not be felt by the state agencies

¹¹ [Louisiana v. Dep't of Commerce](#), 559 F. Supp. 3d 543 (E.D. La. 2021).

¹² [Louisiana v. Dep't of Commerce](#), No. CV 21-1523, 2022 WL 17251152 (E.D. La. Nov. 28, 2022), *aff'd sub nom. Louisiana v. Nat'l Oceanic & Atmospheric Admin.*, 70 F.4th 872 (5th Cir. June 15, 2023) (finding state's claim that 2019 Rule would increase its law enforcement costs lacked any evidence showing that the state would enforce the rule).

that brought the suit, but by shrimpers, who were not the parties suing.

Before the 2019 Rule took effect and before it sued, [Louisiana announced a program](#) that would help shrimpers pay for TEDs. The program promised to reimburse shrimpers up to 60 percent of the cost for two TEDs. Louisiana isn't the only state with a program such as this. [Mississippi also developed a program](#) to reimburse shrimpers for the cost of purchasing and installing TEDs through July 2024.

Helping Shrimpers *and* Helping Sea Turtles



Kemp's Ridley turtle hatchling ready for release.
Photo Credit: Isabel Nykamp

In June 2023 five members of Texas's Congressional Delegation took a different tack to helping Gulf of Mexico shrimpers. While not the intended goal, their request might help sea turtle conservation. The Representatives wrote the U.S. Secretary of Commerce (who oversees NMFS) and the U.S. Trade Representative claiming that the artificially-low price of imported shrimp was making it impossible for U.S. Gulf coast shrimpers to compete.¹³ In their letter they state that the price per pound of shrimp in 1980 was \$6.50 but now was less than \$1.00 per pound “due to foreign shrimp being dumped into United States markets from countries such as Ecuador, India, Thailand, China, Indonesia, and Vietnam.”

The Representatives note that the United States imports 95 percent of the shrimp it eats, but that other countries do not have the good shrimping practices the United States has such as closed seasons, rigorous testing for banned chemicals, safe labor, and TEDs. While imported shrimp from the listed Asian countries have tariffs on them to help balance the market, imports from Ecuador do not, and that country exports to the United States “at least 713 million pounds” of shrimp annually, according to the letter.

While not mentioned in the letter, according to [Oceana](#) 50 – 60 percent of shrimp imported to the United States is from shrimp farms made by clearing mangrove forests. Mangroves provide necessary shoreline stability as well as carbon capture. Other problems associated with farm-raised shrimp include the water quality – antibiotics used to raise shrimp, and agricultural runoff

¹³ See Holly Hansen, [Texas Congressmen Call on Biden Administration to Protect American Shrimp Industry](#), The Texan (June 13, 2023) (the letter is signed by Reps. Brian Babin, Michael Cloud, Vincente Gonzalez, Troy Nehls, and Randy Weber).

and other wastes and chemicals. The [FDA reportedly tests less than one percent](#) of imported shrimp.

Conclusion

In the 2019 Rule NMFS sought to balance sea turtle bycatch while addressing the economic concerns of the shrimping industry. These efforts however did not save the regulation from scrutiny. Compromises in the final rule resulted in higher losses of turtles than in the proposed rule, while still adversely impacting hundreds of shrimpers already operating on the margin.

Help for Gulf of Mexico shrimpers might come from a different type of regulation. Texas Representatives suggested that regulating shrimp imports could boost U.S. shrimpers' revenue. Establishing universal standards for shrimping – such as requiring folks exporting shrimp to the United States to demonstrate they use TEDs – and leveling the price could help the Gulf coast shrimpers earn a better price without increasing sea turtle losses.



GREEN SEA TURTLE CRITICAL HABITAT

[Proposed critical habitat](#) for the threatened Green Sea Turtle population in the Gulf of Mexico would include areas from the mean high tide lines to waters 20 meters deep offshore of Florida and Texas. These areas, according to NMFS, would protect access to nesting beaches and the nearshore areas would assist mating and hatchlings. The other Gulf states' shores provided "low conservation value" and were not included.

Once critical habitat is determined environmental reviews of fishery management plans for Gulf shrimp may change. Federal plans must show they will not adversely modify the critical habitat of listed species.