Hurricane Irma Fisheries Damage Assessment — Preliminary Results

HURRICANE IRMA made landfall near on Cudjoe Key in the low Florida Keys on **September 10, 2017** as a **Category 4** storm with damaging winds of 130 mph. High winds and a storm surge of over 5 feet cut the Keys off from the mainland for days even as Irma churned up Florida's Gulf Coast. Damage estimates for this storm range from **$58 billion to $83 billion**.

Sinking vessels at a damaged pier in Key West, Florida.
Photo: NOAA Fisheries/Lisa Pfeiffer

THIS STUDY

Florida Fish & Wildlife Conservation Commission, with assistance from NOAA Fisheries, conducted a rapid appraisal of damage from Hurricane Irma through field, online and phone surveys along the Florida peninsula coastal counties from Nassau County in the northeast to the Florida Keys in the south and Franklin county in the northwest. A total of **1,555 businesses and individuals** participated in the surveys through November 17, 2017. Of those businesses that participated, **54%** reported some damage and **41%** of vessel owners had damages. Total damages estimated to vessels and businesses **exceeded $93 million**, and revenue losses reported were **nearly $130 million**.

WHAT'S AT STAKE?

Commercial and recreational fisheries are an important economic driver of many Florida coastal communities. The value added economic impact of the seafood industry in Florida is estimated at **$5.9 billion**, while the value added economic impact by the recreational fishery is estimated at **$7.0 billion**.

WHAT WERE THE DAMAGES TO FISHING OPERATIONS AND FISHING-RELATED BUSINESSES?

Operation / Business Type		Vessel / Facilities Damages		Immediate Job Losses	Total Revenue Losses
		% Damaged	Total Damages		
Commercial & Fishing Businesses	Commercial Fishing Operations	45%	$42.7 million	1,169	$53.1 million
	Seafood Processors & Dealers	52%	$14.4 million	42	$42.1 million
	Seafood Retailers	36%	$0.2 million	16	$1.5 million
For-Hire & Recreational Fishing Businesses	For-Hire Businesses	35%	$13.9 million	237	$18.0 million
	Bait & Tackle Shops	50%	$1.5 million	43	$5.1 million
	Marinas & Other Related Businesses	66%	$20.6 million	170	$9.9 million
Total Damages & Job Losses			**$93.2 million**	**1,725**	**$129.7 million**

Commercial Fishing & Seafood Businesses

WHAT'S AT STAKE?

The Florida commercial and seafood industry had **revenues of $6.8 billion** in 2016 and directly employed **24,000 workers**. The commercial fishing fleet had **revenues of $262 million** and employed **5,700 fishermen**.

Collapsed fuel house on Vaca Key, Florida, three weeks after storm. Photo: NOAA Fisheries/Suzana Blake

DAMAGES BY OPERATION / BUSINESS TYPE

Type	Summary	Reported Damages
Commercial Fishing Operations	Commercial fishing operations were negatively impacted by the loss of vessels and time on the water fishing. An even greater impact was the loss or destruction of gear, primarily lobster traps. Although some lobster fishermen reported losing almost 90 percent of their gear, the majority reported between 25 and 50% trap loss. Furthermore, significant costs in time and money were incurred searching for traps moved by the storm. Fortunately, the storm passed before the start of the stone crab season, allowing fishermen to focus on recovery of lobster gear and reinvest efforts to start up fishing again. Lobster fishermen in the Keys reported a shift in lobster catches due to the hurricane, with large catches of a size that would normally take place later in the season. They expressed a concern that this shift signaled an earlier than normal movement that would end the season early. This could mean they would miss the portion of the season when the catch brought in the strongest price from dealers.	Vessels & Gear **$26.2 M** Facilities **$16.5 M**
Seafood Dealers & Processors	Seafood dealers experienced a range of losses depending on their size and their location. They were variously impacted by a decline in fishing, loss of power and product, facility damage and a decline in clientele. As of the middle of October, 2017 most dealers interviewed were back up in some form of operation, though in some highly impacted areas it took almost six weeks for them to get back to the point of reopening their doors for business.	Facilities **$4.7 M** Seafood **$4.5 M** Equipment **$3.2 M** Pier / Dock **$2.0 M**
Seafood Retailers	Seafood markets and restaurants represented a small portion of the total sampling frame and were one of the least impacted business sectors in the survey. Retail seafood businesses were affected by a loss of product due to power outages, a decline of local fish in the marketplace, and damage to facilities and equipment. Having the ability to open did not equate to full recovery due to the reduction in clientele by local residents, owners of second homes and tourists.	Facilities **$0.1 M** Seafood **$0.0 M** Equipment **$0.1 M** Pier / Dock **$0.0 M**

M = million

For-Hire & Recreational Fishing Businesses

WHAT'S AT STAKE?

Saltwater anglers spent **$1 billion on fishing trips**, which directly supported **6, 800 jobs**. For hire operations alone employed **2,800 workers.**

Sinking for-hire vessel in Islamorada, Florida, 5 weeks after storm. Photo: NOAA Fisheries/Suzana Blake

DAMAGES BY OPERATION / BUSINESS TYPE

Type	Summary	Reported Damages
For-Hire Businesses	Although only 16% of vessels in the survey reported damages, damage levels were much higher in Monroe and Collier counties, where 36% of vessels reported damage. However, of greatest concern for the for-hire sector was the cancelation of pre-booked fishing trips and loss of potential clientele/tourists due to the storm event and the subsequent clean-up, repair and redevelopment. Some for-hire operations in the Keys reported losing all of their pre-booked charters through the middle of January, 2018. In the most significantly impacted areas, many hotels remain closed for repairs or refurbishment, curtailing the availability of accommodations and hampering the flow of tourists. Damaged docks and time required for clean up after the storm also curtailed charter activity. In the Florida Keys, charter captains remained optimistic that repairs would be completed in time for the beginning of high-tourist season in December, although it is likely that in some of the most heavily affected areas recovery efforts will take a significantly longer period of time.	Vessels & Gear **$5.9 M** Facilities **$8.0 M**
Bait & Tackle Shops	Some 50% of bait and tackle shops in the survey sustained damages as a result of the storm. A higher percentage (70%) reported losses in revenue. Many bait and tackle shop owners reported that even though they have been open and up and running, their normal clientele, the tourists, have not yet returned. Local recreational fishermen who come in for gear and bait have returned, but the majority of their money is made on the tourists. Impacts largely involved structural damage and loss of bait due to freezer damage and power outages. Repair and clean-up costs also greatly impacted this business sector.	Facilities **$0.6 M** Bait & Seafood **$0.2 M** Equipment **$0.3 M** Pier / Dock **$0.3 M**
Marinas & Other Related Businesses	Approximately 66% of marinas in the survey sustained damages with reported damages averaging $161,000. Average damage was higher in areas along the coast that were hit hardest by the storm. However, damages often varied widely even in the hardest hit areas. Substantial damage was also experienced by innumerable dry storage facilities and private marinas throughout the state that provide services primarily to private boat and yacht owners. Most of these fell outside of the scope of our survey because the majority of their business is not clearly dependent on fishing activities.	Facilities **$7.6 M** Bait & Seafood **$0.4 M** Equipment **$2.1 M** Pier / Dock **$10.3 M**

M = million

Sunset at a Marathon, Florida hotel with recreational boating piers repaired in the month after the storm (top); Owners of a Key West fishing company describe the damages to their facilities to field interviewers (middle); Debris pile in Everglades City, Florida three weeks after Irma (bottom).
Photos: NOAA Fisheries/Lisa Pfeiffer (top and middle); NOAA Fisheries/Matthew McPherson (bottom)