

Hurricane Katrina: Fishing and Aquaculture Industries — Damage and Recovery

Eugene H. Buck
Specialist in Natural Resources Policy
Resources, Science, and Industry Division

Summary

The Gulf Coast where Hurricane Katrina struck is an especially important center of commercial and recreational fishing, producing 10% of the shrimp and 40% of the oysters consumed in the United States. Many areas have been closed to fishing because of pollution-related contamination concerns. In addition, inland areas account for much of the U.S. farmed catfish production. This report summarizes damage assessments and recovery efforts, with initial reports primarily anecdotal until more accurate assessments become available. This report will be updated as warranted to incorporate new information.

Hurricane Katrina struck the Gulf Coast of the United States on August 29, 2005, causing widespread flooding and significant property and infrastructure damage to the fishing and aquaculture industries in the Louisiana, Mississippi, and Alabama region. A total of 15 major fishing ports, 177 seafood processing facilities, 1,816 federally permitted fishing vessels, and an unknown number of state permitted fishing vessels are located in this region.¹ Katrina earlier brushed across the Florida Keys, causing damage there.

Shrimp. Commercial shrimpers fishing out of or delivering to Alabama, Mississippi, and Louisiana ports account for almost half of all U.S. shrimp production. Katrina has destroyed or severely damaged shrimp boats and shrimp processing and storage facilities throughout this area during this, the peak harvesting season. How much of the processing capacity and how many vessels might be salvageable is still being determined. For shrimp, the Louisiana Department of Wildlife and Fisheries estimates the 12-month potential loss at dockside at more than \$81 million, with 12-month potential

¹ For a background discussion on the difficulties in counting fishermen and vessels, see CRS Report RS21312, *How Many Commercial Fishermen?*

production losses at the retail level at almost \$540 million.² An uncounted number of shrimpers may have drowned trying to ride out the storm aboard their vessels, but information is not yet available. Unprocessed, rotting shrimp at damaged processing plants must be disposed. Even prior to Katrina, this segment of the U.S. fishing industry had been declining due to competition from less-expensive foreign imports and among domestic harvesters, since domestic capacity is much greater than necessary to efficiently harvest the resource. In addition, since shrimp trawling is very fuel consumptive, increasing fuel costs make shrimp trawling more uneconomical; shrimpers who survived Katrina may find it difficult to resume fishing because of high fuel costs. Additional impediments to shrimping are the underwater obstacles that foul and damage shrimp trawls; hurricane debris will provide many new obstacles (i.e., “hangs”), and Katrina’s storm surges may have moved former obstacles to new, uncharted positions.³

Oysters. With the decline of oyster harvest from the Mid-Atlantic region, the Gulf Coast has been supplying most of the recent domestic oyster harvest. Oyster beds and oyster vessels along the Gulf Coast were extensively damaged, if not totally destroyed by siltation and contamination related to Katrina. For oysters, the Louisiana Department of Wildlife and Fisheries estimates the direct loss of available resource at more than \$205 million and the 24-month potential loss at dockside at almost \$45 million, with 24-month potential production losses at the retail level at almost \$300 million, assuming oyster mortality at 99% based on the size and strength of Katrina.⁴ Oyster reef rehabilitation costs are estimated to exceed \$860 million.⁵ In addition, the Florida oyster industry, struggling to recover from damage by earlier Hurricane Dennis, has been closed because of toxic red tide; Florida seafood processing facilities normally receive oysters from Louisiana and Texas. Because of extensive hurricane-related pollution and related contamination concerns, any remaining oysters in areas affected by Katrina will not be harvestable for an undetermined period.

Spiny Lobster. In the Florida Keys, an estimated one-fourth to one-half of all commercial spiny lobster traps were tangled or destroyed by the passage of Katrina. About 600 individuals are licensed to fish for spiny lobster in this area, and account for about 80% of Florida’s lobster harvest.

Other Fisheries. The Louisiana Department of Wildlife and Fisheries estimates the 12-month potential losses at dockside for crab (\$12.3 million), freshwater fish (\$190,000), menhaden (\$44.6 million), and other saltwater fish (\$11.8 million), with 12-month potential production losses at the retail level for crab (\$82 million), freshwater fish (\$1.3 million), menhaden (\$93 million), and other saltwater fish (\$79 million).⁶

² Louisiana Dept. of Wildlife and Fisheries, *Preliminary Analyses of Economic Losses Caused by Hurricane Katrina to Louisiana’s Fisheries Resources*, Sept. 7, 2005, 6 p.

³ Louisiana’s Underwater Obstruction Removal Program estimates between \$600 to \$15,000 to remove a single obstruction.

⁴ *Ibid.*, p. 1.

⁵ *Ibid.*, p. 2.

⁶ *Ibid.*, p. 1.

Aquaculture. Mississippi catfish operations appear to have suffered little damage from the storm; some lost power, but high winds and other factors contributed to no significant loss of fish. High winds and waves in large ponds did cause some levee damage from erosion. A major concern for catfish operators is the loss of their New Orleans market, as this was a significant market for farmed catfish. Damage to Louisiana catfish farms is uncertain; however, most are located in the northern part of the state and not in coastal areas. Louisiana crawfish farmers may have been hurt because of their more southern location, where high winds knocked over rice; the extent of this damage is uncertain.

Recreational Fishing. Damage to small boats and charter craft has been extensive; however, information is still sketchy on how this sector may have been affected. The Louisiana Department of Wildlife and Fisheries estimates the 12-month retail value of lost sales resulting from the potential disruption of recreational fishing activities at almost \$200 million.⁷ Artificial reefs have not yet been inspected to determine the extent of possible damage. However, the system of buoys marking the artificial reef off Grant Isle, LA, has not responded since Katrina hit and may be damaged beyond repair; replacement costs are estimated to exceed \$500,000.⁸

Fishery Management. The National Marine Fisheries Service (NMFS) has many employees and contractors in the area damaged by Katrina. As of September 7, 2005, NMFS had made contact with all 132 employees and contractors in the affected area. The NMFS facility at Pascagoula, MS, sustained significant damage.⁹ The Gulf of Mexico Fishery Management Council meeting originally scheduled for September 12-16 in New Orleans has been postponed until October and moved to St. Petersburg, FL.

It is unknown what effect the hurricane and related events, including pollutant runoff, may have on fish and shellfish stocks. Inshore nursery areas could have been disrupted. The hypoxic “dead zone” off the mouth of the Mississippi River could have been displaced or altered in size, due to increased river discharge. Management measures may need to be reviewed to assess their adequacy in protecting fish and shellfish stocks if any stocks are determined to have been significantly harmed by Katrina-related events. Contaminants in runoff waters could affect the edibility and marketability of some fish and shellfish.

Seafood Consumers. While certain fish and shellfish from the Gulf may disappear from the market, extensive domestic and imported seafood alternatives remain. There could be some increase in price as retailers adjust to different products and suppliers. The price of oysters may be more affected than some other seafood products, because of less opportunity for substitution of similar items.

Disaster Assistance. On September 9, 2005, Secretary of Commerce Carlos M. Gutierrez declared a fishery failure in the Gulf of Mexico, a necessary precursor for

⁷ Ibid., p. 1.

⁸ Ibid., p. 6.

⁹ Photographs of damage were available at [<http://www.nmfs.noaa.gov/pascagoula.htm>] on Sept. 7, 2005.

federal fishery disaster assistance.¹⁰ The affected area includes the Florida Keys and along the Gulf Coast from Pensacola, FL, to the Texas border. Fishery disaster assistance is provided primarily through two authorities — §312(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §1861a(a)) and §308 of the Interjurisdictional Fisheries Act (16 U.S.C. §4107). These NMFS programs are further detailed at [<http://sero.nmfs.noaa.gov/grants/fda.htm>] and [http://www.nmfs.noaa.gov/mb/financial_services/disaster.htm]. Aquaculture loss may be covered under the U.S. Department of Agriculture's Noninsured Crop Disaster Assistance Program, with details at [<http://disaster.fsa.usda.gov/nap.htm>]. On the private front, various fishermen's groups and associations from other regions have announced special funds and programs to assist Gulf of Mexico fishermen.

Capacity Reduction. Distress in the commercial shrimp industry presents an opportunity for a possible capacity reduction effort to remove vessels and licenses permanently from the fleet. Such efforts could provide both compensation for damages for those who decide to sell their licenses and vessels as well as reduction in competition to those who may decide to resume shrimping. A summary of NMFS capacity reduction programs can be found at [http://www.nmfs.noaa.gov/mb/financial_services/buyback.htm].

Habitat Concerns. Contaminants from runoff and hydrocarbon spills are expected to cause fish kills and losses of crustacean and molluscan species in nearshore areas. Reported contaminant sources include two large oil spills (68,000 barrels at Venice, LA, and 10,000 barrels at Chalmette, LA), releases from 25 major sewage treatment centers and many smaller ones, and runoff from countless fuel storage tanks and household and industrial chemical stores (antifreeze, bleach, acids, alcohols, etc.). There is no estimate yet of losses to the extensive and unique habitat provided by sea grass beds along the Louisiana coast in Breton and Chandeleur Sounds.

¹⁰ A press release is available at [http://www.commerce.gov/opa/press/Secretary_Gutierrez/2005_Releases/-September/Katrina%20Economic%20Recovery%20Effort.htm], on Sept. 9, 2005.