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Policy brief

Estimating the impact of irregular and unsustainable fishing of distant-water fishing fleets in Ecuador, Ghana, Peru, the Philippines and Senegal

Miren Gutierrez and Alberto Lemma
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Abstract

This policy brief synthesises information from the report *Fishy Business: estimating the impact of irregular and unsustainable fishing of distant-water fishing fleets in Ecuador, Ghana, Peru, the Philippines and Senegal* (Gutierrez et al., 2024) and provides recommendations for national and international policymakers on how to propose more sustainable and responsible fishing practices.

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About this publication

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About the authors

Miren Gutierrez

Miren Gutierrez is a Research Associate with ODI.

Alberto Lemma

Alberto Lemma is a Research Fellow at ODI

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Introduction

Distant-water fishing (DWF) – referring to fishing conducted by vessels from one country in the waters of another country or in international waters – employs state-of-the-art technologies which allow vessels to fish non-stop and travel to remote areas, often competing unfairly with smaller domestic vessels (Daniels et al., 2016; Pauly and Zeller, 2016). The Fishy Business report by Gutierrez et al. analysed the DWF fleets' activity – both domestic and foreign – in five vulnerable EEZs and further evaluated the potential economic, job and well-being impacts of companies previously engaged in wrongdoing.

The report reveals the scale, form and behaviour of the domestic and foreign fleets operating within the exclusive economic zones (EEZs) of Ecuador, Peru, Senegal, Ghana and the Philippines. It also investigates the domestic and foreign companies that own or operate vessels in these countries' EEZs. For the first time, this analysis estimates the impact of fishing businesses with a track record of unsustainable practices on these five countries' economies, employment and well-being. The report expresses in human terms the loss of opportunity these five countries face by allowing companies with a history of misconduct to operate in their waters, offering a powerful argument for transparency and grounds for reform.

Fleet composition and types of vessels

We have built a relational database, drawn from expertise in fisheries, specialised literature, and the FishSpektrum Krakken® V15.0 high-granularity data registry. Krakken® V15.0 is the largest registry of fishing vessels, owned by the Seattle-based Allen Institute for AI (a non-profit research institute founded by Microsoft co-founder Paul Allen). According to our analysis, the fleets within the EEZs of the five countries are diverse, with a mix of domestic and foreign vessels engaged in various fishing practices. The study identifies 19 large conglomerates which own or operate 657 vessels previously involved in wrongdoing or unsustainable practices.

The largest fishing nations by vessel presence include Ecuador, China, Peru, Spain, Japan, Panama, and Taiwan, Province of China, while Senegal, Ghana, and the Philippines have fewer vessels flagged to them. The types of vessels range from longliners and seiners to trawlers and fish carriers, with a significant number of vessels of unknown types presumed to be artisanal.

Concretely:

- Looking at distant-water fishing (DWF) presence indicated by automatic identification system (AIS) positions, **the largest fishing nations in the countries under study are Ecuador (with 493 vessels flagged to Ecuador detected via satellite data in any of their EEZs), China (191), Peru (189), Spain (126), Japan (84), Panama (68) and Taiwan, Province of China (64)**. Senegal (with 57 vessels flagged to Senegal detected via satellite data), Ghana (33) and the Philippines (25) are relegated behind.
- The analysis of fishing manoeuvres of the vessels in these EEZs shows **intense competition between domestic and foreign fleets of the same fishing type** (for example, longlining in Ecuador or trawling in Senegal). Foreign DWF vessels' technical capacity to fish non-stop and travel to remote areas often awards them a competitive advantage. Foreign DWF competes with people's livelihoods and food security in low-income nations (Toppe et al., 2017), and unfair access by foreign DWF fleets to developing countries' EEZs can threaten food security (Okafor-Yarwood and Belhabib, 2020).

Ownership, concerns, controversies, and other issues

Ownership of the fleets is a mix of domestic and foreign companies, with Chinese interests notably present in the domestic fleets of four of the countries. The study highlights concerns about the incorporation of foreign vessels into domestic fleets, which can lead to market distortions, overfishing, and threats to food security and livelihoods. Flags of convenience (FoC) also play a significant role, with a fifth of the foreign vessels registered with a FoC, raising concerns about safety standards, environmental risks, and labour conditions.

Concretely:

- Looking at ownership, operation address, and other indicators, **Chinese vessels stand out within the domestic fleets of four of the countries under study**. A total of 192 vessels were found to be connected to Chinese interests but flagged to Ghana (107), the Philippines (67), Senegal (16) and Ecuador (2). The incorporation of foreign vessels into domestic fleets raises questions, as it can generate market distortions, encourage the breaching of sustainable catch limits, and threaten food security and livelihoods (Belhabib, 2017; Belhabib et al., 2014; Belhabib and Le Billon, 2022; Okafor-Yarwood and Belhabib, 2020).
- **A handful of large conglomerates – 19 companies – owning or operating 657 vessels in these EEZs were previously involved in wrongdoing or unsustainable practices**, including

incidental fishing, lack of transparency, participation in the saiko barter system and shark finning. Allowing access to fishing grounds and port infrastructures to vessels with a prior record of unsustainable behavior results in a danger of backsliding (Belhabib and Le Billon, 2022). It signifies, too, a missed opportunity for sustainable development and the long-term well-being of local fishing communities in Ecuador, Peru, Senegal, Ghana and the Philippines.

- **These companies' potential economic impacts on gross domestic product (GDP), employment and people's well-being in the five countries are substantive**. Together, their joint fishing activities amount to a potential opportunity cost of 0.26% of these countries' combined GDP, 30,174 jobs and 142,192 people living below the poverty line.
- **Flags of convenience (FoC) play a significant role in the foreign fleets present in the five EEZs under study**; a fifth of the foreign vessels were registered with an FoC and 3% were registered with the blacklisted FoCs of Cameroon, Vanuatu and Comoros (Paris MOU, 2023), instigating concerns about safety standards, environmental risks and labour conditions.

Impact methodology

The methodology for estimating the economic impacts of firms involved in wrongdoing, irregularities, or unsustainable behaviour in the fisheries sector across the five case study countries – Ecuador, Peru, Ghana, Senegal, and the Philippines – represents a comprehensive approach to assessing the potential consequences of such activities. This multi-faceted evaluation, structured into three main chapters in the full report, delves into the specifics of tonnage conversion, payload calculation, price determination, and the consequent estimations of economic impact, GDP impacts, employment impacts, and poverty impacts.

1. **Tonnage conversion and payload calculation:** The methodology begins with a tonnage conversion formula to transition from gross tonnage (GT) to net tonnage (NT), reflecting the vessel's capacity utilised for fish storage. This step is critical for understanding the economic output and efficiency of the fishing sector. Payload, representing the quantity of fish carried, is calculated using the formula:
   Payload = NT−(NT×60%)
   This calculation is pivotal for assessing the volume of fish caught and its potential economic contribution.
2. **Price determination and economic impact estimation:** The average price per fish species aids in determining the financial value of the catch. The economic impact attributable to the fishing activities of these firms is then estimated by multiplying the payload by the fish price and a constant factor, offering insights into the financial significance of the fishing industry within each country's economy.

3. **GDP impacts:** The GDP contribution per ton of fish caught is calculated by first determining the total GDP contribution of the fisheries sector and then dividing this by the total catch in tons. This method facilitates a comparison of the economic efficiency and productivity of the fisheries sector across different countries, highlighting the variance in economic impact due to the activities of the examined firms.
4. **Employment and poverty impacts:** The analysis extends to evaluating the employment impacts, presenting the number of direct and indirect workers per ton of caught fish, disaggregated by country. This approach provides a granular view of the workforce involved in fishing and related activities, shedding light on the sector's employment significance. Furthermore, the text explores the relationship between GDP growth and poverty reduction, employing the growth elasticity of poverty (GEP) to estimate potential impacts on poverty rates in the case study countries. This methodology offers a nuanced understanding of how economic changes within the fisheries sector can influence broader socio-economic conditions, including employment and poverty levels.

Estimated impacts of firms with a history of wrongdoing, irregularities, or unsustainable behaviour in the fisheries sector

The methodology unveils significant economic, employment, and poverty impacts across the case study countries, attributable to the activities of firms with a history of unsustainable fishing practices. These impacts are quantified in terms of GDP contribution, job creation or loss, and the potential increase in poverty rates, providing a comprehensive overview of the consequences of unsustainable fishing on national economies and local communities. The approach emphasises the importance of sustainable fishing practices and effective regulation to mitigate the adverse effects of such activities on economic and social well-being.

The study identified a group of companies that have been engaged in wrongdoing in the past and which are operating in the selected case study countries' EEZs; their fishing activities were estimated in terms of impacts on these countries' economies. Their potential impact is not negligible.

It translates into 0.08% of Ecuador's national GDP, theoretically affecting 4,854 jobs and potentially causing 14,381 more people to slide into poverty due to fishing sector dynamics. These fishing activities could have affected up to 0.12% of Peru's GDP, potentially influencing 2,590 jobs and affecting 41,225 individuals. In Senegal, these firms' fishing effects might amount to 0.2% of the national GDP, potentially impacting 2,503 jobs and affecting 35,569 individuals. In Ghana, their activities might have impacted 0.08% of GDP, potentially endangering around 3,066 jobs and affecting 27,091 people. Last, these fishing activities in the Philippines amount to 0.02% of the national GDP, potentially impacting 17,161 jobs and causing an additional 23,926 people living below the poverty line. In total, 30,174 jobs could be affected whereas 142,192 additional people could be living below the poverty line.

In the observed Latin American countries, such activities might affect nearly 15.015% of the fisheries' GDPs, resulting in a 0.10% fluctuation in the national GDP, be associated with 0.12 jobs per ton of catch, and could affect 27,803 people living below the poverty line. For the West African countries, these fishing activities could impact around 11.37% of the fisheries GDPs and lead to a potential 0.14% change in the national GDP.

Additionally, these activities may correspond to 0.255 jobs per ton of catch and affect 31,330 impoverished people. Meanwhile, in the Philippines, these activities' potential repercussions could touch upon 1.71% of the fisheries GDP, leading to a slight (0.02%) alteration in the national GDP, representing 0.97 jobs per ton of catch and potentially affecting 23,926 people living below the poverty line.

The activities of the firms under scrutiny reveal a substantial impact on the fisheries sector's contribution to GDP across the case study countries, highlighting the critical economic role of the fisheries sector. The employment impacts indicate a significant number of jobs potentially affected by the fishing activities, emphasising the importance of the fisheries sector as a source of employment. The potential increase in poverty levels associated with these activities underscores the social implications of unsustainable fishing practices, highlighting the need for sustainable management and regulation of the sector to protect and enhance the livelihoods of those dependent on it.

Conclusions

The presence of foreign fleets and companies with a history of unsustainable practices in the EEZs of Ecuador, Peru, Senegal, Ghana, and the Philippines poses significant risks to the long-term well-being of local fishing communities and marine biodiversity. The economic impacts of these activities are substantial, with potential opportunity costs to GDP, employment, and poverty levels. The study underscores the need for transparency and reform to mitigate these risks and promote sustainable development in these countries' fishing sectors.

Recommendations for policymakers

Addressing the diverse issues in fisheries management and related activities that emerge in this report is crucial for sustainable and responsible fishing practices. The report identifies opportunities for strengthening domestic capacity for sustainable fishing and provides powerful arguments for reform, as follows:

Promote good business behaviour

- Demand business transparency regarding registries, beneficial owners and operators, and clarity of corporate structures, track records, licences and agreements.
- Closely monitor companies previously engaged in wrongdoing.
- Establish a ranking system, including a list of undesirable companies and penalties.

Foster international collaboration

- Cultivate alliances with organisations, governments and NGOs to share best practices, resources and information – and seek funding and technical assistance from international bodies and donors to support the implementation of the system.
- Collaborate with neighbouring countries and international organisations to address shared fisheries resources and ensure the system is regionally coordinated.
- Establish a single global IUU fishing list.
- Create more marine protected areas (MPAs); strictly enforce the ban on seining in MPAs in Ecuador and establish or expand MPAs to safeguard critical habitats and marine biodiversity. The Aichi Biodiversity Targets, adopted under the Convention on Biological Diversity, call for the protection of at least 10% of coastal and marine areas by 2020 and the Kunming/Montreal Framework calls for the protection of 30% of land and sea by 2030.
- Subsidy reform: Review and reform government subsidies to fishing companies to ensure they promote sustainability and responsible practices while avoiding subsidies for companies that engage in abusive behaviour.
- Transparency and accountability: Create a unique global registry. Improve transparency in the structure of fishing companies through mandatory disclosure of ownership, vessel registration and catch data. Encourage independent audits of these companies. Create a registry of companies involved in wrongdoing in the past for closer monitoring. This implies eliminating the economic incentives that drive IUU fishing and overfishing, harmful subsidies, and other unsustainable practices.
- Tax haven and flag of convenience control: Strengthen regulations and international cooperation to curb the use of tax havens and FoCs to evade fishing regulations and responsibilities.

Enforce and sharpen internal regulation

- Implement stricter regulations and monitoring to reduce incidental fishing for the fishmeal market in Peru and promote the sustainable use of forage fish. Make companies that take part in incidental fishing more accountable, including heftier fines and, ultimately, removing operating licences.
- Enforce anti-shark finning laws and regulations in Peru, with stricter penalties for violations. Promote shark conservation through education and awareness campaigns.

- Manage and restrict trawling in Senegal and Ghana to mitigate its impact on local fishers and their livelihoods while encouraging sustainable fishing practices. This entails strengthening the monitoring and surveillance of fishing activities, especially by large foreign DWF vessels, and promoting sustainable fishing practices. Build capacity in developing countries for fisheries management, enforcement and good governance, ensuring that governments successfully control their domestic vessels and what happens in their EEZs. Put a sustainable limit to reflagging vessels that aim to take fish from the EEZ for other markets.
- Combat the saiko barter system: Crack down on illegal saiko fishing in Ghana, increase monitoring and enforcement and promote alternative livelihoods for affected communities.
- Regulate and drastically reduce the use of fish aggregating devices (FADs) in Ecuador to minimise bycatch and environmental impact.
- Addressing these issues to ensure sustainable, responsible and ethical fishing practices requires a multifaceted approach involving government policies, international cooperation, community engagement and industry responsibility.

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