



When Disaster Strikes, Go Fish

by [Ben Goldfarb](#)

October 24, 2018 | 800 words, about 4 minutes

Dyhia Belhabib was born in 1984, seven years before the onset of Algeria’s “[Black Decade](#),” a vicious civil war that claimed 200,000 lives. She grew up in Tazmalt, an Algerian town less than 100 kilometers from the Mediterranean, but constant violence and government-imposed curfews prohibited outings to the ocean. Every day brought news of explosions and beheadings. “It was a horror movie, quite frankly,” she says.

The war shaped Belhabib’s childhood—and influenced Algeria’s fisheries. At times, the conflict so interfered with fishing that Belhabib’s family couldn’t even buy sardines, a national staple. When the war ended, however, the Algerian government granted amnesty to former rebels, supported their relocation to the coast, and subsidized boats to rebuild the fishing industry.

To Belhabib, today the fisheries program manager for Ecotrust Canada, the lesson was clear: fisheries are dramatically affected by social and environmental turmoil. [Now a new study](#), authored by Belhabib and her colleagues, shows just how deep this connection runs. Their research suggests that—contrary to conventional wisdom—social upheaval may actually lead to more fish being pulled from the sea.

The scientists examined 273 extreme events: human-caused ones, like wars and oil spills, and natural disasters such as hurricanes and droughts. Many rank among the most infamous recent catastrophes: the 2004 Southeast Asian tsunami, the Deepwater Horizon spill, the Fukushima nuclear disaster, and Typhoon Haiyan in the Philippines. The authors compared each calamity to reconstructed records of fisheries landings made by [the Sea Around Us](#) program.

Crucially, the fisheries database doesn't just list each country's aggregate catches. Rather, it splits the data into sectors: industrial, artisanal, subsistence, and recreational fisheries are all tallied separately. This let the researchers analyze how disasters affect fishing activity from the largest trawlers to the smallest hand-liners.

When they crunched the numbers, Belhabib's team found that catastrophes sometimes lead to declines in catches. After the meltdown of the Fukushima Daiichi Nuclear Power Plant in 2011, for instance, the Japanese government banned fishing in contaminated waters, creating [ad hoc marine reserves](#). The 2004 tsunami killed fishermen and wrecked boats across the Indian Ocean, reducing fish landings in Indonesia and elsewhere. And when the Tamil Tigers revolted against the Sri Lankan government in 1983, the fighting displaced so many fishers that catches plummeted by 20 percent.

The notion that fishing activity might slow in response to crisis is not a new one. In 2011, researchers Sarah Glaser and Cullen Hendrix found that civil wars lead to a [16 percent reduction](#) in catches. "Rebels can go into fishing villages to recruit people to participate in violence, and in some cases you see the direct destruction of boats," says Hendrix, a political scientist at the University of Denver. "Fishers get caught up in these conflict dynamics in all kinds of ways."

But Belhabib also found that, in many cases, disasters actually encourage fishing. Small-scale fishing, in particular, tends to increase in response to crisis.

To understand why, take the Ebola epidemic that ravaged Liberia, Guinea, and Sierra Leone in 2014. With [bushmeat considered a potential vector for the disease](#), hunters abandoned forested interiors for the coast, and more consumers looked to the sea for sustenance. In this and other similar instances, fishing offered an alternative livelihood and bolstered food security in the face of social breakdown and mass migration.

That the sea can furnish calories and income in times of crisis makes perfect sense, Hendrix adds. While cropland is generally private property, fish tend to be an “open-access resource,” available to anyone with a boat and a net, he says.

Disasters can also pave the way for predation by foreign fleets. During the chaos of Somalia’s civil war, fishing vessels from China, Italy, Japan and other nations **plundered its coastline**, a maritime form of **disaster capitalism**. Meanwhile, the 2013 coup that deposed Egyptian President Mohamed Morsi suspended the country’s coast guard and allowed shark poaching to flourish.

“It would be naive to think that governments dealing with crisis would be able to limit illegal fishing in their waters,” Belhabib says.

Although Belhabib’s findings don’t entirely jibe with past studies, there’s a good reason: previous research was forced to rely on less detailed data, using aggregate catch statistics that didn’t differentiate between large- and small-scale fishing. “This is a very carefully done piece of research that leverages new data,” Hendrix says.

So how can coastal nations ensure that fisheries help vulnerable people endure disaster? Conservation, Belhabib says.

Marine protected areas (MPAs) can boost fish populations, ensuring fishers have healthy stocks to draw upon when crisis strikes. In the wake of a disaster, Belhabib recommends governments consider temporarily opening MPAs to subsistence and artisanal fishing (while still potentially excluding foreign fleets) to buffer against economic collapse.

“It’s like putting money in the bank to prepare for the worst,” she says. “People go fishing after these kinds of events to survive. We need to bet today, not tomorrow, on marine protection.”

Author bio

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