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Review

How large is the Chinese Distant Water Fishing fleet?

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The latest Ovearseas Development Institute report "*China's Distant-Water Fishing Fleet – Scale, impact and governance*" presents the scale of the Chinese flagged, owned and/or operated DWF fleet and highlights the gaps and challenges in China's governance capacity, but the methodology and the figures need to be taken with a pinch of salt. CFFA, using specific examples, reviews the key findings and implications for the West Africa region.

1. Overview

A report published recently by the London-based research centre Overseas Development Institute (ODI), highlights the scale and governance issues of China's Distant Water Fishing (DWF) fleet.[1] To do so, the authors analysed data for 2017 and 2018 using big data analytic techniques, ensemble algorithms and geographic information systems (GIS). **Some of their key findings are that China's DWF fleet might be much larger than the 3,000 estimated vessels, with a significant percentage flagged to other countries, mostly to African nations. The report also explains that the ownership of China DWF fleet is very complex and opaque, with a majority of the vessels owned by small and medium enterprises (SMEs), which complicate China's capacity to monitor and control their operations.**

In the conclusions, the authors propose some recommendations to improve the management of the China's DWF fleet and underscore the need for more effective regional and global action, especially in monitoring, control and surveillance (MCS) and through measures to combat illegal, unreported and unregulated (IUU) fishing.

[1] Gutiérrez, Miren et al., "China's distant-water fishing fleet – scale, impact and governance", Overseas Development Institute, London, June 2020. Available at: https://www.odi.org/sites/odi.org.uk/files/resource-documents/chinesedistantwaterfishing_web_1.pdf

Whereas the report attempts to demonstrate that the Chinese DWF fleet is much larger than estimated and explores its potential impact on resources in addition to other fleets also fishing in distant waters, there remains some questions with regards to the methodology, and the figures need to be taken with caution.

2. Methodology

The authors used data from 2017 and 2018 from the Krakken database (FishSpektrum)[2] to create their own database of all possible DWF vessels with a conceivable connection to China. To observe the "behaviour" of the vessels, they used GIS software "*to visualize automatic identification system (AIS) data and identify fishing manoeuvres*" according to the movement patterns.[3]

3. Findings in West Africa

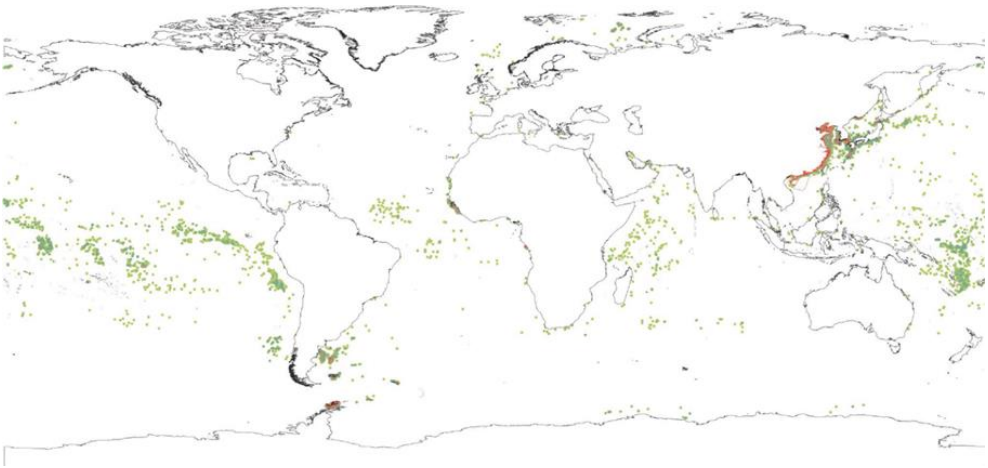
The report mentions in its introduction that much of Chinese DWF fleet fishing in other countries' EEZs is performed in developing countries, especially African nations.[4] Even though it is not within the scope of the report, the authors hint at the risks to the sustainable use of resources in these third countries and the impact on livelihoods of small-scale fisheries and more broadly, food security in the region. The report also mentions the responsibilities of these countries "*in need of foreign currency [...] negotiating disadvantageous fisheries agreements*" and who are unable or unwilling to fight IUU fishing. The report mentions several examples cited in former studies which question the economic and social development narrative framing fisheries arrangements between third countries and Chinese DWF companies.

Approximately 40% of the vessels in the analysed database were identified by the authors as trawlers, with intense trawling activity happening off the coast of West Africa, as shown on on the map from the report, pasted on the next page for easy reference.[5] The report states that fishing manoeuvres observation did not allow to differentiate between pelagic trawling and bottom-trawling. However, various local sources from CFFA partners have already indicated that bottom-trawling by Chinese vessels in West Africa tends to be prevalent, even in zones reserved for artisanal fishing, also known in some countries as the Inshore Exclusive Zone and whose extent varies.

Even though the authors state that "*China is effectively its own flag of convenience*," a 5,5% of ODI's list of vessels would appear to be flagged in other countries, more than half of them to African nations, with Ghana, Mauritania and Ivory Coast at the top of

[2] For more information about this database, see their website: http://fishspektrum.com/about/
[3] For more detailed information, see the Annex 1 and 2 of the report, pages 41 to 47. Available at: https://www.odi.org/sites/odi.org.uk/files/resource-documents/chinesedistantwaterfishing_web_1.pdf
[4] According to a report by Greenpeace in 2015, the number of Chinese vessels in Africa was estimated to be 462 in 2013: "*In just under 30 years, Chinese companies have expanded their fishing operations in Africa from 13 vessels in 1985 to 462 vessels in 2013, which now comprise one fifth of the total Chinese-owned distant water fishing fleet.*" See "Africa's Fisheries' paradise at a crossroads – Investigating Chinese companies' illegal fishing practices in West Africa", Greenpeace, May 2015. Available at: https://issuu.com/gpchina/docs/africa___s_fisheries___paradise_at
[5] See page 19 of the ODI report, available at: https://www.odi.org/sites/odi.org.uk/files/resource-documents/chinesedistantwaterfishing_web_1.pdf

the list. Most of these vessels are trawlers, and the authors suggest that China could have "*encouraged Chinese trawlers to relocate to waters with weaker enforcement*" after some restrictions were taken by authorities in China's EEZ.



In the case of Mauritania, the reflagging is happening in the context of private agreements with Chinese companies, such as Poly Hondone,[6] which grants them access to resources in the Mauritanian EEZ. The reason for most of the reflagging cases to African states might be to simply obtain access to their EEZs which would otherwise not be accessible. For example, Ghana has "*laws restricting industrial [...] fishing [...] to Ghanaian-flagged vessels that are not owned or part-owned by foreign interests.*" Another example would be Senegal with at least 32 Chinese-owned or operated reflagged vessels. The West African country has fishing agreements with some countries in the region, like The Gambia and Liberia, which allow industrial vessels flying the Senegalese flag to fish in these other EEZs. The recent controversy with the request by 52 vessels of Chinese origin for fishing licences in Senegal,[7] which was subsequently declined by the Ministry of Fisheries, would support this hypothesis.

4. Ownership

ODI's analysis of the database shows that the vast majority of the vessels they consider to be part of the Chinese DWF fleet is owned by SMEs, probably some being part of larger conglomerations but registered individually for tax or insurance purposes. For the authors, the "*patterns of ownership and operation are complex*" and point at the difficulty to enforce regulation and monitor such a vast fleet: "*A lack of transparency, labyrinthine corporate structures, and the complexity of a vessel's identity [...] can make it extremely challenging to identify who ultimately owns and benefits from vessels involved in DWF.*"

[6] See Chérif, Mahmoud, « La convention Poly Hondone Fishery – Mauritanie : Analyse des impacts économiques, sociaux, environnementaux », Pêchecops, July 2011. Available at : https://www.cffacape.org/publications-blog/2011/07/08/2011-7-8-impact-analysis-of-the-poly-hondone-pelagic-fishery-mauritania-convention?rq=poly%20hondone

[7] See Philippe, Joëlle, "Senegal: The fisheries ministry will not issue any of the licences to the 54 vessels of Chinese and Turkish origin", CFFA website, June 2020. Available at: https://www.cffacape.org/news-blog/the-fisheries-ministry-will-not-issue-any-of-the-licences-to-the-54-vessels-of-chinese-and-turkish-origin?rq=Senegal

According to the report, approximately 5% of the vessels on ODI's list are owned by firms registered outside China and the authors pin down several hypotheses such as preferential tax regimes, the circumvention of regulations or the access to EEZs, like in the above-mentioned case of Ghana.

In the case of reflagged vessels, the report reminds that it is the flag State and not China that has the monitoring responsibility, but suggests that China has a "*moral responsibility*" to support local governments,[8] which often have limited MCS capacity and resources, through technical assistance.

Overall, what remains the most interesting fact is that the authors say that some of the largest companies are state-owned or are a subsidiary of the China National Fisheries Corporation (CNFC) which, as they rightly indicate, "*provides an opportunity [...] to demonstrate the Government of China's commitment to setting standards and combatting IUU in the DWF fleet.*" Indeed, according to the report, some vessels of these state-owned or state-linked companies appear to be repeat IUU fishing offenders, and could be "*obvious targets*" for enforcement agencies.

5. Potential gaps in the methodology and data

As mentioned in the introduction of this review, there are several potential gaps in the methodology and data which make us take the figures with caution.

"DISTANT-WATER FISHING" DEFINITION

The methodology resulted in the selection of a number of vessels based on what the authors define as "distant water fishing" as they state in the glossary of the report:

> *Distant-water fishing (DWF)*
>
> *The commonly accepted international definition of DWF covers activities outside a nation's 200-mile exclusive economic zone (EEZ), whether on the high seas or in another nation's EEZ.*

However, it should be noted that the United Nations Food and Agriculture Organisation (FAO) defines "*Landings from "distant waters" as quantities taken by vessels in all FAO major fishing areas other than those adjacent to the flag State*," adding that "*this definition implies that fisheries taking place outside the EEZ of the flag State but within the same major fishing area are not considered distant water fisheries.*"[9] A definition which would exclude all fishing vessels operating in FAO Area 61,[10] including on the high seas. As the report does not break down the number of vessels by geographical regions (something the authors should be able to do based

[8] The 2019-2021 Beijing action plan of the Forum on Africa-China cooperation contains a section on maritime economy which states: "*3.5.5 The two sides encourage more exchanges and cooperation among Chinese and African maritime institutes and marine research institutes. China will support African countries in their marine capacity building by providing technical support and training programs.*
3.5.6 China supports Africa in the capacity-building of maritime law-enforcement and environment protection to ensure the security of maritime resources and promote maritime development and cooperation and the promotion of sustainable approaches that are environmentally, socially and economically effective through the Blue Economy." Available online at: https://www.focac.org/eng/zywx_1/zywj/t1594297.htm

[9] See the chapter "2.6 Landings from distant water fisheries" of the FAO fisheries technical paper: Grainger, R.J.R. and Garcia, S.M., "Chronicles of Marine Fishery Landings (1950-1994): Trend Analysis and Fisheries Potential", FAO fisheries department, 1996, available at: http://www.fao.org/3/W3244E/w3244e09.htm

[10] See all FAO Major Fishing areas on their website: http://www.fao.org/fishery/area/search/en

on the location data they used), it is impossible to know how many vessels would be excluded from their list based on the FAO definition.

THE OMISSION OF VESSELS FISHING CAPACITY

Secondly, the authors do not provide information in their database about the characteristics of the individual vessels that affect fishing capacity. Fishing capacity of a vessel depends on several factors such as the its size, engine power, gear type, etc. The constant efficiency improvements and the use of technology are increasing fishing capacity worldwide ('technological creep'). For example, in the case of tuna fishing in the Indian Ocean, the use of Fishing Aggregating Devices (FADs) has increased fishing capacity, thus contributing to over-capacity, even if the total number of tuna vessels has decreased over the years. The focus solely on the total number of vessels does not allow to assess the magnitude of the overcapacity issue and therefore, neither permits the elaboration of fishing capacity management measures, essential for efficient sustainable fisheries management.

RESPONSIBILITY OF CHINA UNDER INTERNATIONAL LAW

It should be noted that the 16,966 vessels mentioned in the report comprise any vessel "with a possible link to Chinese interests", an approach which, again, is open to questions. This needs to be taken into consideration as, under international law, China is only responsible for those vessels flying its flag, and not for those vessels flying the flag of other countries. However, China's responsibility with regards to its nationals engaged in DWF operations is provided for in the recently adopted Administrative Regulation on Distant Water Fisheries which entered into force on 1st April 2020.[11] In particular, article 34 provides for a "blacklist" to be established for persons such as managers of enterprises and projects as well as vessel masters engaged in DWF activities that resulted in serious infringements with sanctions that would prohibit these persons from exercising their activity for 3 to 5 years.

UNRELIABILITY OF AIS AND MMSI SYSTEMS

Finally, the authors repetitively highlight in the report that some information might be missing from the Krakken database, and they conclude the 16,966 number might be an underestimate. The Krakken database uses the vessels' Automatic Identification System (AIS) and Maritime Mobile Service Identity (MMSI) and other similar systems to identify and localize vessels. As several reports have underscored in the past, AIS and MMSI are unreliable because they can easily be manipulated. A 2015 Greenpeace report on the findings of their ship MY Esperanza in 2014 in the EEZs of Senegal, Guinea-Bissau and Guinea, gives a practical example of this:

> *Among all the 134 vessels sighted during the trip, only 21 vessels could be observed on the AIS system, the other 114 vessels could either have their AIS devices switched off or not have an AIS device installed at all. Of the 21 that had their AIS turned on, at least 10 of these vessels had their name, Maritime*

[11] See "Amended Regulations on Administration of Distant Water Fishery Released by Ministry of Agriculture and Rural Affairs of the People's Republic of China", The Global Times, 24 March 2020, available at: https://www.globaltimes.cn/content/1183552.shtml?from=singlemessage&isappinstalled=0

> *Mobile Service Identity (MMSI) number and/or position wrongly reported. All the misreported cases were Chinese-flagged vessels.* [12]

Two more examples of West Africa raise questions regarding the data used in the report. From the table listing the number of vessels by flag country which can be found on the Fishspektrum website,[13] in 2017 Senegal would have reported 97 fishing vessels to FAO. This seems to be more or less in line with what local stakeholders and media sources have been reporting from the ground (in early 2020, there were approximately 160 Senegalese industrial vessels with fishing licences). However, the Krakken database indicates more than 500 fishing vessels flying Senegal's flag, almost 5 times the officially reported figure. Would this mean that 80% of the Senegalese vessels are fishing without a licence? Would the fisheries authorities and other local stakeholders be ignorant of such a big discrepancy? A similar example would be Guinea with 21 Guinean vessels recorded on their official website[14] in 2017 but FishSpektrum indicates there were 53.

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These examples show that the figures need further close examination. Nevertheless, the authors insist that it is the first time the whole Chinese DWF has been described and analysed, and that it is potentially much bigger than what is known and reported by the Chinese government. According to the authors, the figures, either under or overestimated, indicate trends, the highly probable gaps in China's management system and the potential impact of the fleet in developing countries' EEZ. Indeed, the presence of Chinese trawlers along the coast of West Africa is a known fact, extensively researched and reported by NGOs and civil society organisations.

6. Key takeaways from the recommendations of the report

The authors accurately argument that ***"the majority of social, environmental and economic costs have been borne by developing coastal States,"*** **and, we would add, especially by the coastal fishing communities, such as those of the West Africa region.** In contrast with the EU's increasing attention to transparency, **the opacity of Chinese DWF and lack of access to reliable data shields it from public accountability.** In addition, the lack of political will and capacity of the African coastal states to sustainably manage the exploitation of their marine resources and the inability of the international community to find consensus on several matters related to IUU and DWF further hamper a global sustainable management of fisheries.

In their conclusion, the authors propose some recommendations to the Chinese government, to coastal developing States and to international bodies and agencies. Among the **key recommendations to China are the targeting of MCS efforts on the state-owned or state-linked companies, the strengthening of capacity-building for**

[12] See page 22 of "Esperanza West Africa Expedition 2014 – Summary of the findings from 26 October – 21 November 2014 in the Exclusive Economic Zones of Senegal, Guinea-Bissau and Guinea", Greenpeace, May 2015. Available at: https://issuu.com/gpchina/docs/esperanza_west_africa_expedition_20
[13] The table can be found at the bottom of the following page: http://fishspektrum.com/about/
[14] The list can be found at the following address of the Guinean fisheries ministry website: http://www.peches.gov.gn/images/ILD_PRAO/ILD_DNPM/info_brutes_dnpm/ild_brute_tousphilip_2017/liste-des-licences-mises-Annuelles.pdf

MCS in developing States where Chinese DWF fleet is active and introducing disincentives for bottom-trawling on all Chinese-flagged vessels. The main recommendation to coastal States is to publish all international fisheries arrangements, a clause that is actually increasingly being added to EU-third countries Sustainable Fishing Partnership Agreements (SFPAs) and which is a main requirement for the countries that are signatories of the Fisheries Transparency Initiative (FiTI).[15] For international bodies and agencies, there is a strong emphasis on improving MCS and prosecution to companies suspected of IUU activities.

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[15] The Fisheries Transparency Initiative 12 transparency requirements can be found on their official website: http://fisheriestransparency.org/fiti-standard