A relative handful of companies are responsible for a large share of fishing-related offenses, including human rights violations, and punishments are often inadequate. That's according to new research led by Dyhia Belhabib of Ecotrust Canada and Nautical Crime Investigation Services.

Illegal fishing, estimated to be about one-quarter of all fishing, threatens marine ecosystems and the livelihoods of law-abiding fishers. In addition, evidence increasingly shows that illegal fishing is sometimes linked to other offenses, such as forced labor, money laundering, and tax fraud.

The team of researchers, supported by Oceana, recently published two studies looking at this complex problem. The first is the most comprehensive examination to date of the global data on fisheries offenses, while the second zooms in on illegal fishing in the artisanal sector. Together, they offer important steps to combat this illegal activity while supporting sustainable, legal fishing.

**KEY FINDINGS**

- Fishing-related illegal activities are highly concentrated. Just 450 vessels linked to 20 companies were responsible for a third of reported fisheries-related offenses in the industrial sector.

- Offenses involving fishing vessels go beyond illegal fishing: 11% of offenses are human rights violations, and 3% are smuggling.

- The worst offenders often face few consequences, in part because fisheries agencies may only enforce rules related to fishing. The authors therefore recommend tougher penalties, such as vessel confiscation and jail time.

- For artisanal illegal fishing, the authors recommend reducing punishments and focusing on root causes, such as poverty and displacement.

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**STUDYING THE LARGEST DATABASE OF CRIMINAL ACTIVITY IN THE FISHING SECTOR**

Belhabib's first study, co-authored by Philippe Le Billon of the School of Public Policy and Global Affairs at the University of British Columbia, was published in March 2022 in the journal *Science Advances*. It examines the world's largest database of fishing-related crimes. This database included 7,962 alleged and confirmed offenses, as found in reports from governments, NGOs, the media, and others from 2000 to 2020.

As a starting point, the researchers looked at which offenses were most common. About half were incidents of fishing without a license or permit, mostly reported for artisanal fishers. These small-scale operations make up the vast majority of the world’s fishers and often have difficulty securing the required licenses.

About a third of the offenses were other kinds of fishing violations, and 11% were labor and human rights violations. Both of these categories of offenses were mainly committed by industrial vessel operators.

The researchers also tracked who was responsible for illegal activities. For 1,700 incidents, they were able to identify the true, or "beneficial," owners of the vessels involved by searching databases, corporate registers, and other sources. The result: More than one-third of those offenses were associated with just 20 companies (see table 3 in the *Science Advances* paper) and 450 vessels—a fraction of the 6,053 unique vessels in the database and a drop in the bucket of the tens of thousands of industrial vessels and 5 million total fishing vessels on the global ocean.
WHERE MULTIPLE OFFENSES OCCUR, HUMAN RIGHTS ABUSE IS OFTEN FOUND

The study also looked closely at incidents involving more than one offense. Forced labor aboard fishing vessels has gained attention in recent years, but no one has systematically assessed how strongly it is linked to illegal fishing.

The researchers found that fishing vessels were charged with two or more offenses in 12% of all incidents. Nearly 42% of those incidents—a total of 320—involved human rights abuse or labor abuses, the vast majority co-occurring with illegal fishing. And this number may be an underestimate, because it is not clear whether labor practices are being consistently monitored.

The finding confirms a substantial linkage between illegal fishing and serious non-fishing offenses. Law enforcement may be able to use this linkage to create better profiles of criminal behavior and improve detection. To help with that effort, the authors recommend that nations and agencies share more data with each other and with researchers.

SHORTCOMINGS IN ENFORCEMENT

One clear pattern is that the overwhelming majority of human rights and labor abuse offenses involve industrial fishing vessels. However, such offenses commonly result in small fines, and any prison sentences are generally imposed on crews, not vessel owners, according to the study.

One reason for the apparently lenient punishment may be that fisheries agencies do not see it as their job to police non-fishing offenses. The study therefore recommends that law enforcement address the full range of offenses associated with fishing vessels, regardless of which agency is doing the enforcement. It also recommends deeper consequences, such as vessel seizures and jail time, for the owners who benefit from these offenses.

DRIVERS OF ILLEGAL ACTIVITY IN ARTISANAL FISHING

In the second study, published in December 2021 in the journal *Nature Human Behaviour*, the authors examine illegal activity in artisanal fishing. Greed is rarely the main driver of illegal practices in this sector, according to Belhabib, Le Billon, and their co-author, Nathan Bennett of The Peopled Seas Initiative in North Vancouver, Canada.

More important drivers include poverty and displacement from traditional fishing grounds by industrial vessels. And yet current law enforcement criminalizes small-scale fishers and fails to address the drivers of illegal activity, according to the authors.

They therefore recommend decriminalizing some minor offenses and instead focusing on the most harmful practices.

FUTURE RESEARCH TO BETTER TARGET FISHING-RELATED CRIME

The authors note that their study is far from a comprehensive look at the problem. In particular, the database they used, while large, does not record all offenses associated with fishing. (The database is public and searchable at http://spyglass.fish/) Research could help even more, they argue, if agencies and nations shared and reported more data.

The result could be a fuller understanding of the diversity and complexity of illegal activity at sea. That, in turn, could help researchers and policymakers find ways to better deter the worst offenders, as well as support the livelihoods of those who fish responsibly.