

Gulf of Maine Responsibly Harvested American Lobster



- ☑ **Criteria: The fishery is managed by a competent authority and has a management plan in place that incorporates a science-based approach to ensure sustainability.**

The American lobster fishery in the Gulf of Maine region is managed through the Atlantic States Marine Fisheries Commission (ASMFC), the states of Maine, New Hampshire, Massachusetts, and National Marine Fisheries Service (NMFS). The ASMFC is made up of representatives for each of the Atlantic coast states, and manages fishery resources that are spread across multiple state and federal boundaries. Under Amendment 3 of the Interstate Fishery Management Plan (ISFMP), the ASMFC manages lobster fisheries in state waters, while NMFS manages lobster fisheries in federal waters through the complimentary Atlantic Coastal Fisheries Cooperative Management Act. Both fishery management plans apply the best available science to determine harvest levels that ensure long-term sustainability of the resource. The eastern Canada offshore lobster fishery was recently certified by the Marine Stewardship Council, and thus lobsters harvested in Canadian offshore waters (Area 41) within the Gulf of Maine region are qualified.

- ☑ **Criteria: If stock sizes are below management target levels, whether due to natural or man-made causes, management plans are established that enable rebuilding within a specified timeframe.**

Based on the regional differences in the life parameters of lobsters, two separate lobster stock units have been identified in the Gulf of Maine region. These stocks include the Gulf of Maine (GOM) and Georges Bank (GB) lobster stocks (Fig. 1). Each stock supports both inshore and offshore components of the fishery and distributed across the multiple lobster management areas in the region. The GOM and GB lobster stocks are not considered overfished, and neither stock is experiencing overfishing according to NMFS.

- ☑ **Criteria: Sufficient data exists to determine harvest levels.**

The annual harvest levels for American lobster are based on fisheries dependent and independent data and determined by ASMFC and NMFS. This data includes state landings and federal dealer reports, as well as stock assessment modeling to determine lobster biomass of stocks and abundance in management areas.

- ☑ **Criteria: Monitoring and compliance measures are in place to ensure acceptable harvest levels.**

As of January 1, 2010, federal dealers are required to provide weekly reports on American lobster landings based on harvester trips to NMFS. States monitor harvest levels through harvesters' catch and effort reports, landings data, at sea vessel observers, vessel trip reports, and dealer reports. The Atlantic Coast Cooperative Statistic Program has developed reporting standards so federal and state data can be collaborated.

- ☑ **Criteria: Enforcement exists to ensure that harvesters follow regulations, and to prevent illegal practices and unreported harvest.**

U.S. Coast Guard, NMFS Office of Law Enforcement agents, and state marine patrol agents enforce the laws and regulations governing the harvest of American lobster. Through the Cooperative Enforcement Program, the NMFS Office of Law Enforcement collaborates with certain coastal state and territorial marine law enforcement agencies to enforce fishery regulations in federal waters. Federal and state agencies ensure compliance with regulations surrounding gear restrictions, trap limits, and reporting requirements.

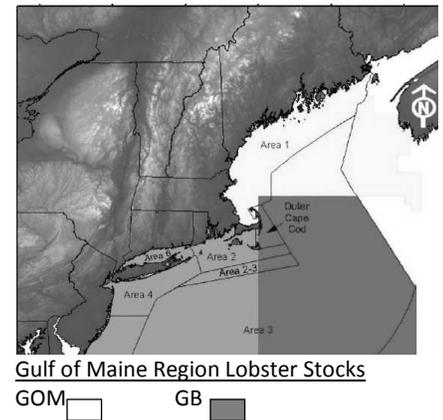


Figure 1. American Lobster Stocks and Management Areas

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American Lobster (*Homarus americanus*)

Herring and Lobster Relationship

The 2010 lobster catch for the state of Maine was the largest ever recorded, at 93.4 million pounds, with harvesters receiving a 14% increase in price from the year before. The healthy biomass (Fig. 2) bodes well for the seafood industry, but it is also important to understand the factors influencing the increased number of lobster landings. One suggestion by researchers is that lobster populations are benefiting from the bait used in lobster traps. By sampling the diets of lobsters caught in closed fishing areas and open areas, collaborative research conducted between GMRI and other organizations determined that herring, a common lobster bait, was more prevalent in lobsters from open fishing areas, and that the bait played an important role in the growth and overall population dynamics of lobsters. This project provided valuable information for fishery managers when making ecosystem-based management decisions on lobster stocks.

GMRI's benthic ecology research scientist, Jonathan Grabowski, co-authored a paper on this research called *Use of Herring Bait to Farm Lobsters*.

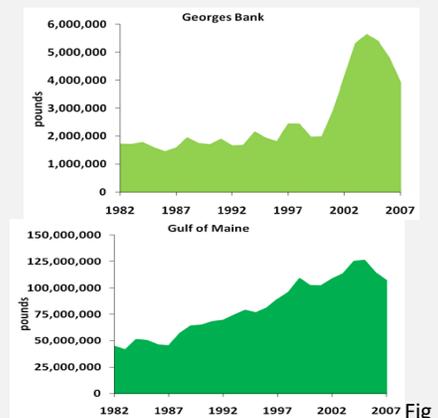


Figure 2. Biomass of Georges Bank and Gulf of Maine American Lobster stocks

Protecting Females

Recent management efforts of the lobster fishery were implemented to ensure long-term sustainability of lobster stocks, as well as to reduce ecological impacts of the fishery. These measures included increasing the size requirement, required electronic reporting of lobster landings, and requiring "v-notching" certain lobsters. To ensure that females stay in the water to reproduce, lobstermen v-notch the tails of egg bearing females so these females are not harvested, even when not carrying eggs.

Selective Lobster Gear

Management strategies have also concentrated on modification of lobster traps. These gear requirements include larger sized escape vents to reduce bycatch, and biodegradable hinges to prevent ghost fishing. Ghost fishing occurs when gear is lost at sea and species become permanently entangled or trapped in the gear. Along with trap modifications, harvesters are now required to use sinking lines to prevent whale entanglements.

To learn more about GMRI's collaborative fisheries research in the Gulf of Maine region, check out the GMRI's Science Research webpage at www.gmri.org/science.

For more information on the Gulf of Maine Responsibly Harvested program, visit www.gmri.org/seafood.