

CHINA'S HIDDEN FLEET IN WEST AFRICA

A spotlight on illegal practices within Ghana's industrial trawl sector





The Environmental Justice Foundation (EJF) is a UK-based organisation working internationally to address threats to environmental security and their associated human rights abuses.
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OUR MISSION

To Protect People and Planet

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- Create and implement solutions where they are needed most – training local people and communities who are directly affected to investigate, expose and combat environmental degradation and associated human rights abuses
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- Raise international awareness of the issues our partners are working locally to resolve.

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Our ambition is to secure truly sustainable, well-managed fisheries and with this the conservation of marine biodiversity and ecosystems and the protection of human rights.

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We believe in working collaboratively with all stakeholders to achieve these goals.

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Abbreviations

AIS	Automatic identification system	MSY	Maximum sustainable yield
CPUE	Catch per unit effort	MT	Metric tonnes
DWF	Distant water fisheries	NPOA-IUU	National plan of action to prevent, deter and eliminate illegal, unreported and unregulated Fishing
EEZ	Exclusive Economic Zone	RCMF	Rongcheng Marine Fishery Co. Ltd
EITI	Extractive Industries Transparency Initiative	SFMP	Sustainable Fisheries Management Project (Ghana)
EU	European Union	SPV	Special purpose vehicle
GHEITI	Ghana Extractive Industries Transparency Initiative	UNCLOS	United Nations Convention on the Law of the Sea
GHS	Ghanaian Cedi	US	United States
GRT	Gross register tonnage	USAID	United States Agency for International Development
GT	Gross tonnage	UVI	Unique vessel identifier
IEZ	Inshore Exclusion Zone	VMS	Vessel monitoring system
IMO	International Maritime Organization	WARFP	West Africa Regional Fisheries Programme
IUU	Illegal, unreported and unregulated fishing		
MCS	Monitoring, control and surveillance		
MoFAD	Ministry of Fisheries and Aquaculture Development		

Executive summary

According to Ghana's Fisheries Act of 2002, foreign interests are not permitted to engage in Ghana's industrial fishing sector by way of joint ventures. This restriction applies to all local (i.e. Ghana-flagged) industrial and semi-industrial vessels, with an exception carved out for tuna vessels. The restriction purports to ensure that the financial benefits accruing from the trawl sector are retained within the country, thereby contributing to Ghana's socio-economic development, rather than being sent overseas.

In spite of the existence of these restrictions, foreign interests, in particular from China, are known to be extensive within Ghana's industrial trawl sector. Chinese companies operate through Ghanaian "front" companies to import their vessels into the Ghanaian fleet register and obtain a licence to fish, setting up opaque corporate structures to circumvent the nationality criteria in the law. With the balance of control invariably resting with the Chinese investor, such arrangements quite clearly contravene the spirit and purpose of the legislation, if not the letter of the law.

The result is a complete lack of transparency as regards the true nature of ownership of industrial trawl vessels operating in Ghana. In official sources, such as the vessel licence list and the database of vessels maintained by IHS Sea-web, only the Ghanaian "front" company appears. Further investigation reveals, however, that in reality up to 90-95% of Ghana's trawl fleet may have some Chinese involvement.

This lack of transparency is problematic for a number of reasons, particularly in disguising the true beneficiaries of profits flowing from illicit activities in Ghana's trawl sector, preventing those individuals from being held to account. In recent years, Ghana's trawl sector has been plagued by

illegalities, most notably the targeting of juvenile and small pelagic fish for trans-shipment at sea to specially adapted canoes (known as "saiko"). Despite being illegal, saiko fishing has increased in recent years, contributing to the rapid deterioration of Ghana's fisheries resources, and putting livelihoods and food security at risk.

The findings of this study highlight the urgent need for extensive reforms in Ghana's industrial trawl sector, to ensure that fishing activities are carried out in a legal and sustainable manner. As a matter of priority, all necessary steps must be taken to end the illegal and destructive practice of saiko fishing, and to reduce the fishing effort of the industrial trawl fleet in line with scientific advice on the status of fish stocks.

Critically, there is a compelling need for greater transparency in the sector, to ensure that the perpetrators of illegal activities can be held to account for their acts. While reducing the cost-burden of management and enforcement operations, improving transparency around fishing agreements would also help to address inequities in benefit flows, whereby local fishing communities and the country as a whole lose out in unbalanced arrangements with foreign operators.

The responsibility for these reforms falls on both the Ghanaian and Chinese governments. The Chinese government plays the key role in supporting the fishing operations of its nationals overseas through subsidies and other forms of incentives. Its recent attempt to crack down on illicit activities of Chinese operators in West Africa is to be welcomed. It is imperative that this momentum be sustained, and that Chinese distant water fishing operations under third country flags such as Ghana do not escape scrutiny.



Fishing boats at Elmina port. © EJF

1. Introduction

Illegal, unreported and unregulated (IUU) fishing, in a number of its manifestations, is increasingly recognised as a form of transnational organised crime¹. It is commonly associated with forgery, fraud, money laundering and other enabling crimes, as well as non-fisheries violations such as human trafficking and the drugs trade². IUU fishing is highly lucrative, resulting in billions of dollars of illicit financial flows every year³.

Dismantling the networks behind these operations requires the recipients of profits to be identified and held to account. This is no easy task. IUU operations may span continents and oceans, involving players far removed from activities at sea. Opaque corporate structures may conceal the identities of beneficiaries, allowing them to profit from illegal fishing with low risk of detection. Tracking financial flows and reaching behind corporate arrangements requires a high degree of cooperation across agencies, borders and disciplines.

Given these challenges, fisheries enforcement has traditionally targeted the registered owners and captains of fishing vessels. However, notorious IUU offenders can assign new individuals to these roles, continuing their operations and evading sanction⁴.

Improving transparency of beneficial ownership⁵ in the fishing industry is a simple, cost effective mechanism to ensure that enforcement targets the true beneficiaries of illicit activities. This has been a focus in the extractive industries sector, as part of reforms implemented under the global Extractive Industries Transparency Initiative (EiTI) (see **Box 1**). This study examines the beneficial ownership arrangements within Ghana's industrial trawl sector, and the implications for fisheries management and enforcement.

Under Ghanaian law, foreigners are prohibited from engaging in joint ventures with respect to industrial trawl vessels, yet foreign interests, particularly from China, are extensive within the sector. As foreign interests are effectively prohibited, operators establish opaque corporate structures, concealing the true beneficial owner and shielding the foreign partner from scrutiny.

The result is a complete lack of transparency as to who is responsible for illegal actions, and who exerts control over, and who benefits from, the activities of Ghana's industrial trawl fleet. This has created an enabling environment for illegal activities, and the systematic over-exploitation of marine fisheries resources.

The findings of this study have important implications for fisheries management and enforcement both within Ghana and in the wider region. Further research is required to unravel the networks behind these operations, which likely extend far beyond the West African coast. Recommendations are made for improving transparency in the context of the on-going reform of Ghana's fisheries law framework.

Box 1

Transparency and natural resource governance

There is increasing recognition of the importance of transparency as a basis for good governance and the sustainable use of natural resources, particularly in the extractive industries and forestry sector.

The Extractive Industry Transparency Initiative (EiTI) is a voluntary global standard that aims to promote open and accountable resource management in countries rich in oil, gas, and mineral resources. The EiTI is implemented in Ghana through the Ghana Extractive Industry Transparency Initiative (GHEITI), representing an important step forward in the transparent management of Ghana's natural resources.

The 2016 EiTI Standard requires all implementing countries to establish a public beneficial ownership disclosure regime by January 2020. The standard defines a beneficial owner in respect of a company as "the natural person(s) who directly or indirectly ultimately owns or controls the corporate entity".

In response to this requirement, in 2016, Ghana published a comprehensive roadmap towards beneficial ownership disclosure, including the establishment of a beneficial ownership registry for the mining, oil and gas sectors. This initiative has received support from the highest levels in government.

In August 2016, Ghana's Companies Act was amended to provide for the inclusion of the names and particulars of beneficial owners of companies in the register of members, as a means of tackling corruption, money laundering and terrorism.

As part of stakeholder consultations on the issue, both state and non-state actors agreed that beneficial ownership disclosure should not be limited to the extractive sector, but expanded to include all other sectors.

For further information, see:

- Republic of Ghana (2016). *Ghana EiTI Beneficial Ownership Roadmap*. Ghana Extractive Industries Transparency Initiative (GHEITI). https://eiti.org/sites/default/files/documents/ghanas_eiti_beneficial_ownership_road_map.pdf
- GHEITI, 'Data analysis of Ghana's Extractive Sector, accessed 9.8.18. <http://data.gheiti.gov.gh/#home>
- Sackey, K. and Arthur-Mensah, G. (2.2.17), 'Government commits to implementing beneficial ownership regime', *Ghana News Agency*, accessed 9.8.18. <http://www.ghananewsagency.org/economics/government-commits-to-implementing-beneficial-ownership-regime--112884>

2. Background

Marine fisheries are critical for the food security, income and employment of coastal populations across West Africa. An estimated 6.7 million people depend directly on fisheries for food and livelihoods⁶, with fish accounting for over 50% of animal protein intake in countries such as Ghana and Sierra Leone⁷. In the face of rising poverty, coastal populations in the region rely increasingly on fisheries for food and income⁸.

However, illegal fishing is rife, resulting in the over-exploitation of fish stocks and significant lost revenue to local economies⁹. West Africa has some of the highest rates of IUU fishing in the world, accounting for around 37% of catches. IUU losses to the West African economies of Mauritania, Senegal, The Gambia, Guinea Bissau, Guinea and Sierra Leone are estimated at around US\$ 2.3 billion annually. Only a fraction of these losses (approximately US\$ 13 million) are recovered each year through sanctions for fisheries-related offences¹⁰.

In Ghana, over 2 million people rely, directly or indirectly, on marine fisheries for income and employment, with more than 200 coastal villages dependent on fisheries as their primary source of income. Ghana has one of the largest and most important small-scale fishing fleets in West Africa, accounting for 11% of total artisanal canoes in the region¹¹ and employing around 80% of fishers in the country¹².

However, Ghana's fisheries are in crisis. Decades of over-exploitation by both the artisanal and industrial fleets have pushed stocks of some key species, such as sardinella, to the brink of collapse¹³. Illegal and destructive fishing practices are widespread, causing irreparable damage to ecosystems and the marine environment¹⁴. Incomes of Ghana's artisanal

fishers have dropped by as much as 40% in the last 10-15 years¹⁵, and the country is now forced to import more than half of fish consumed¹⁶.

In November 2013, Ghana received a warning (yellow card)¹⁷ from the European Commission, for failing to comply with fisheries management and monitoring obligations under international law¹⁸. The yellow card prompted a number of new laws and initiatives, including the development of a fisheries management plan to improve sustainability of fisheries resources through measures such as closed seasons. The national legal framework was also updated, increasing the sanctions for IUU fishing offences and improving controls over fishing vessels. Satisfied with the progress made, the European Commission lifted the yellow card in October 2015¹⁹.

Yet, significant concerns remain. Since the yellow card was lifted, progress has stalled in several areas, in particular with regard to the over-capacity and illegal practices of the industrial trawl fleet²⁰.

In recent years, industrial bottom trawlers operating in Ghana have engaged in one of the most destructive forms of illegal fishing – locally referred to as “saiko”²¹. Saiko involves the deliberate and systematic harvesting of juvenile fish and non-target species, such as sardinella and chub mackerel, for trans-shipment at sea to specially adapted canoes. The practice is illegal under Ghanaian law²², yet with low risk of arrest and sanction, it has been on the increase in recent years, accounting for an estimated 100,000 metric tonnes of illegal and unreported catches each year²³. The practice is fuelling the collapse of Ghana's fisheries, with devastating implications for artisanal fishing communities.



Canoe fishers at Elmina port. © EJF

3. Status of Ghana's marine fisheries resources

The past decade has seen significant declines in Ghana's marine fisheries resources, a trend observed across the region. A number of important stocks, such as sardinella, sea breams, groupers, snappers and cephalopods, are considered severely overfished, while others, such as chub mackerel and skipjacks, are considered fully exploited²⁴.

The status of small pelagic stocks is of particular concern due to their role in food security and livelihood provision, and as the key target of the artisanal fishery. According to recent assessments, Ghana's small pelagic fishery could collapse within the next three to seven years in the absence of robust management interventions²⁵. Annual landings have declined to around 20,000 tonnes, in spite of increased fishing effort²⁶ (**Figure 1**).

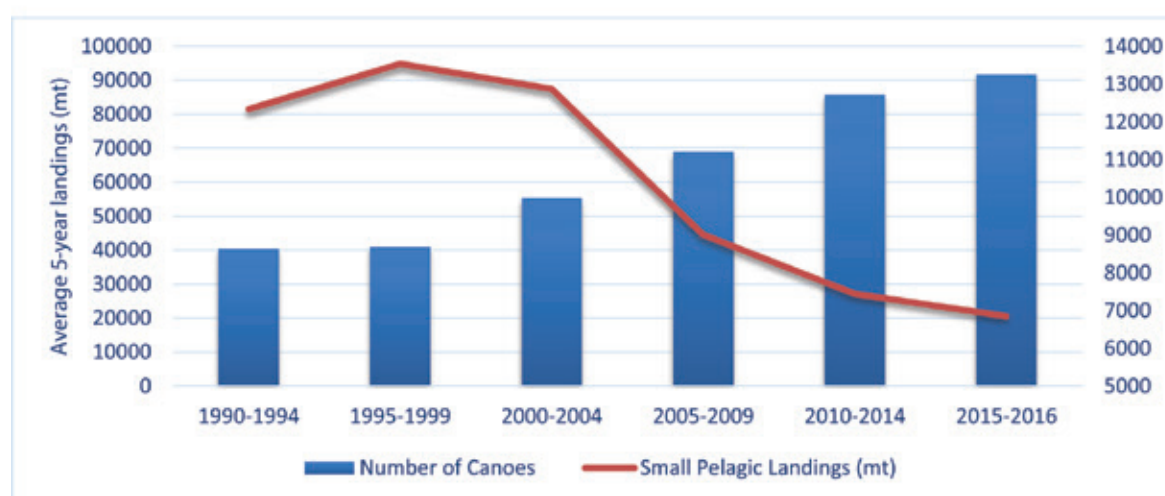
Stock declines have been attributed to excessive capacity in the artisanal and industrial sectors and to weak governance and enforcement, leading to over-exploitation and illegal fishing. An open access management regime saw the number of canoes operating in Ghana's waters increase from 5,000 to 12,000 over the course of two decades (**Table 1**). The number of industrial trawlers peaked at 107 in 2014, an estimated fleet over-capacity of 55%²⁷. As a result, both the artisanal and industrial trawl sectors have seen particularly notable declines in catch per unit effort (CPUE) in recent years (**Figures 2 and 3**)

Table 1: Size of the fishing fleet and percentage of fleet reduction to attain sustainable fishing effort

Sector	Number of vessels (in 2014)	Maximum sustainable yield (MSY) (metric tonnes)	Number of vessels required to sustain fishery	Percentage reduction required
Artisanal	>12,000	239,913	9,095	> 24%
Inshore	403	13,713	272	32%
Industrial	107	30,637	48	55%

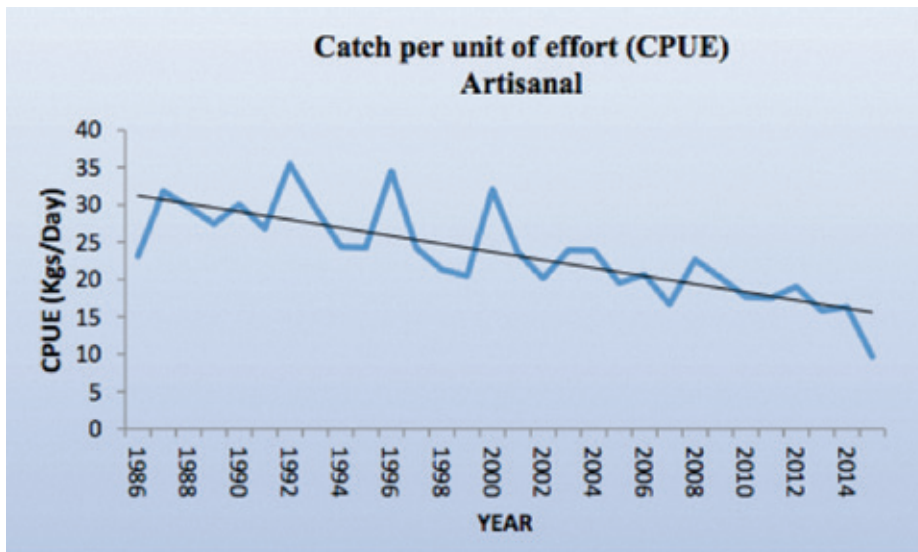
Source: Lazar, N. (2016). *The State of Fisheries in Ghana – Science and Fisheries Management*. University of Rhode Island/USAID-Sustainable Fisheries Management Project (SFMP).

Figure 1: Landings of small pelagic stocks (sardinellas, anchovies and mackerel) and effort in number of canoes targeting small pelagics from 1990 to 2016



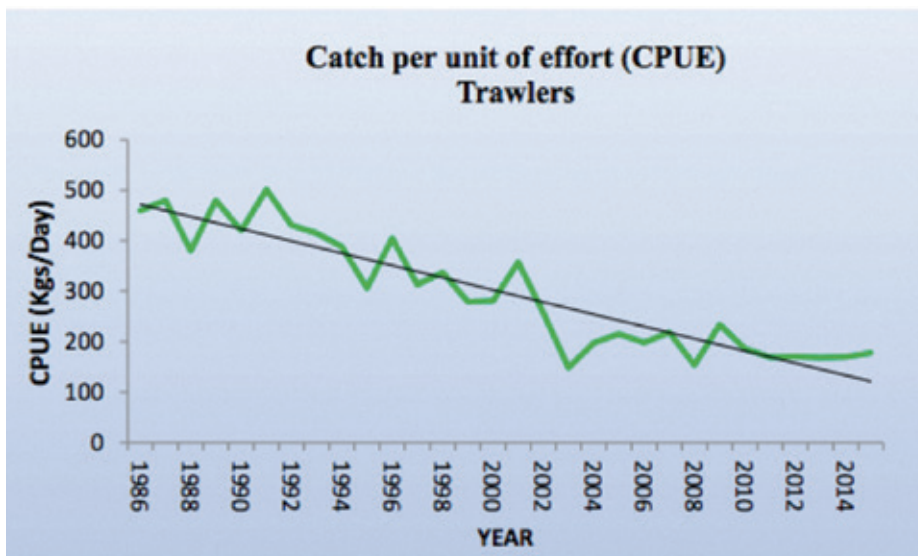
Source: Lazar, N., et al. (2018). *Status of the small pelagic stocks in Ghana and recommendations to achieve sustainable fishing 2017*. Scientific and Technical Working Group. USAID/Ghana Sustainable Fisheries Management Project (SFMP).

Figure 2: Catch per unit effort (CPUE) of the artisanal fishery



Source: Lazar, N. (2016). *The State of Fisheries in Ghana – Science and Fisheries Management*.
University of Rhode Island/USAID-Sustainable Fisheries Management Project (SFMP).

Figure 3: Catch per unit effort (CPUE) of the industrial trawl fishery



Source: Lazar, N. (2016). *The State of Fisheries in Ghana – Science and Fisheries Management*.
University of Rhode Island/USAID-Sustainable Fisheries Management Project (SFMP).



Catches from small-scale fishers in Cape Coast. © EJF

4. Ghana's industrial trawl sector

The number of industrial trawlers operating in Ghana increased rapidly during the 1980s and 1990s, until the collapse of the *balistes* fishery in the mid-1990s. This event saw a sharp decline in reported catches from 50,000 tonnes in 1996 to around 20,000 tonnes per year between 1997 and 2007. In 1996, around 75 industrial trawlers were licensed to fish in Ghana²⁸. In spite of stagnating catch levels, this number continued to increase, peaking at 107 trawlers with active licences in 2014²⁹.

Ghana's industrial trawl fishery targets bottom dwelling species such as groupers, cuttlefish, octopus and snappers³⁰. In 2014, Ghana's trawl fleet reported total annual catches of 18,500 metric tonnes (MT), or 173 MT on average per vessel. This average is considerably lower than may be expected for vessels of the size and power in Ghana's fleet registry³¹. According to the 2011-2016 Fisheries and Aquaculture Sector Development Plan, a fleet of around 10 vessels in this class would be sufficient to harvest the reported landings. This is consistent with the findings of a study of bottom trawlers operating in West Africa, which calculated mean catches per vessel of 1256 tonnes per year³².

Recognising the over-capacity in the industrial trawl sector, Ghana's 2015-2019 National Fisheries Management Plan sets a target of achieving a 50% reduction in fishing days for the industrial trawl fleet over the first three years of the Plan's implementation (scaled annually). The Plan sets out a number of measures to achieve this target, including:

- Establishment of a closed season for two months, increasing to four months by Year 3 (May-June or November-December to be determined).
- Cancellation of licences of repeat IUU offenders without an option to replace that vessel.
- Reduction of fleet size over a transitional period of three years.

At the end of 2017 there were 76 industrial trawlers flagged to Ghana and licensed to fish in Ghana's Exclusive Economic Zone (EEZ)³³. An additional 25-35 trawlers (approx.) are thought to be listed in the Ghanaian fleet register but do not hold licences to fish within Ghanaian waters. There are currently no foreign-flagged trawlers licensed to fish in the Ghanaian EEZ. The majority (80%) of industrial trawlers in Ghana's fleet registry have a gross register tonnage (GRT) of 199 or more. According to data obtained for 2015, 90% of industrial trawl vessels licensed in Ghana in that year were built in China³⁴.

The licence fees collected by the Ghanaian government from the industrial trawl and other sectors are set out in **Table 2** below. In 2015, licence fees paid by industrial trawlers amounted to around € 400,000 (GHS 1.75 million approx.), compared to around € 1.2 million (GHS 5.2 million approx.) for the industrial tuna fleet. According to data from the West Africa Regional Fisheries Programme (WARFP), Ghana's fishing licence fees are substantially lower than fees applied by other West African countries (**Table 3**)³⁵.

Table 2: Licence fees collected by year (2011-2015)

Type of Vessel	2011	2012	2013	2014	2015
GHS					
Trawlers	538 314	614 196	845 794	1 136 063	1 749 946
Tuna vessels	1 620 284	1 893 398	2 350 050	2 921 996	5 189 587
Shrimpers	22 589	0	0	0	0
Carriers	83 175	88 720	110 900	121 990	243 384
Total	2 264 362	2 596 314	3 306 744	4 180 048	7 182 917
EUR					
Trawlers	251 114	264 034	330 375	288 377	403 316
Tuna vessels	755 835	813 945	917 952	741 717	1 196 061
Shrimpers	10 537	0	0	0	0
Carriers	38 800	38139	43 319	30 966	56 093
Total	1 056 287	1 116 118	1 291 646	1 061 061	1 655 470

Source: Data from the Ministry of Fisheries and Aquaculture Development (MoFAD), cited in EU-Ghana Sustainable Fisheries Partnership Agreement *ex ante* evaluation (2016)³⁶

Table 3: Fishing licence fees in a selection of West African countries

Licence Charges				Revenue State
	Shrimp	Cephalopod	Demersal	Average
WARFP	\$/GRT	\$/GRT	\$/GRT	200 grt
Mauritania			\$125/tonne	87,500
Senegal	289	261	147	29,412
Guinea Bissau	409	332	307	61,353
Guinea	430	350	315	63,000
Sierra Leone	200	150	150	45,000
Sierra Leone Royalty	18,000	15,000	15,000	
Liberia	10% ex V	10% ex V	10% ex V	150,000
Ghana			35	7,000

Source: USAID-Sustainable Fisheries Management Project citing data from the West Africa Regional Fisheries Programme (WARFP).

5. Legal provisions regarding ownership of industrial trawl vessels

Section 47(1) of the Fisheries Act of 2002 provides that a local (i.e. Ghanaian-flagged) industrial or semi-industrial fishing vessel is one that is owned or controlled by:

- a citizen of Ghana;
- the Government of Ghana;
- a company or partnership registered by law in Ghana which has its principal place of business in Ghana, and the share of which is beneficially owned wholly by the Government, a citizen, a public corporation established by law in Ghana or a combination of any of them.

An exception is provided in the case of tuna vessels, for which at least 50% of the shares must be beneficially owned or controlled by the persons specified above, i.e. a Ghanaian citizen, the government or a Ghanaian company or partnership.

The legislation seemingly attempts to prohibit the use of “front” or “shell” companies that in reality are owned or controlled by foreign interests.

“Beneficially owned” is defined in the Act as “for one’s own benefit and not as trustee or agent”³⁷. This may be construed as a relatively narrow definition of beneficial ownership, compared to how the term is used in other contexts and jurisdictions. The EiTI standard, for example, defines a beneficial owner as “the natural person(s) who directly or indirectly ultimately owns or controls the corporate entity”³⁸. The inclusion of the term “indirectly” extends the reach of the definition to the individual that profits from a company’s activities through ownership and/or control, regardless of who is registered as the owner or shareholder of the company concerned.

Indeed, since the 2002 Fisheries Act was adopted, Ghana’s 1963 Companies Act (Act 179) has been amended to define beneficial ownership in a much broader sense, taking into account definitions provided by the EiTI, of which Ghana is a member³⁹. According to the Companies (Amendment) Act 2016 (Act 920), a beneficial owner now means an individual:

- who directly or indirectly ultimately owns or exercises substantial control over a person or a company;
- who has a substantial economic interest in or receives substantial economic benefits from a company whether acting alone or together with other persons;
- on whose behalf a transaction is conducted; or
- who exercises ultimate effective control over a legal person or legal arrangements.

Regardless of the relatively narrow scope of the 2002 Fisheries Act definition of a beneficial owner, it seems clear that the spirit and purpose of this provision is to exclude foreign interests from the local industrial fleet (with the exception of tuna fishing). By referring to “beneficial ownership” and therefore drawing the distinction between the registered owner and the beneficial owner, the legislation seemingly attempts to prohibit the use of “front” or “shell” companies that in reality are owned or controlled by foreign interests.

6. Ownership in practice – Chinese interests in the trawl sector

A statement in Ghana's 2014 National Plan of Action on Illegal, Unreported and Unregulated Fishing (NPOA-IUU) supports this intention:

*“The tuna industry is the only sector of the Ghanaian fishing industry where foreigners are permitted to go into joint-venture with Ghanaian nationals, the latter who must retain at least 50% of the interest in the business”.*⁴⁰

The Fisheries Ministry's guidelines for acquiring a fishing licence in Ghana likewise confirm that:

*“Shareholding should be 100% Ghanaian for Local Industrial vessels and at least 50% Ghanaian for tuna vessel operations [...] Tuna fishing is the only area where Fisheries Law allows foreign participation, i.e. Joint Venture [Section 47(1b) of Fisheries Act 2002, Act 625]”*⁴¹

These provisions purport to ensure that Ghanaian nationals retain control over the exploitation of fisheries resources by Ghanaian vessels and, by extension, within Ghana's waters through the allocation of fishing licences. Presumably, the rationale is to secure the financial benefits of fishing activities for Ghanaian nationals and to ensure these benefits contribute to Ghana's socio-economic development rather than being sent overseas. This is consistent with the fact that only local industrial trawlers are granted licences to fish in Ghanaian waters.

Such “nationality criteria” may also be seen as a means by which Ghana can fulfil its flag state obligations under the UN Convention on the Law of the Sea (UNCLOS), to ensure a “genuine link” between its territory and vessels applying for registration⁴². The aim of this UNCLOS provision is to prevent the use of flags of convenience (where the nationality of the owner is different from the flag of the vessel) to evade fisheries conservation and management measures or to benefit from preferential conditions.

This UNCLOS provision has been a major focus of the European Union's dialogue process with third (non-EU) countries within the framework of its 2010 Regulation to end IUU fishing⁴³. Failure by countries to ensure this “genuine link” for fishing vessels registered to their flag has been cited repeatedly in the EU's decisions to warn (yellow card) and sanction (red card) third countries for failing to fulfil their international obligations to combat illegal fishing⁴⁴.

In spite of the legal provisions prohibiting foreign interests in Ghana's trawl sector, there is a high degree of Chinese involvement in practice.

Extent of Chinese involvement in the trawl sector

Data on the extent of Chinese interests in Ghana's trawl sector are not readily available. While the Ministry of Fisheries and Aquaculture Development (MoFAD) publishes a list of industrial trawlers licensed to fish in the Ghanaian EEZ⁴⁵, the list does not include information on beneficial ownership or foreign interests, only the name of the licence holder in Ghana. To note that, at the time of writing (August 2018), the licence list in Ghana has not been updated and is blank for the current licence period.

The majority of industrial trawl vessels operating in Ghana now carry unique vessel identifiers (UVIs) in the form of an International Maritime Organization (IMO) number⁴⁶. This is a welcome development in terms of vessel monitoring and transparency, and means that details of trawl vessels, such as previous flag, shipyard, tonnage and owner, should be included in the IHS Maritime Sea-web database⁴⁷.

However, data held in the Sea-web database shed very little light on beneficial ownership or foreign interests in industrial trawl vessels registered in Ghana. For most vessels, the database only includes the name of the Ghanaian registered owner (licence holder) and accompanying PO box number for the company.

To establish a picture of Chinese interests in the industrial trawl sector, it is necessary to supplement “official” data with other sources. Some Chinese companies publish details of their operations on their websites – see example in **Case Study #1**.

As regards the extent of Chinese involvement in the sector, a representative of the Chinese government, in an article published in 2012, sheds some light on the issue⁴⁸:

“At present, there are about 150 large and medium-sized fishing vessels operating in the Ghanaian sea. Among them, nearly 100 fishing vessels from China are owned by more than 10 companies respectively, employing more than 600 people. Chinese-funded vessels cover about 95% of the market share in [Ghana's] bottom trawl industry.”

The article notes how intensified management by the Ghanaian government, including enforcement of a ban on pair trawling and implementation of other measures, has led to a decline in profitability of Chinese operations in Ghana:

“In recent years, due to over-investment in the fisheries sector and over-exploitation [...] the output of a single vessel has greatly decreased compared to the same period of last year. Since 2008, the Ghanaian government has stepped up efforts to protect marine resources and the environment, and has banned the operation of pair-trawling fishing vessels so that our enterprises are facing more and more constraints on operations in Ghana”.

This is confirmed by interview data gathered for a 2017 paper on Chinese interests in Ghana’s trawl sector, published in Marine Policy. The authors, Penney *et al.* (2017), found that: “multiple Chinese [distant water fishing] companies in joint-arrangement trawling partnerships dominate [Ghana’s] industrial sector”⁴⁹, a phenomenon dating back 25-30 years according to many of those interviewed. One interviewee notes that:

“All of the licence holders are Ghanaian and the Chinese own the vessel...It is difficult to say but it is probably around 90%, maybe 95%, [of the industrial vessels] have Chinese involvement”

(Ghanaian licence holder, Tema, #2).

According to another source, the Chinese government provides support to the majority (if not all) trawlers currently operating in Ghana, in the form of fuel subsidies, loans and other funding for their operations⁵⁰.

These findings are consistent with data on the nationality of captains of the industrial trawl fleet. In 2015, Chinese nationals captained over 95% of trawlers with active licences to fish in Ghanaian waters (102 of 106 vessels)⁵¹, an observation strongly indicative of Chinese involvement in the vessel concerned.

As Pauly *et al.* (2014) argue in their study of the size of China’s distant water fleet⁵²:

“There are likely few (if any) instances in which a fishing boat that is not owned, directly or indirectly, by a Chinese firm (irrespective of the flag flown) is operated by Chinese officers and crew.”

CASE STUDY #1:

Fishing operations of Chinese company Rongcheng Marine Fishery Co. Ltd in Ghana

Rongcheng Marine Fishery Co. Ltd (RCMF) is a Chinese company with a registered office in Roncheng, Shandong Province. It is a subsidiary of Shandong Bodelong Group Co. Ltd, along with Rongcheng Guangrun Aquatic Foods Co. Ltd, among othersⁱ. RCMF has CN¥ 400 million in fixed assets, including four squid fishing vessels and 24 trawl vessels. The fleet engages in fishing operations in the Pacific, Indian Ocean, Southwest Atlantic and West Africa throughout the year, with an annual catch of more than 30,000 tonnes. Fisheries products are sold directly to Europe and Asia, or are processed and sold back to Chinaⁱⁱ.

RCMF launched its ocean fishery project in Ghana in 2013 and by 2015 had become one of the largest Chinese offshore fishing companies in the country. It has more than 20 large-scale ocean going trawlers in Ghana, which account for the majority, (if not all) of its trawl fleetⁱⁱⁱ. The company plays an active role in inspections, repairs and maintenance of this fleet, both through an in-country department, and visits from off site inspectors. In August 2017, a team of inspectors visited Ghana from China to carry out an inspection of offshore fishing vessels for the company^{iv}.

Based on images on the websites of RCMF and its affiliates (see, for example, **Figures A-C** below) and other sources (see **Table 5** in main text), it is possible to infer that the company’s fleet in Ghana comprises, amongst others, the following individual vessels (Ghanaian licence holder is indicated in brackets):

- LU RONG YUAN YU 906 (DANAC FISHERIES LTD)
- LU RONG YUAN YU 907 (DANAC FISHERIES LTD)
- LU RONG YUAN YU 908 (MOVELLE CO. LTD)
- LU RONG YUAN YU 910 (REONQ FISHERIES CO. LTD)
- LU RONG YUAN YU 916 (REONQ FISHERIES CO. LTD)
- LU RONG YUAN YU 917 (MYSTICAL GRACE CO. LTD)
- LU RONG YUAN YU 918 (GAINSVILLE VENTURES LTD)
- LU RONG YUAN YU 919 (CONNADO ENT. LTD)
- LU RONG YUAN YU 920 (NYAME DOME COLDSTORE LTD)
- LU RONG YUAN YU 930 (SANTA FISHERIES GHANA LTD)
- LU RONG YUAN YU 966 (SANTA FISHERIES GHANA LTD)
- LU RONG YUAN YU 967 (SANTA FISHERIES GHANA LTD)
- LU RONG YUAN YU 968 (GAZ IMPEX GH. LTD)
- LU RONG YUAN YU 969 (GAZ IMPEX GH. LTD)
- LU RONG YUAN YU 970 (SANTA FISHERIES GHANA LTD)

Figure A: Image of vessel LU RONG YUAN YU 920 on the website of Rongcheng Guangrun Aquatic Foods Co. Ltd



© Rongcheng Guangrun Aquatic Foods Co., Ltd

Figure C: Image of vessels LU RONG YUAN YU 930 and 970 on website of Rongcheng Marine Fishery Co. Ltd



© Rongcheng Marine Fishery Co. Ltd

Figure B: Image of vessels LU RONG YUAN YU 966, 967 and 968 on the website of Rongcheng Guangrun Aquatic Foods Co. Ltd



© Rongcheng Guangrun Aquatic Foods Co. Ltd

It is worth noting that in the IHS Sea-web database, RCMF is listed as the registered owner for only six vessels, and for none of the vessels listed above. The entries in IHS Sea-web for the vessels listed above name only the Ghanaian registered owner (licence holder), with no mention of linkages to RCMF or its affiliates.

In some cases it appears that the vessel history listed in IHS Sea-web may be inaccurate or incomplete. For example, LU RONG YUAN YU 906 is listed as flagged to Ghana and owned by DANAC FISHERIES LTD since its construction in 2013 (**Figure D**). However, according to the 2013-2014 list of vessels licensed to fish in Côte D'Ivoire, the vessel was at this time flagged to China and operated by RONGCHENG OCEAN FISHERY Co, Ltd, SPA 04 BP 1035 ABIDJAN 04'. This could explain why the vessel appears in China's list of vessels authorized to export fisheries products to the European Union (see **Table 5** in main text), rather than in the list for Ghana. The vessel was included in China's list of authorized establishments under EU health legislation in 2013.

Figure D: Operating history for LU RONG YUAN YU 906 in IHS Sea-web

Date	Name	Flag	Group Owner	Operator	Manager	Registered Owner	DOC
2015-09							Unknown
2013-01			Unknown				
2013-00	LU RONG YUAN YU 906	Ghana		Danac Fisheries Ltd	Danac Fisheries Ltd	Danac Fisheries Ltd	

Examples of fishery products exported from Ghana to the EU and Asia are shown in **Figures E and F** below. The products are available for purchase on the online marketplace, Alibaba.com, with a dedicated page for the Spanish market^{vi}. A key export commodity from Ghana is frozen octopus.

Figure E: Product described as “African frozen trawling octopus” frozen for export



© Shandong Bodelong Group Co. Ltd on Alibaba.com

- ⁱ Alibaba, 'Shandong Bodelong Group Co. Ltd., Company Profile', accessed 9.8.18. https://bodelong.en.alibaba.com/?spm=a2700.md_es_ES.shnsopsi9.1.5dde16c1zvr4sG and Rongcheng Marine Fishery Co., Ltd., 'Company Profile', accessed 9.8.18. http://www.rchaiyang.com/columns_detail/columnsId=59&FrontColumns_navigation01-1385532162422FirstColumnId=59.html
- ⁱⁱ Rongcheng Marine Fishery Co., Ltd., 'Company Profile', accessed 9.8.18. http://www.rchaiyang.com/columns_detail/columnsId=59&FrontColumns_navigation01-1385532162422FirstColumnId=59.html

Figure F: Box of frozen octopus packaged for export from the Ghanaian company SANTA FISHERIES GHANA LTD



© Shandong Bodelong Group Co. Ltd on Alibaba.com

- ⁱⁱⁱ Rongcheng Marine Fishery Co., Ltd. (25.4.15), 'Company leaders go to Ghana for an offshore fishery project', accessed 9.8.18. http://www.rchaiyang.com/news_detail/newsId=30.html
- ^{iv} Rongcheng Marine Fishery Co., Ltd. (18.9.17), 'Ghana Ocean Fishing Boat successfully passed the 2017 ship inspection', accessed 9.8.18. http://www.rchaiyang.com/news_detail/newsId=70.html
- ^v Directorate of Aquaculture and Fisheries, Côte D'Ivoire, pers. comm. to EJF.
- ^{vi} Alibaba (Spanish), 'Africano congelado arrastre pulpo tripa fuera', accessed 9.8.18. <https://spanish.alibaba.com/product-detail/african-frozen-trawling-octopus-gut-off-60743731891.html?spm=a2700.7787047.0.0.K4Ez2X>

Types of arrangements between local and Chinese interests

According to available information, Chinese companies commonly operate through Ghanaian “front” companies to import their vessels into the Ghanaian fleet register and obtain a licence to fish. On paper, interests are entirely Ghanaian, including the Board of Directors of the registered corporate owner⁵³.

The arrangements established may differ between companies and vessels, but in all cases are characterised by their opacity, shielding the foreign owner from external scrutiny. They may include hire purchase agreements, whereby the licence holder pays part of the purchase price of the vessel upfront, and the remaining amount in instalments over a designated period of time⁵⁴.

The interview with a Chinese government representative in the 2012 article referenced above offers some insights into how these arrangements are set up in practice⁵⁵, albeit this appears to be a mis-reading of the provisions on beneficial ownership set out in the 2002 Fisheries Act⁵⁶:

“According to the Ghana Fisheries Act 2002, foreign investment is forbidden to enter the field of fishing by sole proprietorship. Only local fishery companies are eligible to apply for a fishing licence from Ghana's Ministry of Food and Agriculture. Therefore, foreign companies can only engage in fishing operations in cooperation with local enterprises. Chinese-funded enterprises usually sell the vessels to local companies, for lease management or agency management.”

An example of how arrangements have been set up in recent years is provided in **Case Study #2**. An example of a historical arrangement dating from the 1990s is provided in **Case Study #3**.

CASE STUDY #2:

Corporate structures established by Shandong Zhonglu Oceanic Fisheries Co. Ltd, a Chinese company with operations in Ghana

In its Annual Report for 2014, Chinese company, Shandong Zhonglu Oceanic Fisheries Co. Ltd, registered in Shandong Province, describes how it exerts control over a Special Purpose Vehicle (SPV) in Ghana via an operational lease.

The SPV concerned –Ghanaian company Yaw Addo Fisheries Company Limited –in turn, holds the licences for two trawlers currently operating in Ghana, ZHONG LU YU 1003 and ZHONG LU YU 1004ⁱ. According to the Report, the Chinese company retains control over the SPV and owns 100% of the shareholdingⁱⁱ.

The website of Shandong Zhonglu Oceanic Fisheries Co. Ltd states the followingⁱⁱⁱ:

“YAW ADDO FISHERIES CO. LTD. was established in 2007 in the city of Tema in the Republic of Ghana. It mainly operates the medium-sized trawlers “Zhonglu Yu 1003” and the “Zhonglu Yu 1004”. The main catch is cuttlefish, octopus, etc. The products are sold to European and local markets.”

Both vessels are included on the list of Ghanaian establishments authorised to export fishery products to the European Union^{iv}.

ⁱ Republic of Ghana, MoFAD, ‘Vessel Registry’, accessed 23.3.18.

<https://www.mofad.gov.gh/publications/statistics-and-reports/vessel-registry/>

ⁱⁱ Shandong Zhonglu Oceanic Fisheries Co. Ltd (2015). *Annual Report for the Year of 2014*, accessed 2.1.18.

ⁱⁱⁱ Shandong Zhonglu Oceanic Fisheries Co. Ltd, ‘Yaw Addo Fisheries Co., Ltd.’, accessed 9.8.18. <http://www.zofco.cn/yawaddofisheriescoltd>

^{iv} https://webgate.ec.europa.eu/sanco/traces/output/GH/FFP_GH_en.pdf

CASE STUDY #3:

Agreement between Chinese company Zhongha Fisheries Limited and Ghanaian companies Komal Ltd and Obourwe and Company Ltd for the use of trawl vessels

On 1 January 1995, Chinese company, Zhongha Fisheries Limited, entered into two agreements with Ghanaian companies, Komal Ltd and Obourwe and Company Ltdⁱ, for the release of the vessels Zhonglu 701, 702, 703, 704, 705, 706 and 708 to Komal Ltd and Nduman Ltdⁱ (another Ghanaian company) for use in their fishery operations.

Under the agreement, Zhongha Fisheries was to provide the Ghanaian companies with fishing technology consultancy and oceanic fishing management services, among other services. The agreement further stated that the vessels would be in full possession and at the absolute disposal of the local companies for a three-year period for the purpose of oceanic fishing. In return, the local companies would pay a yearly fee of US\$ 183,000 to the Chinese.

An investigation by Ghana’s Serious Fraud Office revealed that, in reality the local companies were relegated to the background by the Chinese company, which maintained total control over the vessels. The benefit derived by the local partners in some cases was limited to several boxes of fish, with the majority of the catch destined for export.

This case was documented in the Ghanaian Chronicle on 8 July 2002.

ⁱ This article suggests that the companies Nduman Ltd and Obourwe and Company Ltd are linked to the same parent company/owner. Both companies continue to hold licences for industrial trawlers fishing in Ghana. In the active licence list as at end of March 2018, Nduman Ltd holds the licence for the trawler LONG XIANG 609. Obourwe and Company Ltd currently holds licences for GUO JIN 601 and 602, and LONG XIANG 601. In recent years, Obourwe and Company Ltd has also held licences for LONG XIANG 602 and 606.

The practice of Ghanaian nationals “fronting” for Chinese companies wishing to import their vessels into the Ghanaian fleet registry is documented in various studies and media reports⁵⁷. In 2004, Atta-Mills *et al.* observed that:

“Foreign vessels intrude into Ghana’s EEZ and some foreign fishing companies are fronted by Ghanaian nationals in trawling operations in the already overfished demersal sector.”⁵⁸

This practice has given rise to concerns over the exploitation of Ghanaian nationals in unequal agreements concluded with Chinese investors. In early 2017, speaking before the Parliamentary Appointments Committee, the Minister for Fisheries and Aquaculture Development pledged to ensure that Ghanaians who front for the Chinese to register their trawlers are treated fairly, noting that locals enter into “shoddy, unprofessional” agreements “because they lack employment”⁵⁹.

The unequal balance of power in such agreements is documented in the study by Penney *et al.* (2017). The authors note that, in these arrangements, the Ghanaian partner holds the licence, while the Chinese partner retains (beneficial) ownership and control of the vessel⁶⁰. Citing one licence holder interviewed:

“The Chinese supply the vessel, the licence is our (Ghanaians) stake, usually 51%, but actually its all being controlled by Chinese.”

(Ghanaian licence holder, Tema #1).

In practice, local partners may exert limited control over the vessel’s activities. In some cases, logbooks and catch certificates from Ghanaian-flagged trawl vessels have been found to include catch data written in the Chinese language⁶¹. Under other agreements, the local partner is required to purchase the proportion of the catch that the foreign partner does not wish to export⁶². These types of arrangement are strongly indicative of an imbalance of power in arrangements between local and Chinese partners.

It is important to note that there are currently no sanctions set out in the 2002 Fisheries Act for acting contrary to the nationality provisions in the legislation, an area that will need to be addressed in the on-going reform of the national fisheries law framework⁶³. Piercing the corporate veil (i.e. looking behind these arrangements) is also extremely difficult in the absence of suspicions of an economic crime such as fraud⁶⁴. For these reasons, the conduct of investigations into beneficial ownership is especially difficult within the confines of the current legal framework.

Destination of catches of industrial trawl vessels

According to a report prepared by the EU to inform implementation of the 2010 IUU Regulation, the main part of the catches from Ghana’s industrial trawl fleet are destined for China, while cephalopods are exported to the EU either with or without processing⁶⁵.

During the period 2010-2016, the EU imported around 2,600 tonnes of cephalopods from Ghana annually, primarily cuttlefish and octopus⁶⁶. The leading EU importers of cuttlefish and octopus from Ghana were Spain, Italy and Portugal, with average annual imports of 1,187 tonnes, 641 tonnes and 518 tonnes, respectively. Currently, 14 industrial trawlers flagged to Ghana are authorised to export catches to the EU market, although not all are on the most recent active licence list (**Table 4**)⁶⁷. Two of these vessels, Zhong Lu Yu 1003 and 1004, are believed to be beneficially owned by a Chinese company, in potential contravention of the Fisheries Act 2002 (see **Case Study #2**).

In addition, China’s list of authorised establishments for exports of fishery products to the EU appears to include a number of trawlers operating under the Ghanaian flag and owned by Rongcheng Marine Fishery Co. Ltd (**Table 5**). Indeed, the presence of Chinese company Rongcheng Marine Fishery Co. Ltd in Ghana is described in more detail above in **Case Study #1**. The company describes itself as one of the largest Chinese offshore fishing companies in Ghana. Further investigation is warranted to ensure that the presence of Ghanaian-flagged vessels on the Chinese list of authorised establishments does not reflect fraud or mis-reporting of the origin of fisheries product exports to the EU.

Table 4: Ghanaian-flagged trawlers authorised to export catches to the EU

Approval number	Name of vessel	Date of request
GS/SF/E096	Adum	27/08/2012
GS/SF/E097	Asona	27/08/2012
GS/SF/E093	Awoyaa V (Big Catch Fisheries)	
GS/SF/E021	LONG XIAN 601	07/11/2016
GS/SF/E038	LONG XIAN 602	07/11/2016
GS/SF/E082	LONG XIAN 603	15/02/2018
GS/SF/E024	LONG XIAN 606	07/11/2016
GS/SF/E012	LONG XIAN 607	07/11/2016
GS/SF/E048	LONG XIAN 608	07/11/2016
GS/SF/E018	LONG XIAN 609	07/11/2016
GS/SF/E101	Sapele	
GS/SF/E102	Tormabum	
GS/SF/E115	Zhong Lu Yu 1003	01/08/2008
GS/SF/E116	Zhong Lu Yu 1004	01/08/2008

Source: European Commission (12.4.18), ‘Non-EU Countries Authorised Establishments, Ghana, Fishery Products’, accessed 9.8.18.
https://webgate.ec.europa.eu/sanco/traces/output/GH/FFP_GH_en.pdf

Table 5: Suspected inclusion of industrial trawl vessels flagged to Ghana in the Chinese list of establishments authorised to export fisheries products to the EU

EU list of authorised establishments for China ¹				Ghana licence list for industrial trawlers ²			
Name	City / Region	Activities	Date of request	Name in licence list	Licence holder	IMO number	Licence
LURONGYUANYU 917 (RongCheng Marine Fisheries CO., LTD) ³	Rongchang / Shandong	ZV	07/12/17	LU RONG YUAN YU 917	MYSTICAL GRACE CO. LTD.	8673906	Current (June 2018)
LURONGYUANYU 916 (RongCheng Marine Fisheries CO., LTD)	Rongchang / Shandong	ZV	07/12/17	LU RONG YUAN YU 916	REONQ FISHERIES CO. LTD.	8673891	Current (June 2018)
LURONGYUANYU 910 (RongCheng Marine Fisheries CO., LTD)	Rongchang / Shandong	ZV	07/12/17	LU RONG YUAN YU 910	REONQ FISHERIES CO. LTD.	8673889	Current (June 2018)
LURONGYUANYU 918 (RongCheng Marine Fisheries CO., LTD)	Rongchang / Shandong	ZV	07/12/17	LU RONG YUAN YU 918	GAINSVILLE VENTURES LTD.	8673918	Current (June 2018)
LURONGYUANYU 919 (RongCheng Marine Fisheries CO., LTD)	Rongchang / Shandong	ZV	07/12/17	LU RONG YUAN YU 919	CONNADO ENT. LTD.	8673920	Current (June 2018)
LURONGYUANYU 920 (RongCheng Marine Fisheries CO., LTD)	Rongchang / Shandong	ZV	07/12/17	LU RONG YUAN YU 920	NYAME DOME COLDSTORE LTD.	8673932	Current (June 2018)
Lu Rong Yuan Yu 906 (RongCheng Marine Fisheries Co., Ltd)	Rongchang / Shandong	ZV	29/08/13	LU RONG YUAN YU 906 ⁴	DANAC FISHERIES LTD.	8683640	Current (June 2018)
Lu Rong Yuan Yu 907 (RongCheng Marine Fisheries Co., Ltd)	Rongchang / Shandong	ZV	29/08/13	LU RONG YUAN YU 907 ⁴	DANAC FISHERIES LTD.	8683652	Current (June 2018)
Lu Rong Yuan Yu 908 (RongCheng Marine Fisheries Co., Ltd)	Rongchang / Shandong	ZV	29/08/13	LU RONG YUAN YU 908 ⁴	MOVELE CO. LTD.	8697994	Up to end 2017

Abbreviations: ZV - freezing vessel

Notes:

¹ European Commission (4.4.18), 'Non-EU Countries Authorised Establishments, China, Fishery Products', accessed 9.8.18. https://webgate.ec.europa.eu/sanco/traces/output/CN/FFP_CN_en.pdf

² Republic of Ghana, MoFAD, 'Vessel Registry', <https://www.mofad.gov.gh/publications/statistics-and-reports/vessel-registry/>, accessed 15.6.18.

³ According to media reports, in May 2014, an industrial vessel belonging to RongCheng Marine Fishing Company carried out an illegal trans-shipment of fish to a canoe in Ghanaian waters. Over 2,000 slabs of frozen fish were found in the canoe on inspection. The reports stated that the fishing company was based in Tema: Anon. (18.5.14), 'Marine Police arrests 10 fishermen for transshipment of fish', *Ghana News Agency*, accessed 9.8.18.

<https://www.ghanaweb.com/GhanaHomePage/crime/Marine-Police-arrests-10-fishermen-for-transshipment-of-fish-309765> and Aklorbortu, M. and Tetteh, A. (17.5.14), 'Fishing crew in police grip over illegal fish', *Graphic Online*, accessed 9.8.18.

<https://www.graphic.com.gh/news/general-news/fishing-crew-in-police-grip-over-illegal-fish.html>. See also **Case Study #1**.

⁴ LU RONG YUAN YU 906, 907 and 908 all appeared on the Ghanaian licence list for the first time in 2015. According to the historical licence list for Côte D'Ivoire, in 2013 and 2014, the three vessels were fishing in Ivorian waters under the Chinese flag. The owner of the vessels was listed as RONGCHENG OCEAN FISHERY Co, Ltd.

7. Implications and the need for greater transparency in Ghana's trawl sector

The opaque nature of ownership arrangements in Ghana's industrial trawl sector has serious implications for the sustainable management of fisheries resources in Ghana's waters and, indeed, in the wider region.

At the fore, is the inability to determine the true beneficiaries of profits flowing from illicit activities in Ghana's trawl sector, and to hold those individuals to account. In addition, a lack of transparency surrounding Chinese joint ventures has been associated elsewhere with other non-fisheries related breaches, including mis-declaration of gross tonnage and tax evasion.

Both issues have been observed in Ghana's trawl sector and are discussed in turn below.

Concealment of beneficiaries of illegal fishing activities

Due to the lack of transparency around the ownership of trawl vessels in Ghana, it is very difficult to determine, based on official data and public sources, the level of Chinese involvement in (and control over) the operations of individual vessels. Arrangements between local companies and foreign partners are invariably concealed, precluding external scrutiny over the destination of benefit flows from illegal (and indeed legal) activities. In recent years, Ghana's trawl sector has been plagued by illegal and destructive fishing activities, including pair trawling, use of prohibited fishing gears, and fishing in the Inshore Exclusion Zone (IEZ) reserved for artisanal fishers (see **Appendix I** for examples). Violations have also been reported in neighbouring countries, including cases of bribery and non-compliance with legislation on safety at sea⁶⁸.

EJF investigations have documented several cases of alleged fisheries violations by industrial trawlers in Ghana and neighbouring countries. Examples are provided in **Appendix II** and in **Case Study #4**.

CASE STUDY #4

Alleged fisheries violations identified by EJF through remote monitoring of vessel activities

Using the software ExactEarth, EJF monitors fishing vessel activities in regions with high levels of IUU fishing, such as West Africa. ExactEarth is a satellite-based tracking system that allows for the observation of vessels equipped with an Automatic Identification System (AIS). In November 2017, EJF observed the industrial trawl vessel, LONG XIANG 606, operating at speeds consistent with fishing activityⁱ, apparently in areas prohibited for industrial trawl vessels.

In Côte D'Ivoire, Ghanaian-flagged industrial trawlers are not permitted to operate within 7 nautical miles of the shorelineⁱⁱ. On 14 and 19 November 2017, the vessel was observed operating at speeds of around 3.7 knots, 3.4 nautical miles from the shoreline (see **Figure A** for an example).

In Ghana, the Inshore Exclusion Zone (IEZ) reserved for artisanal fishers is set at 6 nautical miles, or the 30 metre depth limit, whichever is further from the shoreline. On several occasions in November 2017, LONG XIANG 606 was observed on AIS operating at speeds of between 3 and 4 knots, less than 4 nautical miles from the Ghanaian shoreline (see example in **Figure B**).

This information was communicated by EJF to the Monitoring, Control and Surveillance (MCS) Division of Ghana's Fisheries Commission^{iv}, resulting in an investigation and warning being issued to the vessel's operator^v.

Figure A: LONG XIANG 606 from 19–20 November 2017



Figure B: LONG XIANG 606 from 15–16 November 2017



ⁱ De Souza, E., Boerder, K., Matwin, S. and Worm, B. (2016). Improving Fishing Pattern Detection from Satellite AIS Using Data Mining and Machine Learning. *PLoS ONE* 11(9): e0163760. <https://doi.org/10.1371/journal.pone.0163760>

ⁱⁱ Directorate of Aquaculture and Fisheries, Côte D'Ivoire, pers. comm. to EJF.

ⁱⁱⁱ Schedule referred to in Section 81(1) of the Fisheries Act 2002

^{iv} EJF Vessel Activity Notification dated 27 November 2017

^v MCS Division of the Fisheries Commission, pers. comm. to EJF, May 2018.

However, one activity of the trawl fleet, known locally as “saiko”, stands out today as presenting a very real and urgent threat to national food security, and the livelihoods of coastal communities. This is explained in more detail in **Case Study #5**.

In view of the scale of the saiko trade and declining profitability of Ghana’s industrial trawl sector, it is likely that many vessels have engaged in the practice in recent years to remain competitive. As the control of fishing activities invariably lies with the Chinese partner, and with the majority of vessels captained by Chinese nationals, Chinese interests are likely to be central to decision-making and oversight in the saiko business.

There is limited information on detected cases of saiko fishing, including the details of vessels involved and any sanctions imposed for infringements. This may be due to the lack of a requirement for the Ministry to publish details of IUU fishing infringements, while most cases are settled out of court (see **Appendix I**), which limits the availability of data in the public domain. On the other hand, it may reflect a relative absence of prosecutions for saiko activities in recent years.

One case linking Chinese interests to the saiko trade was reported in the media in May 2014. The case allegedly involved a trans-shipment from an industrial vessel belonging to Rongcheng Marine Fishing Company (see **Case Study #1**) to a canoe in Ghanaian waters. According to one report, over 2,000 slabs of frozen fish were found in the canoe on inspection. The reports stated that the fishing company, Rongcheng Marine Fishing Company, was based in Tema⁶⁹.

According to data from the Ministry up to end of 2015, a number of trawlers have been sanctioned for illegally adapting their gear to harvest juvenile fish, but only one case reported in the official data specifically mentions trans-shipment (**Appendix I**). This case concerned an unauthorised trans-shipment by the trawler MENG XIN 5 to a canoe in December 2013, and the illegal adaptation of fishing gear (use of chafers with undersized mesh on the top side of the trawl net)⁷⁰. A fine of GHS 347,690 was imposed by the settlement committee, of which just GHS 100,000 (US\$ 42,507 approx.⁷¹) was paid – significantly less than the minimum fine of US\$ 100,000 provided in the 2002 Fisheries Act. The owner of the vessel is not reported in the data provided by the Fisheries Commission.

It is worth noting that, while the 2002 Fisheries Act provides for the settlement of offences out of court (termed “compounding of offences”), it requires that offenders pay a sum of money not less than the minimum penalty specified for the offence, plus the fair market value of the fish caught illegally⁷².

As of December 2014, when the 2014 Fisheries (Amendment) Act came into force, certain IUU fishing offences have attracted a minimum fine of US\$ 1 million. This includes the use of prohibited fishing gear, the taking on board and trans-shipment of undersized fish, and fishing in a closed area/ beyond a closed depth.

Yet, in 2015, settlement payments of GHS 200,000 were accepted in two separate cases, both of which involved the taking on board of undersized fish by industrial trawlers (LU RONG YUAN YU 959 and JIN HAI 608)⁷³. At around US\$ 50,000, the fines accepted were well below the minimum of US\$ 1 million set out in the 2014 Fisheries (Amendment) Act. These payments are at odds with the requirement that out of court settlements be no less than the minimum set out in the legislation.

A criticism levied at the minimum fines introduced through the 2014 Fisheries (Amendment) Act, is that they far exceed the financial means of local operators, particularly in the trawl sector. This could lead to reluctance on the part of public officials to make arrests, as sanctions could effectively put an operator out of business.

According to international law, sanctions for IUU fishing should be adequate in severity to discourage violations of fisheries rules, and should deprive offenders of the benefits accruing from such activities⁷⁴. When considering the proportionality of sanctions for fisheries offences, it is therefore crucial to consider the means available to the entity that is effectively controlling a vessel and profiting from illegal activities. In the case of Ghana’s trawl sector, and to ensure sanctions have the required deterrent effect, it is essential that the beneficial owner –often a much larger entity and with a controlling interest in the vessel –can be identified and held to account for infringements of fisheries rules. See **Case Study #6** for an example.

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Illegal and unreported activities of Ghana's industrial trawl fleet – the case of “saiko”



Saiko canoes at Elmina port. © EJF

What is saiko?

“Saiko” is a term used in Ghana to refer to the trans-shipment of frozen blocks of fish from industrial trawlers to specially adapted canoes out at sea. Saiko fishing arose initially as an informal trading system at sea, whereby trawlers would exchange their unwanted by-catch for goods supplied by canoe fishermen. Over time, as the trade has become increasingly lucrative, and as profits from legal fishing activities have declined, saiko has increased both in terms of scale and organisation.

In recent years, industrial trawlers with licences to fish for bottom dwelling species, such as snappers, groupers and cephalopods, have illegally adapted their towing gear to target fish specifically for the saiko trade. This includes small pelagics, such as sardinella and chub mackerel, the key target species of the artisanal fleet and in high demand for local consumption.

The arrangements are highly organised, with contracts agreed between saiko canoe owners and trawler operators, and pre-payment for saiko fish made, in some cases before the trawler has left port. Saiko canoe owners are organised in a formal collective, the Bycatch Collectors Association, and pay official taxes to the state.

The transfer of catches from industrial vessels to canoes at sea is illegal under Ghanaian law, attracting a fine of between US\$ 100,000 and US\$ 2 million. The minimum fine increases to US\$ 1 million where catches involve juvenile fish or the use of prohibited fishing gears.

What is the scale of the trade?

Despite being prohibited, a low risk of arrest and sanction has meant that saiko has been on the increase in recent years. In 2017, 62 saiko canoes were recorded operating out of the port of Elmina, more than double the number of canoes counted in 2015, with an additional 18 or so canoes operating out of Apam and Axim. An average saiko canoe can carry around 26 tonnes of fish in a single trip, equating to around 400 artisanal fishing trips. Many saiko canoes operate multiple times per week.

In 2017, an estimated 100,000 tonnes of fish were landed through saiko, 80,000 tonnes of which were landed in the Central Region port of Elmina alone. In 2014, trawlers reported “official” catches of 18,500 tonnes, suggesting a reporting rate of just 16% of total catches to the government. Reported catches were on average 175 tonnes per vessel, far lower than expected for vessels of the size and power in Ghana’s fleet registry.

The value of fish traded through saiko in 2017 is estimated at between US\$ 26-41 million (value of fish sold at sea), with an estimated landed (pre-processing) value of between US\$ 34-65 million. As saiko catches are not reported, this represents a significant loss of state revenue in terms of taxes on landings and fishing licence fees.

What is the impact of saiko?

Saiko activities are of particular concern due to their impact on stocks of small pelagics, the key target fishery of the canoe fleet. According to recent studies, frozen slabs of saiko fish contain a significant proportion of small pelagics. In 2012, annual landings of sardinella by the canoe fishery dropped to just over 17,000 metric tons, from a high of 120,000 metric tons 12 years earlier. Saiko catches often involve juvenile fish, further eroding the reproductive potential of the resource.

Saiko has devastating implications for artisanal fishing communities. Industrial trawlers compete directly with artisanal fishers for depleted small pelagic stocks. Having caught the fish meant for artisanal fishers, saiko operators sell these back to the same fishing communities for profit. Saiko also floods the market with cheap, poor quality fish, pushing down prices and incomes of artisanal fishers. The past 10-15 years have seen the average annual income per canoe drop by as much as 40%, compromising the socio-economic development of Ghana's coastal regions.

The impacts of saiko may be felt beyond Ghana's waters. Saiko trans-shipments include catches taken by Ghanaian-flagged vessels authorised to fish in Ivorian waters. In 2017, 39 trawlers flagged to Ghana carried licences to fish in Ivorian waters. Ghanaian-flagged trawlers are not permitted to fish below the limit of 7 nautical miles from the Ivorian shoreline; however, have been observed carrying out fishing activities below this limit (see **Case Study #4** and **Appendix II**).

As saiko catches are not recorded in national catch statistics, fisheries managers are unable to calculate the overall pressure on Ghana's fish stocks, making effective fisheries management practically impossible. This is inconsistent with Ghana's coastal state obligations under UNCLOS, specifically to ensure, through conservation and management measures based on the best available science, that living resources in the Ghanaian EEZ are not endangered by over-exploitation.



Small pelagics in slabs of frozen fish landed by a saiko canoe. © Hen Mpoano

In 2017, Ghana ratified the UN Fish Stocks Agreement, introducing additional flag state obligations with regard to straddling and highly migratory fish stocks. These include the implementation of requirements to ensure recording and timely reporting of catches of target and non-target species, and measures to verify those catches.

For further information:

- EJF and Hen Mpoano (2018). *The problem with saiko: An ecological and human catastrophe*. Issue Brief. <https://ejfoundation.org/reports/the-problem-with-saiko>
- Käller, R. (2017). *Reeling in on by-catch: The saiko story. How saiko reproduces access to resources and maintains its position in Ghanaian fisheries*. MSc Thesis. University of Amsterdam.
- Penney, R., Wilson, G. and Rodwell, L. (2017). Managing sino-ghanaian fishery relations: A political ecology approach. *Marine Policy* 79, 46-53. <https://www.sciencedirect.com/science/article/pii/S0308597X16308132>
- Hen Mpoano (2015). *Addressing illegal fishing through Education and Sensitization for Sustainable Fisheries Management in Ghana: Rapid Assessment of IUU fishing in three coastal communities in the Central and Western Region of Ghana*. Hen Mpoano and BUSAC. 38pp. http://henmpoano.org/wp-content/uploads/2016/06/Rapid-Assessment-Report-on-IUU-Saiko-Fishing-in-Axim-Apam-and-Elmina_Use_.pdf



Frozen blocks of fish being prepared for trans-shipment from a trawler to a saiko canoe. Footage courtesy of Hen Mpoano.

CASE STUDY #6

Revenue of local and foreign partners in industrial trawl ventures

According to the licence list for industrial trawl vessels fishing in Ghana, the Ghanaian company CONNADO ENTERPRISES LIMITED holds the fishing licence for the vessel LU RONG YUAN YU 919, among others. As discussed in **Case Study #1** and presented in **Table 5** in the main text, this vessel is likely (beneficially) owned by Chinese company Rongcheng Marine Fishery Co. Ltd (RCMF), which in turn is part of the larger group Shandong Bodelong Group Co. Ltd.

According to company information held by the Registrar General's Department, the registered capital of CONNADO ENTERPRISES LIMITED is GHS 300,000 (US\$ 64,000 approx.). The company's envisaged annual revenue is GHS 10,000 (US\$ 2,200 approx.) and the envisaged number of employees is two. It is not possible to run a fishing vessel with such limited revenue and number of employees, suggesting the involvement of another entity in the vessel's operations.

In contrast, RCMF has fixed assets of US\$ 62.5 million (approx.) and reports an annual production value of more than US\$ 47 million (approx.). The group owner, Shandong Bodelong Group Co. Ltd meanwhile has fixed assets of US\$ 300 million, an annual revenue of US\$ 230 million and employs 1,500 individuals (see **Case Study #1**).

These discrepancies highlight the importance of considering the beneficial owner when determining the level of sanctions for fisheries-related violations, to ensure they reach the true beneficiaries of illegal fishing and that they have a deterrent effect. National laws must be designed to ensure beneficial owners can be identified and held to account for their acts.

Fraudulent practices and other non-fisheries related breaches

Chinese fishing activities, and particularly those under opaque joint venture agreements with local partners, have come under increasing scrutiny in recent years, both due to the destructive fishing practices of the primarily bottom trawl fleet, and for other fraudulent activities such as the vast under-reporting of gross tonnage (GT) to the licensing authorities in coastal states.

In 2015, research by Greenpeace Africa found that the Chinese National Fishing Corporation had under-reported the GT of 44 of its 59 vessels fishing in Senegal, Guinea-Bissau and Guinea, resulting in significant lost revenue in access fees for these governments⁷⁵.

In Ghana, EJF has identified instances of possible under-reporting of gross tonnage of two vessels in the active licence list, which require further follow up by the Ghanaian authorities (see **Case Study #7**). This is accompanied by discrepancies in ownership histories for the vessels concerned, with potential linkages to Chinese companies engaged in repeated IUU fishing in West Africa.

CASE STUDY #7

Possible under-reporting of gross tonnage and discrepancies in ownership records

Discrepancies in reported gross tonnage

The vessels M/V LIAN RUN 43 and M/V LIAN RUN 44 were imported into the Ghanaian fleet register in January 2017. For both vessels, discrepancies have been identified between the GT reported in the active licence list, and the entries for the vessels in the IHS Sea-web database. Both vessels are registered on the active licence list at 250 GT. However, in the IHS Sea-web database, the vessels are registered at 362 GT, a discrepancy of 45%.

This discrepancy warrants further attention by the Ghanaian authorities to determine whether there has been intentional under-reporting of GT by the vessel operators, either to avoid licence fees or circumvent licensing requirements. According to the Ministry's guidelines on applying for a fishing licence, trawlers applying for a licence to fish in Ghana should not exceed 300 GRT¹.

Discrepancies in ownership records

On the current licence list, the vessels are listed as owned by companies incorporated in Ghana as follows:

- (a) M/V LIAN RUN 43 is listed as owned by A.S. DOMDANQ LTD, a company established in Ghana in 2017. This is the only vessel owned by the company. (**Table A**)
- (b) M/V LIAN RUN 44 is listed as owned by CONNADO ENT. LTD., a company established in Ghana in 2013. According to the licence list, the company owns a second vessel, LU RONG YUAN YU 919 (see also **Table 5** above and **Case Study #6**). (**Table B**)

Table A: Commercial history for LIAN RUN 43 in the IHS Sea-web database

Date	Name	Flag	Group Owner	Operator	Manager	Registered Owner	DOC
2017-11				AS Domdanq Ltd	AS Domdanq Ltd	AS Domdanq Ltd	
2017-01		Ghana					
2016-07							Unknown
2015-01	LIAN RUN 43	China, People's Republic Of	Unknown	Shao KS	Shao KS	Shao KS	

Originally LIAN RUN 43

Table B: Commercial history for LIAN RUN 44 in the IHS Sea-web database

Date	Name	Flag	Group Owner	Operator	Manager	Registered Owner	DOC
2017-01		Ghana		Connado Enterprises Ltd	Connado Enterprises Ltd	Connado Enterprises Ltd	
2016-07							Unknown
2015-01	LIAN RUN 44	China, People's Republic Of	Unknown	Shao KS	Shao KS	Shao KS	

Originally LIAN RUN 44

According to the IHS Sea-web database, both vessels were built in 2015. Prior to entering the Ghanaian fleet register in 2017, the vessels were registered to the Chinese flag with the registered owner Shao Kui Shuang (Shao KS). At the time of writing, Shao KS is the registered owner of four fishing vessels in the IHS Sea-web database, LIAN RUN 45, 46, 47 and 48.

Shao KS is registered to the same address as the company Dalian Lian Run Pelagic Fishery Co Ltd (Dalian Lian Run)ⁱ. In February 2018, the Chinese Ministry of Agriculture cancelled the Distant Water Fisheries (DWF) certificate of Dalian Lian Run following repeated illegal fishing infringements in West Africaⁱⁱ.

A press release celebrating the inauguration of the fishing vessels LIAN RUN 43, 44, 45, 46 and 47 is indicative of corporate linkages between Shao KS and Dalian Lian Run. The press release, issued by Donghong Shipbuilding Industry Co. Ltd in 2014, cites Dalian Lianrun Pelagic Fishing Co. Ltd as the owner of these five vessels. Yet Shao KS appears as the sole registered owner since 2015 for LIAN RUN 45, 46 and 47 in the IHS Sea-web database, and as the only registered owner in China for LIAN RUN 43 and 44 prior to their import to Ghana (see **Tables A and B** above)^{iv}.

In light of the above, further investigation is warranted to determine:

- whether the two vessels on the Ghanaian licence list, M/V LIAN RUN 43 and 44, have retained ownership linkages to the Chinese company Shao KS following their import into the Ghanaian fleet register, and
- if so, whether the vessels are also linked to Dalian Lian Run, and are thus fishing without an authorisation from the Chinese government following the revocation of the DWF certificate of Dalian Lian Run in early 2018.

Figure A: LIAN RUN 43 and 44 at their launch in 2014. The press release published by Zhejiang Donghong Shipbuilding Co. Ltd identifies the owner of the vessels as Dalian Lianrun Pelagic Fishery Co. Ltd



© Zhejiang Donghong Shipbuilding Co., Ltd

ⁱ Republic of Ghana, Fisheries Commission (2013). *Guidelines for the registration and licensing of fishing vessels (industrial and semi-industrial) in Ghana*. Version dated 3 November 2013. <https://www.mofad.gov.gh/wp-content/uploads/2016/05/Final-Guidelines-for-Acquiring-Fishing-Licence.pdf>

ⁱⁱ 17th Floor, Tiantong Finance Building, 58, Luxun Lu, Zhongshan Qu, Dalian, Liaoning, China

ⁱⁱⁱ Greenpeace International (9.3.18), 'Chinese companies see subsidies cancelled and permits removed for illegal fishing in West Africa', accessed 9.8.18. <https://www.greenpeace.org/international/press-release/15209/chinese-companies-see-subsidies-cancelled-and-permits-removed-for-illegal-fishing-in-west-africa/>

^{iv} Donghong Shipbuilding (11.12.14), 'Donghong Shipbuilding hold a ceremony for the launch of "Lianrun 43, 47" for Dalian customers', accessed 9.8.18. <http://www.zjdhcy.com/news1.asp?id=571>

It is also worth noting that the two vessels concerned (M/V LIAN RUN 43 and 44), as well as two other vessels (LU RONG YUAN YU 219 and 220), were new additions to the licence list in 2017. The rationale behind such additions is unclear, in view of high profile commitments made by the government to reduce the number of vessels in Ghana's industrial trawl fleet. This is explained further in **Case Study #8**.

The unreported catches from saiko activities represent another potential loss of revenue for the Ghanaian government. An estimated 100,000 metric tonnes of fish were traded through saiko in 2017, with a landed (pre-processing) value of between US\$ 34-65 million approx. This represents a significant loss of state revenue in the form of taxes on official landings, while the licence fees paid by Ghana's trawl fleet (**Table 3**) likely fall substantially below the actual landed value of fish caught⁷⁶.

The scale of the saiko trade highlights the huge scale of under-reporting of catches by Ghana's industrial trawl fleet, around 90% of which is believed to be linked to Chinese ownership.⁷⁷ As noted in **Case Study #5**, the trawl fleet reported official catches of just 18,500 tonnes in 2014. If estimated saiko catches are considered in the total, this would mean a reporting rate by the industrial trawl fleet of just 16% of total fish caught.

In the late 1990s/early 2000s, two Chinese fishing companies were the subject of an investigation by Ghana's Serious Fraud Office for failing to pay tax on landings and export of fish. Further details of this case are provided in **Case Study #9**.

CASE STUDY #8:

Vessels imported into the Ghanaian fleet register despite capacity reduction commitments under the 2015-2019 Fisheries Management Plan and West Africa Regional Fisheries Programme (WARFP)

Ghana's 2015-2019 Fisheries Management Plan sets out a target of reducing the number of fishing days of the industrial trawl fleet by 50% by the end of 2018, through measures including a reduction in the number of vessels over a transitional period of three years. This reduction in capacity is combined with a vessel replacement scheme for registered vessels, allowing for the replacement of two old vessels for one new vessel not exceeding 300 GTⁱ.

The Government of Ghana has also undertaken to reduce the capacity of its industrial trawl fleet as a condition of funding from the World Bank under the West Africa Regional Fisheries Programme (WARFP). In February 2012, the government issued a moratorium on the issue of new fishing licences and the replacement of old vessels in the industrial and semi-industrial sub-sectors, effective from 1 February 2012.

However, since the February 2012 moratorium and adoption of capacity reduction targets in the 2015-2019 Management Plan, a number of vessels have entered the Ghanaian vessel register.

In 2017, four trawlers of Chinese origin were imported into Ghana and received licences to fish, none of which held licences in either 2015 or 2016ⁱⁱ. The vessels were M/V LIAN RUN 43 and 44 (also the subject of **Case Study #7**),

and LU RONG YUAN YU 219 and 220. Three of these vessels are listed as owned by Ghanaian companies incorporated in 2016-17, therefore appear not to qualify as "replacement" vessels under the provisions described above. The licence holder for M/V LIAN RUN 43 is listed as A.S. DOMDANQ LTD, founded in 2017. The licence holder for MV LU RONG YUAN YU 219 and MV LU RONG YUAN YU 220 is listed as ELSHADAI CO. LTD, founded in 2016. All four vessels were built in 2015 or 2016, according to data in the IHS Sea-web databaseⁱⁱⁱ.

It is also worth noting that, as described in **Case Study #1**, Chinese company Rongcheng Marine Fishery Co. Ltd, launched its fishing operations in Ghana in 2013, after the February 2012 moratorium. This saw the addition of more than 20 new trawl vessels to the fleet register.

ⁱ Republic of Ghana (2015). *2015-2019 National Fisheries Management Plan*. <https://www.mofad.gov.gh/fisheries-management-plan-of-ghana-2015-2019/>

ⁱⁱ Republic of Ghana, MoFAD, 'Vessel Registry', accessed 23.8.18.

<https://www.mofad.gov.gh/publications/statistics-and-reports/vessel-registry/>

ⁱⁱⁱ IHS Sea-web database

With such a prominent position in West Africa's fisheries, China's distant water fishing sector has a crucial responsibility to ensure the sustainable and legal exploitation of the region's resources.

CASE STUDY #9:

Investigation by Ghana's Serious Fraud Office for tax evasion and other breaches by two Chinese companies

This case was documented in Ghana's national newspaper, the Daily Graphic, in March 2006.¹

The report concerned a fraudulent scheme uncovered by Ghana's Serious Fraud Office involving two Chinese companies Afrik-Shandong Limited and Zhongha Fisheries Limited. The companies had landed and re-exported fish between 1994 and 1999, but had failed to pay taxes totaling US\$ 15,357,236.

Ghana's Investment Promotion Centre said it had not granted the two companies licences to carry out trawl fishing in Ghana, and were unaware that the companies were engaged in such activities in the country.

As a result of the breaches, the two companies were prohibited from operating trawl vessels in Ghana, and were required to forfeit all catches to the state. According to the Deputy Managing Director of the companies, at the time both companies were owned by the Chinese government, with their earnings and taxes audited periodically by the Chinese Embassy in Ghana.

¹Mensah, M. (20.3.06), 'c313bn Fraud Uncovered, 2 Chinese Companies Involved', *Modern Ghana*, accessed 9.8.18. <https://www.modernghana.com/news/96907/313bn-fraud-uncovered-2-chinese-companies-involved.html>

8. Conclusion

China's distant water fisheries have undergone a rapid expansion since the mid-1980s when the first fleet of 13 vessels owned by the China Fishing Corporation travelled to fishing grounds off West Africa. By 2016, the fleet had expanded to 2,517 vessels fishing overseas, with an operational area extending across the EEZs of over 40 countries, including several West African nations⁷⁸.

China's distant water fleet in West Africa has been estimated to number 345 vessels⁷⁹, around three quarters of which are bottom trawlers targeting demersal fish and bottom invertebrates, notably shrimp. Annual catches by China's bottom trawl fleet in West Africa are estimated at around 2.35 million tonnes per annum, or around 50% of the country's total distant water catches, with a landed (ex-vessel) value of € 4.74 billion per year⁸⁰.

With such a prominent position in West Africa's fisheries, China's distant water fishing sector has a crucial responsibility to ensure the sustainable and legal exploitation of the region's resources. This is especially critical in a region where coastal communities depend increasingly on fisheries resources for food security and income⁸¹. In addition, the inherently destructive nature of bottom trawling activities –on which China's distant water fishing model is based –necessitates strict regulation and compliance to ensure sensitive marine environments are not irreparably damaged.

However, China's fleet has come under increasing criticism for repeated IUU fishing violations along the West African coast. This includes fishing without valid licences, fishing in prohibited areas and use of prohibited gear, as well as widespread tonnage fraud and under-reporting of catches⁸². Chinese fishing ventures have also been criticised for their opacity, which can make it difficult to determine the true level of fishing capacity and catches, and whether activities are legal and sustainable⁸³.

This study has shown these issues on a magnified scale in Ghana. Chinese control and ownership are widespread in Ghana's industrial trawl sector, in spite of the national legislation prohibiting foreign beneficial ownership. Vessels have continued to be imported from China despite a moratorium on new vessels entering Ghanaian waters to address vast over-capacity and severe depletion of stocks. Ghana's industrial trawl fleet has engaged in illegal fishing on a massive scale, most recently in the form of targeted fishing for juvenile fish and small pelagic stocks and trans-shipment of these to canoes at sea, a practice known as "saiko". Ghana's small pelagic fishery has all but collapsed in recent years, threatening the primary livelihoods of over two million fisherfolk along the coast.

Failures to address the over-capacity and destructive practices in the industrial trawl sector present a serious risk that Ghana could receive a second yellow or even red card under the EU IUU Regulation. A red card is accompanied by trade sanctions, jeopardising the country's lucrative tuna industry that relies on exports to the EU market.

In 2016, the EU absorbed around 90% of Ghana's tuna exports, worth approximately US\$ 175.5 million⁸⁴.

With the lifting of the yellow card in October 2015, Ghana committed, amongst other things, to implement capacity reduction commitments set out in its 2015-2019 Fisheries Management Plan, and to apply deterrent sanctions provided in its 2014 Fisheries (Amendment) Act. Ghana also undertook to fulfil its coastal state obligations under UNCLOS, including implementation of science-based measures to ensure fisheries resources within its waters are not endangered by over-exploitation.

These commitments are thrown into doubt by the magnitude of illegal and unreported catches that have occurred through saiko, which render science-based management practically impossible. Several industrial trawlers are authorized to export catches to the EU, leaving the EU market vulnerable to products caught by, or in association with, IUU fishing activities.

The findings of this study highlight the urgent need for extensive reforms in Ghana's industrial trawl sector, to ensure that fishing activities are carried out in a legal and sustainable manner. As a matter of priority, all necessary steps must be taken to end the illegal and destructive practice of saiko fishing, and to reduce the fishing effort of the industrial trawl fleet in line with scientific advice on the status of fish stocks.

Critically, there is a need for greater transparency in the sector, to ensure that the perpetrators of illegal activities can be held to account for their acts. Improving transparency around fishing agreements would also help to address inequities in benefit flows, whereby local fishing communities and the country as a whole lose out in unbalanced arrangements with foreign operators.

The responsibility for these reforms falls on both the Chinese and Ghanaian governments. The Chinese government plays a key role in supporting the fishing operations of its nationals overseas through subsidies and other forms of incentives⁸⁵. Its recent action to crack down on the illegal activities of Chinese distant water fishing operators is to be welcomed⁸⁶. According to an announcement in February 2018, China's Ministry of Agriculture recently withdrew subsidies and fishing licences of three Chinese companies involved in IUU fishing off the coast of West Africa, and since 2016 has cancelled subsidies worth around CN¥ 700 million (US\$ 110.5 million approx.) for 264 fishing vessels belonging to 78 offshore fishing enterprises. It is imperative that this momentum be sustained, and that Chinese distant water fishing operations under third country flags such as Ghana do not escape scrutiny.



Canoe landing site in Cape Coast. © EJF

9. Recommendations

EJF calls on the governments of China and Ghana to act on the following recommendations, to bring the activities of the industrial trawl fleet operating in Ghana into line with both national and international law.

To the government of China:

1. Cooperate with the Ghanaian authorities to identify Chinese beneficial ownership in Ghana's industrial trawl sector, and ensure that arrangements are organised in such a way as to comply with all relevant fisheries, company and tax laws.
2. Carry out all necessary investigations into cases of illegal fishing by Chinese nationals in connection with industrial trawl vessels flying the flag of Ghana, with a particular focus on saiko activities, and impose deterrent sanctions to the extent provided under Chinese law.
3. Update the national law framework, if necessary, to ensure that Chinese nationals engaged as beneficial owners of fishing vessels flying the flag of third countries can be prosecuted for IUU fishing infringements and deterrent sanctions imposed.
4. Investigate the discrepancies in vessel gross tonnage highlighted in this report, and ensure appropriate sanctions are imposed in the event infringements are identified.
5. Investigate the possible inclusion of Ghanaian-flagged trawl vessels in the Chinese list of establishments authorised to export fisheries products to the EU and take appropriate action should misconduct be identified.
6. Withdraw the distant water fishing certificates of any Chinese companies found to be supporting or engaging in illegal fishing by vessels under the Ghanaian flag.
7. Ensure that Chinese fishing companies for which the distant water fishing certificates have already been withdrawn are no longer operating vessels in West Africa under third country flags such as Ghana.
8. Ensure government support in the form of subsidies, loans and other funds are not available to companies with a history of IUU fishing infringements.
9. Adopt minimum transparency requirements for distant water fishing activities, including the publication of information on distant water fishing authorisations, companies operating overseas, and their areas of operation.
10. Complete, maintain and make publicly available a detailed list of all fishing vessels licensed to fish under the Chinese flag.
11. Mandate IMO numbers for all vessels in the Chinese distant water fleet, where eligible under the IMO ship number identification scheme.

To the government of Ghana:

1. Scrutinise, in detail, publishing the results, the ownership arrangements of all industrial trawl vessels currently operating in Ghana to ensure compliance with requirements regarding the nationality of beneficial owner(s) set out in the 2002 Fisheries Act, and that there is a genuine link between the owner and Ghana as the country of registration.
2. Require, as part of all applications for a fishing licence, fishing authorisation or entry to the Ghanaian fleet register, submission of records on the destination of profits from fishing activities, and information on beneficial ownership and foreign interests in vessels, to support implementation of nationality requirements in the 2002 Fisheries Act.
3. As part of the ongoing reform of the fisheries law framework, strengthen legal provisions on beneficial ownership through inclusion of minimum disclosure requirements and publication of details of beneficial ownership in a national register, in a manner consistent with Ghana's beneficial ownership roadmap produced under the EiTI⁹⁷. Provide for dissuasive sanctions for breach of nationality requirements set out in the legislation.
4. Strictly enforce the prohibition against saiko and ensure that trans-shipment at sea from industrial trawlers to canoes remains illegal in any form under the future fisheries law framework.
5. Ensure all suspected fisheries-related infringements by the industrial trawl fleet are subject to thorough investigation, and that deterrent sanctions are imposed where violations are confirmed, in accordance with minimum sanctions in the national law and regardless of whether cases are settled in or out of court.
6. Investigate the discrepancies in vessel gross tonnage highlighted in this report, and ensure appropriate sanctions are imposed in the event infringements are detected.
7. Immediately, reduce the number of fishing licences issued for industrial trawl vessels in line with best available scientific advice on the status of both small pelagic and demersal fish stocks.
8. Complete, maintain and make publicly available a detailed list of all fishing vessels licensed to fish under the Ghanaian flag and in the Ghanaian EEZ, as well as the record of external fishing authorisations and register of vessels.
9. In the interests of transparent and accountable decision-making, make the following information publicly available:
 - a. Licence fees paid for access to fisheries resources and conditions of access
 - b. IUU fishing infringements and sanctions imposed/paid
 - c. Numbers of fishing days allocated to each licensed vessel
 - d. Total catches of all fishing sub-sectors, including by-catch
10. Make vessel-monitoring data publicly available to facilitate scrutiny of fishing activities, through publication of unedited VMS data and/or introduction of mandatory AIS requirements for all industrial fishing vessels.
11. Mandate IMO numbers for all industrial fishing vessels fishing in Ghanaian waters/under the Ghanaian flag, where eligible under the IMO ship number identification scheme⁹⁸.

APPENDIX I

Ghanaian industrial trawl vessels sanctioned for fisheries-related infringements in Ghana from 2013 to 2015

DATE OF ARREST	VESSEL NAME	OWNING COMPANY	TYPE OF OFFENCE	SETTLEMENT PROCEDURE	AMOUNT OF FINE IMPOSED	REMARKS
21.12.2013	Meng Xin 5 (AF 670)		Unauthorized Transshipment	In court	GHS 346,790	Settled. Fine partly paid (GHS 100,000)
31.12.2013	Genesis 3 (AF 688)	Nashie Fisheries	Fishing in the IEZ	Out-of-court	GHS 25,100	Settled. Fine paid in full
19.02.2014	Awo Yaa 8 (AF 648)	Cavalier Resources Ltd.	Fishing in the IEZ. Fishing with a net of undersized mesh	Out-of-court	GHS 104,385	Settled. Fine paid in full
21.06.2014	Comforter 2 (AF 720)	Boatacom Co. Ltd.	Fishing with a net of undersized cod-end mesh	Out-of-court	GHS 24,085	Settled. Fine paid in full
21.07.2014	Twin Port City 101 (AF 631)	Mass Fisheries Co. Ltd.	Fishing with a net of undersized cod-end mesh	Out-of-court	GHS 6,809	Settled. Fine paid in full
1.04.2014	Fidelis 102 (AF 705)		Fishing with a net of undersized mesh. Use of top-side chafers Failure to comply with instructions of arresting officer	Out-of-court	GHS 9,650	Settled. Fine paid in full
1.04.2014	Lian Run 14 (AF 713)	Decdor Co. Ltd.	Fishing with a net of undersized mesh. Use of top- side chafers	Out-of-court	GHS 6,650	Settled. Fine paid in full
7.04.2014	Lu Rong Yuan Yu 910 (AF 730)	Reonq Fishing Company	Failure to sign entries in log book. Wrong crew composition. Failure to comply with instructions of arresting officer	Out-of-court	GHS 24,829	Settled. Fine paid in full
28.08.2014	Sombo (AF 696)	Nacmana	Fishing in prohibited zone (gas pipe line)	Out-of-court	n/a	Case adjourned for further investigation
28.08.2014	Guo Jin 801 (AF 651)	Paradise Fishing Co. Ltd.	Fishing in prohibited zone (gas pipe line)	Out-of-court	n/a	Cases adjourned for further investigation
28.08.2014	Maache II (AF 677)		Fishing in prohibited zone (gas pipe line)	Out-of-court	n/a	Cases adjourned for further investigation
28.08.2014	Emule 4 (AF 637)		Fishing in prohibited zone (gas pipe line)	Out-of-court	n/a	Cases adjourned for further investigation
	Twin Port City 101 (AF 631)	Mass Fisheries Co. Ltd.	Fishing in the IEZ	Out-of-court	GHS 50,700	Settled. Fine paid in full (paid in 2015)
5.01.2015	MV Luyu 902 (AF 596)	Winemas Co. Ltd.	Fishing with a net of undersized mesh size	Out-of-court	GHS 46,000	Settled in full (payment made in Accra)
30.01.2015	MV Asona (AF 617)	Legon Fishing Co	Failure to document properly in log book. Failure to ensure safe boarding of inspection officers	Out-of-court	GHS 19,400	Settled. Fine paid in full
11.04.2015	Lu Rong Yuan Yu 959 (AF 741)	Rockpoint Co. Ltd.	Taking on board undersized fish	Out-of-court	GHS 47,980 & US\$ 250,000	Paid GHS 200,000 as accepted by Hon. Minister
12.04.2015	Jin Hai 605 (AF 744)	Itavan Ventures	Taking on board undersized fish	Out-of-court	GHS 13,049 & US\$ 250,000	Fine reviewed to GHS 10,000 and US\$ 55,000 by committee on 16 December
12.04.2015	Jin Hai 608 (AF 745)	Itavan Ventures	Taking on board undersized fish	Out-of-court	GHS 38,799 & US\$ 250,000	Paid GHS 200,000 as accepted by Hon. Minister
16.04.2015	Meng Xin 16 (AF 726)	Kenbonad Fisheries Ltd.	Fishing for juveniles	Out-of-court	GHS 25,600 & US\$ 60,000	Fine yet to be paid (requested to pay in tranches)
29.07.2015	Comforter I (AF 749)	Boatacom Ltd.	Harvesting juvenile fish. Use of top-side chafers	Out-of-court	US\$ 50,000 & GHS 10,000	Reviewed to US\$ 25,000 and GHS 10,000 by Hon. Minister. Paid in full
30.07.2015	Meng Xin II (AF 660)	Bossgie Ltd.	Use of top- side chafers	Out-of-court	GHS 3,000	Fine paid in full
5.08.2015	Twin Port City 104 (AF 632)	Mass Fisheries	Use of topside chafers	Out-of-court	GHS 12,153	Fine paid in full
21.08.2015	Twin Port City 104 (AF 632)	Mass Fisheries	Fishing in the IEZ	Out-of-court	GHS 11,825 & US\$ 20,000	Fine paid in full
5.08.2015	Sombo (AF 696)	Nacmana	Fishing in the IEZ	Out-of-court	GHS 9,600 & US\$ 20,000	Fine settled in full
2.09.2015	Bohye (AF 695)	Nacmana	Fishing in the IEZ	Out-of-court	GHS 4,136 & US\$ 20,000	Fine settled in full
9.11.2015	Lu Rong Yuan Yu 916 (AF 731)	Reonq Fishing Co. Ltd.	Use of topside chafers	Out-of-court	GHS 50,000	Fine settled in full

Source: Adapted from MoFAD and Friends of the Nation (2015). *Baseline for Prosecutions: Summary of Fisheries Arrests and Prosecution in the Western and Eastern Commands*. The USAID/Ghana Sustainable Fisheries Management Project (SFMP). Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island and Friends of the Nation. GH2014_POL013_FoN. 30 pp

APPENDIX II

Examples of alleged fisheries violations by industrial trawl vessels flagged to Ghana identified by EJF through routine remote and in situ monitoring

NAME OF VESSEL	IMO NUMBER	OWNER	DATE	INFRINGEMENT	OUTCOME
NANA AMOAH	9027295	NASAAA CO. LTD	December 2012	Operating within Ghanaian IEZ	Warning given to operator by Ghanaian authorities
LUYU 901	N/A	WANNIMA	December 2012	Fishing without a licence in Côte D'Ivoire	Vessel charged by Ghanaian authorities
SEE GOD I	9099664	BOSSGIE LTD	July 2013	Obscuring markings and vessel name. Fishing without a licence in Côte D'Ivoire	Mutual assistance request sent from Côte D'Ivoire to Ghana. Outcome not known
NANA AMOAH	9027295	NASAAA CO. LTD	September 2013	Fishing in Ghanaian IEZ. Fishing without a licence in Côte D'Ivoire	Warning given to operator by Ghanaian authorities
OK FISH 6	8951786	LEGON FISHERIES CO. LTD	July 2015 and April 2016	Fishing in the Ivorian IEZ	Investigation by Ghanaian authorities
OK FISH 12	8951803	LEGON FISHERIES CO. LTD	July 2015 and April 2016	Fishing in the Ivorian IEZ	Investigation by Ghanaian authorities
LONG XIANG 606	8698023	OBUORWE AND COMPANY LTD	November 2017	Fishing in Ghanaian and Ivorian IEZs	Warning given to operator by Ghanaian authorities

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