



Editorial: Illegal Fishing as a Trans-National Crime

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Editorial on the Research Topic

Illegal Fishing as a Trans-National Crime

Illegal fishing is a widespread phenomenon with broad socio-environmental impacts and transnational criminal dimensions. Ubiquitous, illegal fishing has been reported across all regions of the world, with hotspots in West and East Africa, North Pacific, and South East Asia (see online reporting platform [Spyglass.fish](https://www.spyglass.fish)). Illegal fishing together with unreported and unregulated practices (IUU) accounted for nearly a quarter of the \$120 billion global landed value of fisheries in 2016 (Pauly and Zeller, 2016). The transnational dimensions of illegal fishing include vessels illegally fishing outside their home country, affected fish stocks crossing national EEZ, globalized seafood supply chains processing and retailing illegally harvested fish, and IUU vessel involvement in other transnational crimes such as drug trafficking (Chapsos and Hamilton, 2019).

Illegal fishing negatively impact fish stocks (Le Gallic and Cox, 2006) and ecosystems (Pascoe et al., 2008), including through overharvesting and prohibited gear usage, with increased risk of stock collapse and species extinction, reshaped marine food webs, and reduction of climate resilience for both fish stocks and fishing communities (Konar et al., 2019). Fish stocks over-exploitation increase fishing costs, poverty among small-scale fishers, and human rights abuses including slavery aboard ships become more common (Kittinger et al., 2017; Tickler et al., 2018; Teh et al., 2019). Societal and economic losses are far reaching, as IUU fishing results in loss of employment (Daniels et al., 2016), and economic opportunity (Agnew et al., 2009), loss of income and tax revenue (Konar et al., 2019), and international maritime conflicts (OECD, 2004; Sumaila and Bawumia, 2014; Pomeroy et al., 2016; Standing, 2017; Belhabib et al., 2019; Spijkers et al., 2019). As Glaser et al. shows, foreign IUU fishing in Somali waters fuels public anger and perpetuates conflict with foreign vessels by directly competing with the domestic fishery, destroying bottom ecosystems, aggravating tensions over vessel licensing and contributing to piracy. Illegal fishing can also undermine communities' social cohesion and coastal stewardship, with profound losses in vulnerable low income regions dependent on fish for their employment and food security (Le Gallic and Cox, 2006).

The criminal dimensions of illegal fishing include both fisheries related crimes such as enforcement evasion, misreporting, document forging, money laundering, labor abuses, and tax evasion (OECD, 2013), but also crimes associated with the fisheries sector, including piracy (Denton and Harris, 2019) and various types of trafficking (UNODC, 2011; Vrancken et al., 2019). Complex corporate ownership networks, numerous jurisdictional layers between the companies and vessels, along with common changes in vessel color, name and flag state constitute elaborate evasion techniques that significantly jeopardize vessel apprehension (Österblom, 2014; Belhabib and Le Billon, 2018; Galaz et al., 2018). Miller et al. find that transshipment at sea, particularly in the high seas, is rampant and frequently associated with human rights abuses (such as slavery), requiring more global action and monitoring outside EEZs. As a fraudulent, organized, and transnational activity (Österblom et al., 2011; UNODC, 2011), IUU also lends itself to other illegal activities including the trafficking of

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drugs, migrants, weapons, and wildlife (Phelps Bondaroff et al., 2015; Kittinger et al., 2017). There is a growing body of evidence that suggest that illegal fishing is interlinked with various types of transnational crimes, particularly in spaces with low environmental enforcement at sea (Sumaila et al., 2006; Doumbouya et al., 2017), high corruption levels both on land and at sea (Erdmann, 2001; Standing, 2008; Hanich and Tsamenyi, 2009; Martini, 2013; Sumaila et al., 2017), and weak governance (Standing, 2008).

Root causes of illegal fishing including cost/benefit analysis by offenders (Becker, 1968), but also moral, societal, economic, and cultural factors affecting behaviors—including feelings of entitlement or ownership over the resource, protest against existing rules (Sutinen and Kuperan, 1999), resistance to impoverishing exclusionary conservation (Sutinen and Kuperan, 1999; Sumaila et al., 2006; Belhabib, in review), coercive enrollment (Andrews-Chouicha and Gray, 2005), as well as the hold of organized crime and moral norms within fishing communities (Le Gallic and Cox, 2006; Österblom et al., 2011; Belhabib and Le Billon, 2018; Galaz et al., 2018), regardless of deterrence levels and sanction risks (Sutinen and Kuperan, 1999). Overcapacity, ineffective management and subsidies can exacerbate illicit fishing (Le Gallic and Cox, 2006), alongside poverty and economic desperation, especially in contexts of crisis (Couper et al., 2015).

So far, regulatory efforts targeting IUU fishing mostly seek to detect and prosecute fisheries management offenses through vessel monitoring, control and surveillance (MCS), but often disregard other types of crimes committed onboard fishing vessels or by fishing companies that are criminal and should be prosecuted as such (UNODC, 2011, 2017; Doumbouya et al., 2017). Economic losses can be massive for affected countries, as demonstrated by Intchama et al. in the case of Guinea Bissau, but more effectiveness of monitoring control and surveillance,

as well as more drastic interdiction measures as seen recently in Indonesia, can help reduce them (Cabral et al., 2018). Major fishing countries, especially those with large distant fishing fleets, should severely punish illegal fishing by their own vessels and companies, prevent vessel re-flagging, and track beneficial owners (Telesetsky, 2014). Measures targeting fishing subsidies (Sumaila et al., 2016), marine insurance (Miller et al., 2016), oil bunkering activities (Ford et al., 2018), flag-hopping (Miller and Sumaila, 2016), and connections with organized crime in related sectors (Phelps Bondaroff et al., 2015). International regulatory cooperation and harmonization are also crucial to tackle the transnational dimensions of illegal fishing. Using an economic risk index for the EU carding system seeking to reducing IUU, Sumailas demonstrates that the participation of a critical mass of top fish importing countries is necessary for an IUU carding system to have a significant effect on the elimination of IUU fishing. Current knowledge on IUU vessels (Galaz et al., 2018) limits information to spotlight areas and creates a systemic coverage bias (Belhabib and Le Billon, 2018), therefore requiring more comprehensive information gathering and analyzing the full scope of transnational crimes associated with illegal fishing. Authorities should not simply respond to illegal fishing through fishery management, but address its many transnational criminal dimensions.

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Conflict of Interest: DB is principal investigator of Spyglass.com, a platform tracking the criminal record of fishing vessels.

The remaining author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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