

Powerless bystanders: Ghana's fisheries observers struggle to curb crimes and ensure their own safety at sea

July 2021

Summary

- Since 2018, all industrial trawl vessels operating under the Ghanaian flag have been required to carry a government-appointed fisheries observer on board to monitor fishing activities and report on illegal fishing.
- However, fisheries observers experience intimidation and bribery which compromises their security at sea and ability to perform their functions. In July 2019, a fisheries observer went missing from a trawler in Ghana. He has not been found.
- Testimony from observers and crew members indicates that illegal fishing remains rife in Ghana's trawl sector. Illegal trans-shipment (saiko), use of prohibited fishing gear, catching of juvenile fish and illegal dumping/discarding are widespread.
- Saiko is decimating fish populations in Ghana, including the severely depleted small pelagics that are critical for livelihoods and food security of coastal communities.
- According to in-port monitoring, illegal saiko landings increased by an estimated 28.5% between 2019 and 2020. In 2020, 704 saiko canoes were observed landing openly at Elmina port, equating to an estimated 18,586-30,976 tonnes of fish and suggesting a rate of 33-45% of catches going unreported.
- Evidence of continued, commercial-scale illegal fishing by trawlers is indicative of serious failures to monitor and investigate the activities of these vessels and effectively sanction offenders.
- Urgent reforms are required to ensure the security of fisheries observers and end illegal practices in the trawl fleet, particularly the highly destructive practice of saiko, to save Ghana's small pelagic fishery from imminent collapse.



An industrial trawler carries out an alleged saiko-transshipment off the coast of Elmina.



An industrial trawler operating in Ghana.

Introduction

Since 2018, the government of Ghana has appointed fisheries observers on board all industrial trawlers operating under the Ghanaian flag (around 75 vessels licensed at any one time), to collect data on fishing activities and report on illegal practices occurring at sea. The observer programme was originally established under the West Africa Regional Fisheries Program (WARFP) and salaries paid by the World Bank¹. Following the end of the WARFP in Ghana in 2019, 100% observer coverage of the fleet has been maintained, with the responsibility for observer salaries transferred to vessel owners through the Ghana Industrial Trawlers Association (GITA).

Despite fisheries observers being present on all vessels, illegal fishing remains rife in Ghana's trawl sector. This briefing presents evidence of continued illegal fishing by trawlers in Ghana based on testimony from fisheries observers and crew members, as well as monitoring of landings in port. Recommendations are provided to the government of Ghana on ensuring the security of fisheries observers and eliminating illegal and destructive fishing practices that threaten the livelihoods and food security of millions of Ghanaians.

Methods

This briefing is based on interviews with six fisheries observers and ten crew members working on board industrial trawl vessels in Ghana, conducted during the period September 2019 to April 2021. Each respondent had worked on multiple industrial trawl vessels – in some cases, on over 15 different vessels operating under the Ghanaian flag. Some observers had been employed since the start of the observer programme in 2015 before observers were mandated on all vessels. Interviews were conducted via phone and in person by EJJ investigators at a safe location in Accra. Where respondents granted permission for the interviews to be filmed, care was taken to ensure identities were strictly protected. Names and vessel identities are anonymised in this briefing. Where possible, respondents were asked to provide visual evidence (photos, video footage) of illegal activities encountered on the trawl fleet.

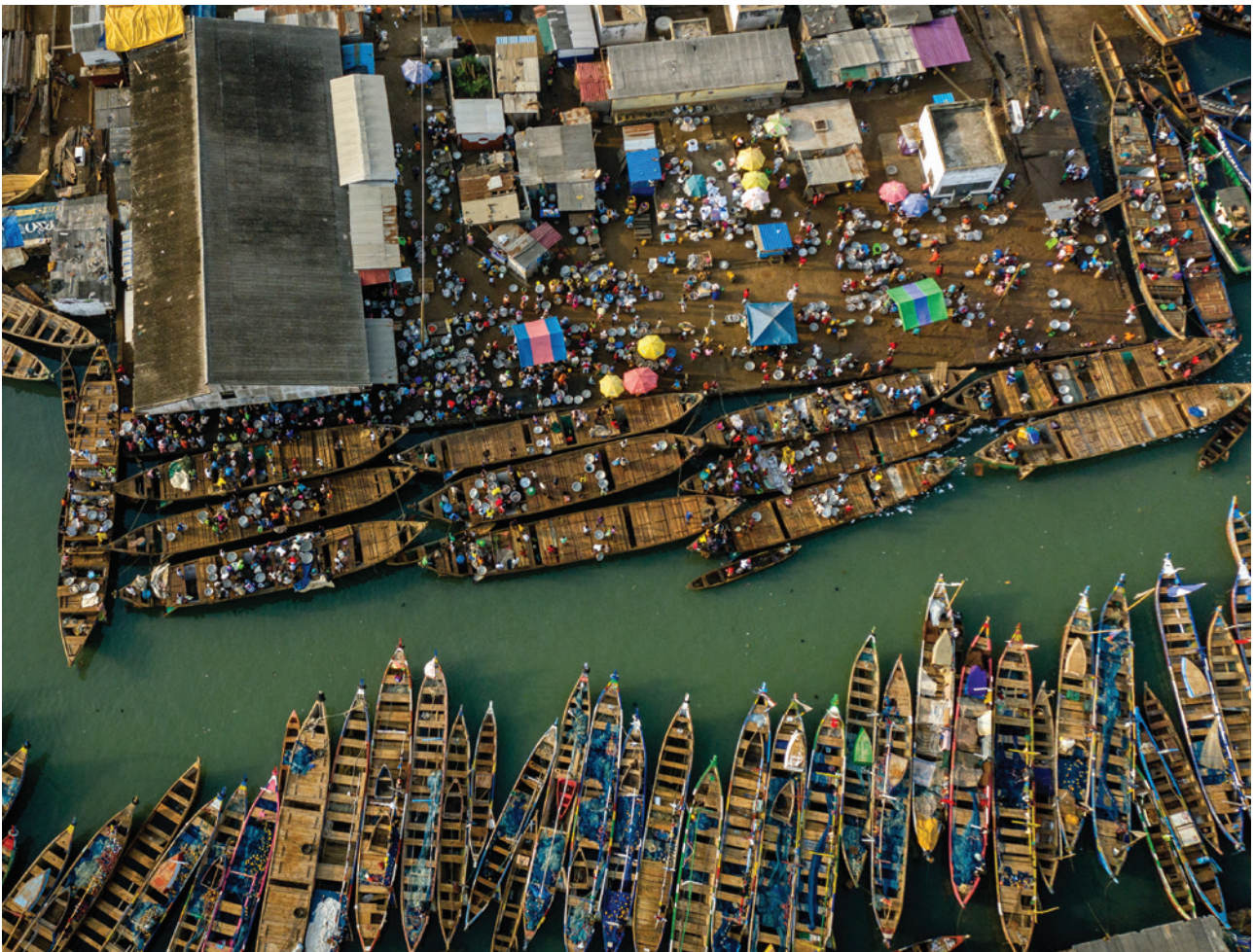
Testimony from fisheries observers and crew members was supplemented by data derived from in-port and remote (satellite) monitoring to verify the information provided. EJJ carries out daily monitoring of saiko landings (**Box 1**) at Elmina and Apam ports in the Central Region of Ghana and monitors the activities of vessels within Ghana's Exclusive Economic Zone (EEZ) using the software ExactEarth. Reports concerning potential illegal fishing activities are submitted in the form of Vessel Activity Notifications to the Fisheries Commission in Ghana for further investigation. EJJ also gathers information from local fishers through the deployment of geotagged cameras and a mobile application ("DASE") for reporting on illegal activities.

Box 1: “Saiko” – an ecological and social catastrophe

The highly destructive practice, known locally as “saiko”², is a serious threat to the sustainability of fish populations in Ghana and the communities that depend on them. In the saiko trade, industrial bottom trawlers – an estimated 90% of which are owned/financed by Chinese corporations³ – use prohibited gear to illegally target small pelagic species such as sardinella, the staple catch of small-scale fishers. The catches, which often include large numbers of juvenile fish that are critical to rebuilding the fishery⁴, are trans-shipped at sea to purpose-built canoes, before being landed and sold back to coastal communities for profit – fish that local communities should have caught themselves.

Saiko is driving Ghana’s small pelagic fishery – known as the “people’s fish” due to its importance for local livelihoods – to the brink of collapse⁵. Landings of sardinella have declined by around 80% over the past two decades, from 135,628 metric tonnes in 1996, to 29,111 tonnes in 2016⁶. In 2017, industrial trawlers caught an estimated 100,000 metric tonnes of fish for the illegal saiko trade, with a landed value of over US\$50 million⁷. Saiko has severe implications for Ghana’s small-scale fishing sector and the livelihoods of over 2.7 million people that depend, directly or indirectly, on marine fisheries for their livelihoods⁸, as well as the food security of the entire nation.

In 2017, scientists predicted the collapse of Ghana’s small pelagic fishery within 3-7 years in a business-as-usual scenario⁹. A 2019 assessment by FAO recommended the closure of the sardinella fishery shared between Côte d’Ivoire, Ghana, Togo and Benin to allow fish populations to recover¹⁰.



Aerial view of saiko canoes at Elmina port. In 2021, up to 15 saiko canoes have been observed landing illegally in a single day.

Findings

1. Saiko is ongoing despite observers being present on all vessels

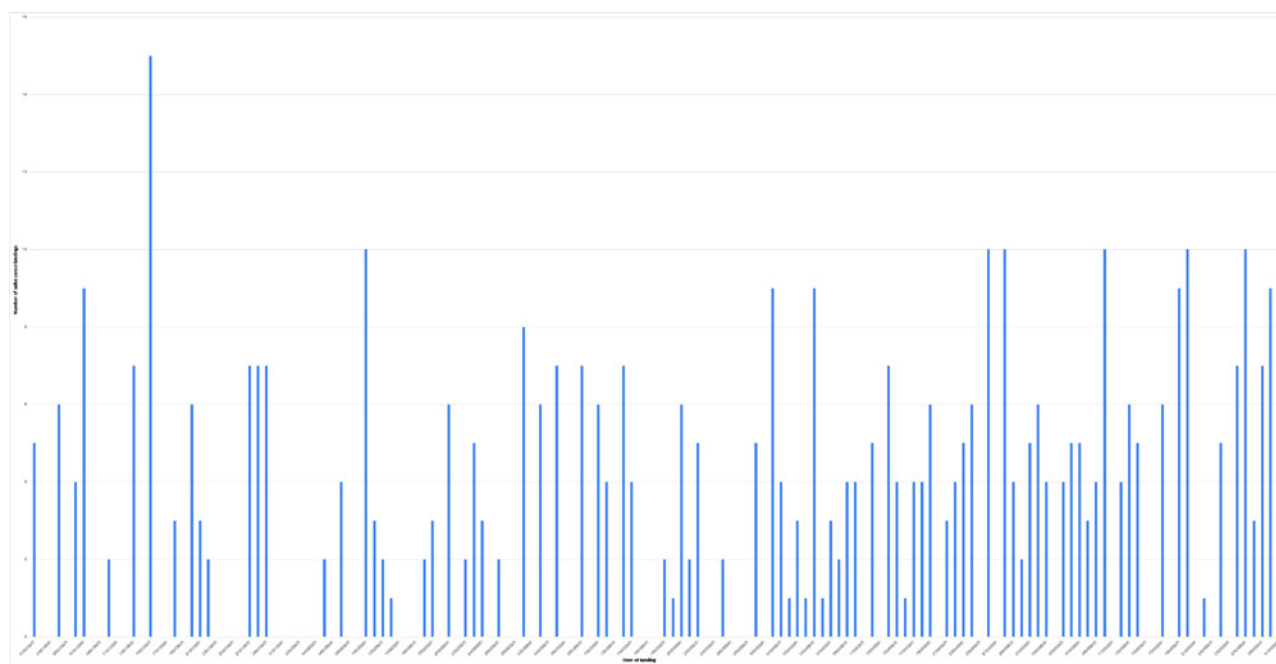
Testimony from crew members and fisheries observers confirmed that saiko trans-shipments are still carried out by multiple trawlers operating in Ghana's waters. This is confirmed by monitoring in ports. Although prohibited under Ghana's fisheries laws¹¹, landings of saiko canoes continue openly at the ports of Elmina and Apam in the Central Region, with up to 15 canoes landing at Elmina in a single day (**Figure 1**).

Despite a commitment by the government in the 2019 Budget Statement to end saiko¹², saiko landings increased by an estimated 28.5% between 2019 and 2020. In 2020, 704 saiko canoes were observed landing at Elmina, equating to an estimated 18,586 - 30,976 tonnes of fish (see **Appendix**). This would suggest a rate of 33-45% of catches going unreported, based on 2019 reported catch data from the Fisheries Commission¹³.

Since 1 January 2021, 447 saiko canoes have been observed landing fish at Elmina, and 24 saiko canoes at Apam. This equates to an estimated 11,801 - 19,668 tonnes of fish, indicating an increased rate of saiko landings compared to 2020. Every saiko canoe landing fish at Elmina represents a trans-shipment at sea witnessed by an observer.

Interviewees provided video footage of saiko trans-shipments carried out by industrial trawlers as recently as March 2021 (see **Figures 2-4**). One observer, interviewed in April 2021, said that trans-shipment could take place up to ten times during a single fishing trip.

Figure 1: Daily landings of saiko canoes at Elmina port from 1 January to 31 May 2021



Observers pointed to waybills which are produced by GITA for each saiko trans-shipment that takes place. The waybills indicate the vessel name and date of trans-shipment and the quantity and species of fish trans-shipped. Observers, along with the vessel master, are required to sign the waybills which provide documentation of this illegal activity.

“So if we get 2000-2500 slabs of logo [saiko] fish, we call the canoes to come and meet us on the sea for the fish. Sometimes it occurs three or four times before the trip will be over”

– Crew member #1

“It depends on the quantity of the saiko fish that we have on board at that particular time. If the fish are to be more than 6,000 or 5,000 going...they used to call two canoes to come for it”

– Fisheries observer #5

“The local fishes are the logo [saiko] fish – that is the small small ones. Sometimes we sell the logo fish on the sea to a canoe....if we catch a lot of logo fish, we can gather 3,000 slabs of fish. And then we can call either two or three canoes and discharge all the slabs to them.”

– Crew member #8

Figure 2: Screen capture of video footage of a saiko trans-shipment (2021)



Figure 3: Screen capture of video footage of a saiko trans-shipment (2021)



Figure 4: Screen capture of video footage of a saiko trans-shipment (2021)



2. Trawlers illegally target small pelagic species reserved for artisanal fishers for the saiko trade

According to respondents, trawlers deliberately target small pelagic species such as sardinella, mackerel and scad for the saiko trade. Saiko incentivises the capture of these species (rather than the demersal species for which the vessels are licensed) as they are in high demand for local consumption. Small pelagics, which are severely depleted in the region, are supposed to be reserved for small-scale fishers. Respondents expressed concern over the state of fisheries resources and the impact of trawling activities on the livelihoods of small-scale fishers.

“When they go, some of them, they don’t look for their target species. They are rather looking for saiko”

– Fisheries observer #6

“It is worrying because these vessels are catching the fish that local canoes would otherwise catch.”

– Crew member #6

“The one they usually catch is the pelagics, that is the chub mackerel and the false scad”

– Fisheries observer #5

“We usually catch juvenile species, like anchovy, round scad...”

– Fisheries observer #4

“The Meng Xin company is not trawling. They will catch with nets that work on the surface of the water. So, in the Meng Xin company, they catch any kind of fish like sardines, herrings, anchovies. That small small fish, we freeze it and sell or discharge [trans-ship] to a canoe on the sea.”

– Crew member #3

Figure 5: Small pelagics in frozen blocks of saiko fish unloaded at Elmina port in February 2021

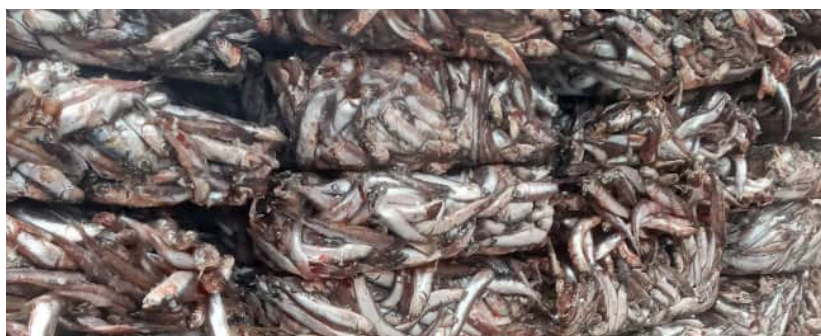


Figure 6: Small pelagics caught by an industrial trawl vessel in Ghana (2021)



3. Trawlers use prohibited fishing gear to catch saiko fish – unwanted catches are discarded at sea

Respondents described the use of mid-water trawl nets to illegally target small pelagic fish, such as sardinella, near the sea surface, as opposed to the bottom-dwelling species such as octopus for which they are licensed. They also described the use of under-sized mesh nets (referred to as “inner sacks”) to line the trawl nets in order to harvest greater quantities of fish. Smaller species, such as anchovies, and juvenile fish, would be trans-shipped to a saiko canoe, or discarded.

“The nets that we trawl with are the bigger size mesh nets but the captain wants to catch plenty [of] fish so he puts small mesh size nets into it.”

– Crew member #8

“We have trawling nets. And inside the sack, we have another small net. That helps us to catch small fish.”

– Crew member #3

“Some they add another mesh to their normal [net] or they change the gears. Some would be 60 [mm] others would be 45 [mm] - it will be joined.”

– Fisheries observer #2

“Even sometimes the fish they normally fish for the saiko, those fish sometimes the captain will catch more, so when the captain catches plenty, he will only put the quantity that he wants on board - the rest he can decide to dump them.”

– Fisheries observer #6

“So if they use the under-sized net those fingerlings will not be able to go out. At the end of the day they will bring [catch] everything. When they realize that there is too much of the fingerlings, then they will decide to discard everything.”

– Fisheries observer #3

“...the local canoes aren’t getting any catch now. The Chinese come down at night and catch all the fish, and [then] throw them into the sea on the high seas.”

– Crew member #6

“Every trip I encounter discard or dumping of fish. Every trip, especially the Meng Xin vessels dump a lot of fish at sea because of their nets”

– Fisheries observer #5

4. Observers are fearful for their safety at sea – intimidation and bribery are commonplace

Illegal fishing occurs even when fisheries observers are present on board the vessels. Several respondents had been offered bribes or had witnessed Chinese officers¹⁴ bribing observers to stop them from reporting on illegal activities. Officers had reportedly seized the phones of observers and deleted photos taken as evidence, or steered vessels out of mobile network range to threaten observers and prevent infractions from being reported¹⁵. One observer felt he had no choice but to accept bribes as he feared for his life at sea. Observers seemed genuinely afraid, and even more so since the disappearance of their colleague, Emmanuel Essien, from an industrial trawler in July 2019 (**Box 2**).

“Observers are getting their own pocket money...When they get it, they stay in their cabins”

– Crew member #3

“I have seen observers taking money from the Chinese nationals. I witnessed it myself. They gave the observer money, he [the observer] told me that the captain gave him GHS 1,500.”

– Crew member #8

“The observers, some of them are bribed by the Chinese. The Chinese will fight those who don’t accept their bribe.”

– Crew member #6

“Sometimes observers made videos of us when we are throwing fish away. When they bring the videos to the shore, the big men for the Chinese bribe them and they delete the videos”

– Crew member #4

“Because every day they [the captains] want to check on your phone whether you have evidence on it... and the problem is sometimes when you take all the evidence and you report them, later on, they know what you did to them”

– Fisheries observer #5

“We fear a lot. Even something like taking a picture and the captain sees you. One time such thing happened to me. I had to tell him that I am not feeling well and asked to join a passing vessel. He became aware and he went further out to sea (to 200 metres) where I would not be able to make a call.”

– Fisheries observer #3

“Sometimes it may be physical. The captain can come to you and say: “I don’t need you on the bridge again, walk out.” If you refuse, then he will start pushing you.”

– Fisheries observer #3

“If something happens, the captain says: “I have offended you, so take GHC 1,000 [~ USD 170] and let it go”. You have to say “yes”. You’re still at sea. They can even tell you that if you don’t take the bribe here, when we get down, your bosses will take it. If you say “no”... In the captain's mind, the reason you say “no” is that you’re going to report it.”

– Fisheries observer #3



“There is no way that you can do it right at sea if you’re an observer on board. The truth of the matter is that you can’t do your job.”

– Fisheries observer #3

5. Evidence of continued, commercial-scale illegal fishing by trawlers is indicative of serious failures to investigate the activities of these vessels and effectively sanction offenders

Observers allege that when they submit reports to the Fisheries Commission, little action is taken to prosecute the vessels in question. Observers recalled submitting multiple reports to the Commission but rarely, if ever, being called to provide witness testimony. Trawlers that had been reported as having engaged in illegal practices were observed out at sea shortly thereafter with apparently no action having been taken.

According to observers, as salaries are now paid by the vessel owners via GITA, rather than by the government, this compromises their ability to report on illegal fishing as they are under the “command of the captain”.

“So we’re paid by GITA now and that agreement is between GITA and the Chinese companies. So the Chinese people say – ‘we are paying you’. The captain can tell you that you’re not good, I will go and request a different observer. I will not pick you for my vessel anymore and that ends it. I want this observer on board, or I don’t want this one.”

– Fisheries observer #3

“Discarding fish, dumping fish, trans-shipment...Every trip I have been writing a report against it”

– Fisheries observer #3

“No – the report, they don’t follow up! If you bring the case today with the vessel, after two or three days the vessel is back on the sea working.”

– Fisheries observer #3

“Since I started this work, it was only once that they call me to the police station to write my statement. I have been bringing reports where vessels deserved to be arrested but I don’t know what happened to those vessels”

– Fisheries observer #6

Box 2: The disappearance of a fisheries observer from the Meng Xin 15

On 5 July 2019, 28-year old fisheries observer, Emmanuel Essien, went missing from the industrial trawler, Meng Xin 15. He was reported missing after failing to return to the cabin he shared with three Chinese crew. A police investigation found “no signs of violence or anything incriminating”¹⁶.

Logs from the Meng Xin 15 have shown that illegal saiko fish made up 57% of the catch on the voyage Emmanuel went missing. Emmanuel had been threatened before but had continued to report illegalities at sea.

During his previous trip at sea, Essien had got into a fight with the chief engineer, a Chinese national, after filming the crew allegedly discarding juvenile fish at sea. The vessel involved – the Meng Xin 4 – had been allegedly involved in catching significant quantities of juvenile fish and engaging in saiko¹⁷. On returning to port, he provided a report and accompanying video footage to the Fisheries Commission. His report ended: “I humbly plead with the police to investigate further.”

According to Emmanuel’s brother, Bernard, he had been threatened for reporting illegality on the trawlers and was about to quit.

“There were days he came back and said he was worried. The job of an observer is to make sure they are obeying the laws. There were times those in charge of the vessel got angry at him for doing that. They told him not to. He told me it was difficult. He wasn’t comfortable. He said it was dangerous work.”

An Observer investigation found serious allegations of violence, drug-taking and bribery aboard the industrial fleet. Interviews with fishermen, observers and sources in the Fisheries Commission suggested that criminality is ignored, raising questions over whether the lives of observers are being put at risk¹⁸.



An image of an industrial trawler in Ghana captured by local fishers at sea.

Conclusion

Urgent reforms are needed to ensure the security of fisheries observers in Ghana and to eliminate illegal practices, particularly saiko, from Ghana's waters. Fisheries observers on Ghana's industrial trawl fleet experience intimidation and bribery which compromises their security at sea and ability to perform their functions. Despite government commitments to end illegal saiko fishing, the practice is ongoing at a commercial scale and apparently intensifying, threatening the livelihoods of millions of Ghanaians and the food security of the nation. Robust and immediate reforms are needed to address these issues and ensure every fisheries observer feels safe while carrying out their duties. It is critical that reports of illegal fishing are fully investigated by the authorities and that offenders are effectively sanctioned through transparent processes. The threat that looms over fisheries observers in Ghana is unacceptable and must end.

Recommendations

EJF calls on the Ghanaian government to implement all necessary measures to ensure the security of fisheries observers at sea and eliminate illegal practices by trawlers that threaten the livelihoods and food security of millions of Ghanaians. This includes:

1. Bringing the wage structure of fisheries observers under government control
2. Providing fisheries observers with adequate security protection
3. Ensuring full implementation of the provisions of the 2002 Fisheries Act relating to the duties of vessel masters towards fisheries observers
4. Establishing an anonymous mechanism, for example, through the Ghana Anti-Corruption Coalition (GACC), to report attempted bribery and providing the necessary training on raising such reports
5. Taking robust action with respect to allegations of threats, bribery or violence
6. Making the reports of fisheries observers publicly available
7. Ensuring transparent follow-up on all reports of illegal fishing and effective prosecution
8. Strictly enforcing the prohibition against saiko in the fisheries law framework
9. Ensuring deterrent sanctions are imposed with respect to fisheries and human rights infringements, in accordance with minimum sanctions in the national law
10. Publishing information on arrests and sanctions imposed/paid
11. As part of broader reforms, introducing reliable and cost-effective camera monitoring on board the industrial trawl fleet.

"The Ghanaian sea is dying... Even the Chinese that we work with told us a time will come that there will be no fish in the Ghanaian waters again."

– Crew member #3

Appendix

Estimated volume and value of saiko landings based on daily monitoring at Elmina port (2019 and 2020 comparison)¹⁹

1 January 2019 to 31 December 2019

Number of saiko canoes landing: 548

	Weight (tonnes)	Number of blocks of saiko fish ⁱⁱⁱ	Value at landing - low (GHS, millions) ^{iv}	Value at landing - high (GHS, millions) ^v	Value at landing - low (USD, millions) ^{iv,vi}	Value at landing - high (USD, millions) ^{v,vi}
Estimate based on an average saiko canoe ⁱ	14,467	1,315,200	65.8	105.2	11.2	17.9
Estimate based on a large saiko canoe ⁱⁱ	24,112	2,192,000	109.6	175.4	18.6	29.8

For further information on the methodology, see: EJJ and Hen Mpoano (2019). *Stolen at sea: How illegal “saiko” fishing is fuelling the collapse of Ghana’s fisheries.*

1 January 2020 to 31 December 2020

Number of saiko canoes landing: 704

	Weight (tonnes)	Number of blocks of saiko fish ⁱⁱⁱ	Value at landing - low (GHS, millions) ^{iv}	Value at landing - high (GHS, millions) ^v	Value at landing - low (USD, millions) ^{iv,vi}	Value at landing - high (USD, millions) ^{v,vi}
Estimate based on an average saiko canoe ⁱ	18,586	1,689,600	84.5	135.2	14.4	23.0
Estimate based on a large saiko canoe ⁱⁱ	30,976	2,816,000	140.8	225.3	23.9	38.3

For further information on the methodology, see: EJJ and Hen Mpoano (2019). *Stolen at sea: How illegal “saiko” fishing is fuelling the collapse of Ghana’s fisheries.*

Notes:

ⁱ With a capacity to carry 26.4 tonnes of frozen fish per trip.

ⁱⁱ With a capacity to carry 44 tonnes of frozen fish per trip.

ⁱⁱⁱ Each block (slab) of saiko fish weighs approximately 11 kg.

^{iv} Based on GHS 50 per block (slab) of fish at the landing site. Lower market price of a block of saiko fish landed at Elmina as at 8 July 2020.

^v Based on GHS 80 per block (slab) of fish at the landing site. Upper market price of a block of saiko fish landed at Elmina as at 8 July 2020.

^{vi} GHS to USD exchange rate as at 8 July 2020

Endnotes

- 1 World Bank (2019), *Implementation Completion and Results Report 4979-GH. TFO10905-GH, on an International Development Association Credit in the amount of SDR 31.1 million (US\$50.3 million equivalent) and a Global Environment Facility Grant in the Amount of US\$3.5 million to the Republic of Ghana for a Ghana Project under the First Phase of the West Africa Regional Fisheries Program (P14775)*. 28 March 2019: <http://documents.worldbank.org/curated/en/866911554409721545/pdf/Ghana-Under-the-First-Phase-of-the-West-Africa-Regional-Fisheries-Program-Project.pdf>
- 2 EJF (2019). *Stolen at Sea: How illegal 'saiko' fishing is fuelling the collapse of Ghana's fisheries*. <https://ejfoundation.org/reports/stolen-at-sea-how-illegal-saiko-fishing-is-fuelling-the-collapse-of-ghanas-fisheries>
- 3 In spite of the prohibition against foreign beneficial ownership in Ghana's trawl sector (Section 47 of the 2002 Fisheries Act, Act 625). See also: EJF (2021). *At what cost? How Ghana is losing out in fishing arrangements with China's distant water fleet*. <https://ejfoundation.org/reports/at-what-cost-how-ghana-is-losing-out-in-fishing-arrangements-with-chinas-distant-water-fleet>. EJF (2018). *China's hidden fleet in West Africa: A spotlight on illegal practices within Ghana's industrial trawl sector*. <https://ejfoundation.org/reports/chinas-hidden-fleet-in-west-africa-a-spotlight-on-illegal-practices-within-ghanas-industrial-trawl-sector>
- 4 EJF (2020). *The "people's" fishery on the brink of collapse. Small pelagics in landings of Ghana's industrial trawl fleet*. <https://ejfoundation.org/reports/the-peoples-fishery-on-the-brink-of-collapse-small-pelagics-in-landings-of-ghanas-industrial-trawl-fleet>
- 5 *Ibid.*
- 6 Landings of *S. aurita* and *S. maderensis* by all fleets (industrial, inshore and artisanal): FAO (2019). *Report of the FAO/CECAF Working Group on the Assessment of Small Pelagic Fish – Subgroup South*. Elmina, Ghana, 12-20 September 2018. *Rapport du Groupe de travail FAO/COPACE sur l'évaluation des petits poissons pélagiques – Sousgroupe Sud*. Elmina, Ghana, 12-20 septembre 2018. CECAF/ECAF Series / COPACE/PACE Séries No. 19/81. Rome. <http://www.fao.org/3/ca5402b/ca5402b.pdf>
- 7 EJF (2019). *Stolen at Sea: How illegal 'saiko' fishing is fuelling the collapse of Ghana's fisheries*. <https://ejfoundation.org/reports/stolen-at-sea-how-illegal-saiko-fishing-is-fuelling-the-collapse-of-ghanas-fisheries>
- 8 Ghana Statistical Service (GSS) (2014), cited in Fisheries Commission (2018). *2018 Annual Report*. Ministry of Fisheries and Aquaculture Development. Unpublished.
- 9 Lazar, N., Yankson K., Blay, J., Ofori-Danson, P., Markwei, P., Agbogah, K., Bannerman, P., Sotor, M., Yamoah, K. K., Bilisini, W. B. (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). Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island. GH2014_SCI042_CRC 22 pp
- 10 FAO (2019). *Report of the FAO/CECAF Working Group on the Assessment of Small Pelagic Fish – Subgroup South*. Elmina, Ghana, 12-20 September 2018. *Rapport du Groupe de travail FAO/COPACE sur l'évaluation des petits poissons pélagiques – Sous-groupe Sud*. Elmina, Ghana, 12-20 septembre 2018. CECAF/ECAF Series / COPACE/PACE Séries No. 19/81. Rome.
- 11 Section 132 of the 2002 Fisheries Act (Act 625) and Regulation 33 of the 2010 Fisheries Regulations (L.I.1968)
- 12 Republic of Ghana (2019). *Budget Statement and Economic Policy of the Government of Ghana for the 2020 Financial Year*. Presented to Parliament on Wednesday, 13th November by Ken Ofori-Atta, Minister for Finance.
- 13 2020 catch data were not available at the time of writing.
- 14 Chinese nationals hold the senior positions (captain, chief officer, chief engineer, engineer) on board nearly all industrial trawlers operating in Ghana.
- 15 In violation of Section 101(2) of the 2002 Fisheries Act (Act 625)
- 16 McVeigh, K. and Dzradosi, N. (16.11.19), 'The vanishing: Ghana's defenders face new perils in the fight against overfishing', *The Guardian*, accessed 14.8.20: <https://www.theguardian.com/environment/2019/nov/16/ghana-fisheries-observer-vanishes>
- 17 *Ibid.*; Anon, pers. comm. to EJF, September 2019.
- 18 McVeigh, K. and Dzradosi, N. (16.11.19), 'The vanishing: Ghana's defenders face new perils in the fight against overfishing', *The Guardian*, accessed 14.8.20: <https://www.theguardian.com/environment/2019/nov/16/ghana-fisheries-observer-vanishes>
- 19 It is noted that saiko landings also take place at the landing site of Apam in the Central Region and Axim in the Western Region of Ghana. However, information from informants indicated landings were low or negligible during the period in question. The focus here is therefore on landings in Elmina.