

Are the World's Fisheries Doomed?

MORE fishing boats harvest the world's oceans than at any time in history. But their best catch is seven years gone. Besieged by exploding demand, beset by overfishing, devastated by destruction of life-giving coastal wetlands, the world's oceans have reached their limit.

Drastic measures might turn the tide. Anything less, and the fishing way of life that is so much a part of south Louisiana almost certainly will not survive.

Way of life threatened along with Gulf's vast bounty

By John McQuaid,
Staff writer

Terry Shelley piloted his flat-bottomed boat through the sunlight one recent morning on his way to the oyster beds he depends on for a living. The marsh air was warming, but the wind had a sting to it and the water had taken on a wintry blue cast.

After beaching the boat, Shelley and his mate, Timmy Kirk, paused to orient themselves by the tidal eddies and southwest wind. Then they lumbered through the water, backs bent, their eyes scanning the marsh floor. Reaching down with gloved hands, they picked up oysters and tossed them into rowboats they pulled behind them. The going was easy that morning. But it isn't always. Sometimes a fast-moving tide brings the water up to their necks. Sometimes the water recedes and they must drag the boats across desolate, wind-whipped mud flats.

Shelley can adapt to the changing mood of the marshes. It comes with the job. But he and thousands of other fishers are helpless before the man-made changes tearing across the Gulf of Mexico, leaving a swath of wrecked lives and ecological havoc in their wake.

Part of a global sea change in fishing, the forces include disappearing fish and marshlands, a flood of cheap seafood imports and gill net bans. They threaten millions of livelihoods and the Gulf's unique fishing culture.

They have already reduced Shelley to wading through mud to support his family in Marrero.

He started out shrimping with a small skiff decades ago and traded his way up to a 72-foot shrimp boat, the Second Chance. But shrimping went sour in the 1980s. He tried to make do without insurance and lost his boat after somebody rammed it and he couldn't pay for repairs.

Now he is left with a boat too small to name, 2,000 acres of marsh he leases for \$4,000 a year, and that simplest of fishing implements: his hands.

Even those are no longer enough.

A health scare has sent the price of oysters plummeting, and Shelley fears new regulations will put him out of business. Recently, state Wildlife and Fisheries Department agents cited him for a rules violation - passing off day-old oysters as fresh. He scuffled with them and they threw him to the ground, gave him a shot of pepper spray and carted him off in handcuffs.

If regulations and agents don't get him, coastal erosion will. It has already put the squeeze on oyster beds, and threatens to wipe out the marsh and all the fish and fishers that depend on it.

These problems seemed abstract and remote that languid morning as Shelley talked of his plans for a comeback, a new boat. But they are never far from his thoughts.

"I've been doing this since I was 15," said Shelley, 44. "I've never quit the business, but I've had the business quit me several times. I intend to keep going - what else can I do at my age?"

Essence of the Gulf

Fishing defines the Gulf of Mexico. An armada of commercial and recreational fishing boats pursues a stunning variety of fish that have sustained human cultures for centuries. All told, 200,000 workers in the sport and commercial fishing industries have an economic impact on the regional economy estimated at more than \$5 billion.

But three intertwined trends have turned the Gulf into an arena of bitter conflict, economic pain and ecological destruction:

Overfishing

Thanks to its biological diversity, the Gulf hasn't seen the kind of collapse that occurred in New England and other parts of the world. But too much fishing by more and more boats has lowered the populations of many fish. Lower catches and tight restrictions make it hard to pay the bills.

Economics

Falling fish populations and world markets have tipped the playing field against Gulf fishers, forcing them to compete with lower-priced imports that can be caught with cheaper labor and without the same regulations. Adjusted for inflation, the value of Gulf fish landings was \$744 million in 1986. In 1994, considered the best catch in



The huge Japanese demand for tuna, which pushed prices up to \$68,000 for a single fish recently, is felt in the Gulf of Mexico, a world away. Above, frozen yellowfin tuna is ready to be sold after auction in Tokyo's Tsujiki market. (Photo by Ted Jackson)

years, it was \$544 million, a 27 percent decline.

Habitat destruction.

About 98 percent of Gulf fish species depend on wetlands during some stage of their life cycle, and unless Gulf residents find a way to significantly slow erosion, scientists project that most of the region's marshes will be underwater in 50 years and useless as a spawning ground. Meanwhile, a "dead zone" that forms every year near the mouth of the Mississippi River is growing. Scientists fear it could create a permanent undersea wasteland where some of the region's prime fishing grounds used to be. The trends already have taken a devastating toll. If they continue, they will destroy most fishing in the Gulf and the culture that depends upon it in a matter of decades. "The core component of the culture of coastal Louisiana is shrimping and fishing," said University of New Orleans sociologist Anthony Margavio, the co-author of a book on shrimpers and their tangles with conservationists. "It's not just the way people have historically made their living. It is life. It is what they do. It is what they are. I think the people down here are pretty tenacious. I cannot see it disappearing, but it'll be marginalized to a large extent."

A fishing explosion

As in other parts of the world, population growth and rapid development have taxed the Gulf to its limits.

Between 1960 and '90, U.S. population increased 37 percent. But the population of the Gulf's coastal parishes and counties doubled from 7.4 million to 14.7 million, according to a study by the National Oceanic and Atmospheric Administration.

That means more wastewater from sewer systems and runoff from streets, farm fields and construction sites polluting streams and creeks on the way to the Gulf. More roads, levees and dredging projects are diverting water sources for crucial habitats.

At the same time, growing populations and changing tastes around the world have created hot new markets for seafood. Even as the local fish catch and its value fell, the number of fish wholesalers in the region grew more than 70 percent between 1984 and '92, according to a University of Florida study.

Sport fishing was also expanding into an economic juggernaut. In 1994, Gulf anglers spent \$1.8 billion on boats, equipment, lodging, guides and other amenities, according to the Sport Fishing Institute.

Billions of dollars also flowed into commercial fishing boats after Congress extended the nation's territorial waters to 200 miles in 1976, expelling foreign fleets.

Between 1977 and '93, the estimated number of commercial fishing boats in the Gulf doubled, from 16,257 to 32,114, according to National Marine Fisheries Service data. But they aren't catching more fish. During the 1970s, the average Gulf catch was 1.8 billion pounds. During the first five years of the '90s, it was 1.7 billion pounds.

Commercial fishing has been the victim of its own expansion. Twice as many boats

catching the same amount of fish means fewer fish for everyone. Add into the equation competition from cheap imported fish and the result has been an economic catastrophe for commercial fishing.

About 70 percent of the Gulf's fishspecies that scientists can measure are considered overfished. The rest are fished to their limits of biological and/or economic sustainability.

Many of the tasty reef fish favored by chefs are depleted; among them, the red snapper population remains in danger of collapsing. Bluefin tuna was once plentiful in the Gulf and the Atlantic; in the past decade, demand by Japanese consumers that has driven the price as high as \$68,000 a fish has decimated the species.

This is where sport and commercial fishing diverged - and eventually collided. Sport fishing kept growing economically because anglers could accept catch limits more easily than commercial fishers, whose living depends on quantity.

Shrimp a case in point

Shrimp, the most economically important fish in the Gulf, has been the hardest hit, its value falling 35 percent, adjusted for inflation, from its heyday in the late 1970s and early '80s.

It has been hurt by imports of inexpensive farmed shrimp, economically burdensome regulations, and overinvestment that has swelled the fleet to an unsustainable size.

Shrimpers are fishing longer and catching less than ever before.

"It's overfished and underpriced. Too many boats in too little area. It's put a lot of us out of business and there have got to be some changes made or a lot more of us are going down," said Golden Meadow shrimper Michael Callais.

The rest of the Gulf catch has had similar problems.

Red snapper is protected by some of the toughest rules in the region. Fishing it is banned most of the year. Meanwhile, imports from Mexico and other countries that have no similar restrictions have come to dominate the market and have driven down the price, which has dropped as much as 27 percent since the 1980s.

Snapper fisherman Ron Anderson, also of Golden Meadow, has seen his crew of three reduced to one. His son went to work at a shrimp shack, and another regular crew member found a construction job at a local Wal-Mart. These days Anderson sometimes gets help from his wife and grandson.



Terry Shelley of Belle Chasse has seen the highs and lows of the fishing industry. Once the captain of a 72-foot shrimp boat, Shelley now slogs through the marshes looking for oysters. This day near Empire recently was relatively easy. Sometimes a fast-moving tide brings the water up to his neck as he's scanning the floor for oysters. (Photo by Ted Jackson)

``I'm at poverty level now," he said.

Oysters also face a crunch. Encroaching communities and the pollution that came with them have squeezed oyster beds from the north, while coastal erosion has closed in from the south. A health scare about a bacterium found naturally in oysters, *Vibrio vulnificus*, had the federal government contemplating a 7-month-a-year ban on raw oysters and sent prices falling 50 percent in inflation-adjusted dollars between 1990 and '94. Last fall oystermen staged protests demanding higher dockside prices.

The changes of the past two decades took one of the last unregulated areas of American life and put a fence around it, making it another zone overseen by government agents, analysts and bureaucrats.

Once it became apparent that the limits of many fish species could be overrun so easily, governments established hundreds of regulations - quotas, trip limits, bag limits, size limits, license limits, area closures, gear restrictions and seasonal closures. This mishmash of rules has yet to restore many fish populations. But it has succeeded in confusing and angering fishers.

``It's no secret that fishery management in the Gulf and South Atlantic hasn't worked very well over the years," said Charles Adams, a fishery economist at the University of Florida. ``There are a lot of fish still overfished. It's taking a long time. It's difficult to monitor and enforce it."

One big difference between the Gulf and other regions is the growing influence of sport fishers and their organizations in management decisions. Their influence has helped restrict gill netting in Florida, Alabama, Texas and Louisiana, which have all enacted net bans or serious restrictions in the past few years.

Sport fishing organizations such as Louisiana's Gulf Coast Conservation Association have consolidated their political power. With media savvy, they allied themselves with public sentiment for resource conservation.

Commercial fishers, on the other hand, have failed to move public opinion. Undercut by their traditional independence, they've had trouble presenting a solid front, and ended up offending possible allies last fall with disorganized attempts to block sport fishers from reaching boat launches on the coast.

``They shouldn't split the parish. They shouldn't pit brother against brother. We make our money off of sportsmen of Louisiana," said James Dixon Sr., the owner of Bait Inc. in New Orleans. ``The commercial fishermen are alienating people like me who would be supporting them otherwise."

The Florida ban has had the biggest impact, displacing 5,000 fishers, forcing them to range far afield to find areas to drop their nets. The cost to the state was estimated at \$40 million a year in lost revenue, boat buybacks and other aid programs. When it takes full effect next year, the Louisiana ban on most inshore netting will close the largest and last relatively open area for Gulf gill netters.

Fishery management is almost always crisis management: Managers wait for something bad to happen and then try to fix it. Because responsibility for fish and

their habitats is divided among many government agencies, only rarely does anyone have an eye trained on the long term.

For instance, after 10 years of severe restrictions, the plan to restore redfish seems to be working; managers hope to reopen offshore commercial fishing for the fish soon. At the same time, however, business interests are building levees around wetlands that redfish use as nursery grounds, which could prove devastating to the population. But neither the Gulf of Mexico Fishery Management Council nor Fisheries Service has any say over that activity. The only opportunity for input comes if an agency staffer happens to participate in the wetlands permitting process overseen by the Army Corps of Engineers.

Change is certain

Fishing in the Gulf of Mexico is undergoing a vast cultural change that one way or another will transform it into something much smaller than it is today, say scientists, managers and fishers.

One change already under way will end the open access and freedom that was the rule in the Gulf for centuries. The most common solution - introducing a form of property rights to fishing - would put strict limits on who could fish and how much, something many fishers consider akin to communism.

And what can stop the forces of nature from eroding the vast stretches of marshland that sustain the fisheries? Scientists are leaning toward policies that call for rerouting the Mississippi River in attempts to build vast new deltas of marshland that can support the fisheries of the future.

But such projects would cost billions of dollars and disrupt existing fisheries - forcing oyster farmers, for example, to abandon beds covered by sediment or by too-fresh water and find new ones farther away. Only a vast infusion of money from Washington - or from private sources that might demand more control over marshland in exchange - would pay for such projects. The political climate makes such financing unlikely until the crisis reaches the dinner plates of consumers. By then it will be too late.