National Oceanic and Atmospheric Administration
U.S. Department of Commerce

NOAA's Oil Spill Response

Fish Stocks in the Gulf of Mexico

Overall Economics of Gulf Fisheries

In 2008, commercial fishermen in the Gulf of Mexico harvested 1.27 billion pounds of finfish and shellfish that earned $659 million in total landings revenue.

There were 3.2 million recreational fishermen who took a fishing trip in the Gulf of Mexico region, and they took 24 million fishing trips in 2008.

Shrimp Species

Major shrimp species in the Gulf of Mexico include white shrimp, pink shrimp and brown shrimp. These species are mainly located in coastal areas. During the spring, the young, or postlarvae, migrate from coastal areas. Impacts on these shrimp will increase as the oil slick approaches nearshore areas.

Shrimp species will be impacted due to mortality of adults, as well as postlarvae. In particular, brown shrimp postlarvae will be migrating out of inshore waters from February to April, while white shrimp will begin migration in May and continue through November. The spill could have impacts not only on shrimp catches this year, but also next year if postlarvae mortality is high.

The economic impact of the oil spill on shrimp could be extensive. The Gulf region landings of shrimp are the nation's largest with 188.3 million pounds or 73 percent of the national total (Fisheries of the US, 2008). Louisiana led all Gulf states in landings with 89 million pounds with a dockside value of $130.6 million in 2008, followed by Texas (63.8 million pounds, dockside value of $157.2 million), Alabama (17 million pounds, dockside value of $38.4 million), Florida's West Coast (9.9 million pounds, dockside value of $23.3 million), and Mississippi (8.6 million pounds, dockside value of $17.1 million).

Crabs

There are three species of crabs in the Gulf of Mexico area: blue crab, Gulf stone crab, and stone crab. Blue crab occurs almost exclusively in state waters with peak spawning occurring in August-September. Eggs and larvae develop and settle in the estuaries until crabs reach harvestable size in April-May. The Gulf stone crab is relatively abundant in the Louisiana, Mississippi and Alabama nearshore areas in the spring period. The stone crab distribution is relatively limited.

Blue crabs are the most economically valuable crab species for the region. Louisiana lands approximately 26 percent of the total blue crabs for the nation or 41.6 million pounds in 2008, with a dockside value of $32 million. Landings and dockside values for the other Gulf states were: West Florida, 2.7 million pounds, $3.3 million, Texas, 2.6 million pounds, $2.3 million, Alabama, 1.8 million pounds, $1.5 million, Mississippi, 450,000 pounds, $447,000.

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Oysters

The Gulf region leads the nation in the production of oysters, some 67 percent of the nation's total. The following landings and dockside value was produced in 2008 in the Gulf states: Louisiana, 12,778,311 pounds, $38.8 million; Texas, 2,679,207 pounds, $8.83 million; Mississippi, 2,610,349 pounds, $6.87 million; West Florida, 2,501,475 pounds, $5.47 million; Alabama, 72,776 pounds, $243,414.

Finfish

There is a wide variety of fish species in the Gulf of Mexico. In federal waters, the surface-oriented species will be most impacted by the early stages of the oil spill. As the crude oil sinks, the bottom-oriented fish community may be impacted. The major impacts will be on nearshore species or species that may be currently spawning.

In general, reef fish species in the Gulf of Mexico are associated with bottom topographies on the continental shelf, coral reefs, artificial reefs, rocky hard-bottom substrates. The majority of these species are inshore of the current location of the oil spill. There are potential negative impacts on fish larval stages since several reef fish are currently spawning or will be spawning if the oil spill continues.

Mortality on larvae caused by the oil spill will result in declines in recruitment in future age classes. This will negatively impact the rebuilding plans for these species, as well as short- and potentially long-term economic impacts on commercial and recreational fisheries in the Gulf of Mexico.

Juvenile red snapper are common on mud bottoms in the northern Gulf, particularly off Texas through Alabama. Also, some juvenile snappers (e.g. mutton, gray, red, dog, lane, and yellowtail snappers) and groupers (e.g. goliath grouper, red, gag, and yellowfin groupers) have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems. As long as the oil spill remains on the surface and offshore, the impacts to reef fish habitat should be minor. However, if the oil slick reaches the bottom or nearshore/inshore areas, the majority of the 42 reef fish species managed in the Gulf of Mexico will be affected.

The commercial landings and dockside value of red snapper, one of the more valuable finfish species, by state for 2008 was as follows: Texas, 869,966 pounds, $2.74 million; West Florida, 847,884 pounds, $2.94 million; Louisiana, 589,379 pounds, $2.03 million; Alabama, 60,391 pounds, $237,141. There were no data available for Mississippi.

Postlarvae and juveniles of menhaden and mullets (winter spawners whose juveniles are now entering the estuaries) may be affected by the oil spill. Depending on current Loop Current dynamics, Atlantic bluefin tuna may also be impacted by the oil spill. Atlantic bluefin tuna larvae may also be present in the region of the oil slick. Their presence however is quite dependent on and related to the Loop Current eddies and fronts. The other consideration is the number and extent of Sargassum mats that may intersect with the oil. The Sargassum is nursery habitat for gray triggerfish and the amberjacks.

There are many groundfish species that are located in the area of the oil spill and associated coastal areas.

Sharks

Shark species are distributed throughout the Gulf region with the highest abundances in the central Gulf from Louisiana to Alabama. Blacktip sharks are particularly abundant in this region and are one of the most commercially important shark species in the Gulf.

During spring and summer months several shark species of management concern use coastal nursery areas, and those areas can be expected to be impacted. In particular, blacktip sharks, spinner sharks, Atlantic sharpnose sharks, and bull sharks are regularly captured during coastal gill net surveys and bottom longline surveys.

Adult blacktip sharks are more abundant in the central Gulf of Mexico than any other region; second only to sandbar sharks (also widely distributed in the

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central Gulf) in commercial importance. Tiger sharks are not reported to utilize coastal nursery areas, however, their young are distributed offshore. Whale sharks are distributed along much of the Gulf of Mexico with highest concentrations off the Louisiana Delta; their distribution can be both near coastal and well offshore.

Species in Federal Waters

Sharks (Surface-Oriented)
- Whale sharks
- Hammerhead sharks
- Tiger sharks
- Silky sharks
- Mako sharks

Rays (Surface-Oriented)
- Manta rays
- Eagle rays
- Cownose rays

Finfish (Surface-Oriented)
- Tunas
- Billfish
- Molas

Sharks and Finfish (Bottom-Oriented)
- Sharks, small coastal and large coastal management species
- Groupers
  - Rock Hind
  - Yellowfin
  - Scamp
  - Red Hind
  - Goliath
  - Nassau
  - Red
  - Gag
  - Yellowedge
  - Snowy
- Snappers
  - Mutton
  - Blackfin
  - Red
  - Gray
  - Lane
  - Silk
  - Yellowtail
  - Vermillion
- Tilefish
  - Blackline
  - Anchor
  - Blueline
  - Golden
  - Goldface
- Gray Triggerfish and Jack
- Greater and Lesser Amberjack

Species in State Waters

Common Sharks
- Bull shark
- Blacktip shark
- Spinner shark
- Silky shark
- Atlantic sharpnose shark

Common Finfish
- Red snapper
- Mullet
- Lane snapper
- Red drum
- Gray snapper
- Vermillion snapper
- King and Spanish mackerel
- Gag grouper
- Spotted seatrout
- Cobia
- Greater amberjack

Learn more about NOAA's response to the BP oil spill at http://response.restoration.noaa.gov/deepwaterhorizon.

To learn more about NOAA, visit http://www.noaa.gov.