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Charting a Blue Future for Cooperation between West Africa and China on Sustainable Fisheries

By Sam Geall, Carolyn Gruber, Regina Lam, Lily Schlieman, Lauren Shea,
U. Rashid Sumaila, and Sally Yozell

July 2023

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About the Ocean Security and Sustainable Fisheries Project

Protecting ocean assets and promoting transparency across the global fishing industry to safeguard the economic, health and food security of the billions of people who depend on our ocean.

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Cover photo: Artisanal fishers bring fish to shore at the Tanji Fish Landing Site, Tanji, The Gambia. Photo by Edward Mendy, University of The Gambia.

July 2023

Charting a Blue Future for Cooperation between West Africa and China on Sustainable Fisheries

This report offers the governments of West African states and the People's Republic of China a set of clear, concise, and actionable recommendations to foster sustainable fisheries management and counter IUU fishing in the Gulf of Guinea and beyond.

By Sam Geall, Carolyn Gruber, Regina Lam, Lauren Shea, Lily Schlieman, U. Rashid Sumaila, and Sally Yozell

Over the past decade, Chinese-owned and -flagged distant water fishing vessels have expanded their presence in West Africa, including building up fishing enterprises and deepening partnerships to access West African waters. This rapid expansion is occurring in a region of small nations that often suffer from a lack of financial, technical, operational, and institutional capacity to manage their fisheries. This is compounded by a lack of political will to improve fisheries monitoring and management. To dive deeper into these challenges, the Stimson Center engaged trusted marine and fisheries experts from the People's Republic of China (PRC) and West Africa to better understand how West Africa and the PRC's fisheries interests and experiences converge and differ. Representatives from academia, governments, businesses and nongovernmental organizations mutually identified specific areas where more work and cooperation is needed to achieve long-term sustainable fisheries management in West Africa.

The outcomes of this effort include a set of clear, concise, and actionable recommendations aimed at West African and Chinese decision makers and stakeholders. The report offers a comprehensive understanding of the scale of IUU fishing in West Africa, including the role of the PRC in the development of West Africa's sustainable blue economy. Armed with this report, decision makers can pinpoint exactly how to improve policies, implementation, and enforcement actions to achieve the mutually beneficial goal of a sustainable blue economy in West Africa.

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Glossary of Terms

AIS: Automatic Identification System – The AIS is an automatic tracking system that uses transceivers on ships and is used by vessel traffic services. Vessels equipped with AIS transceivers can be tracked by base stations along the coast or via satellite.

Beneficial Ownership: A beneficial owner is a person or persons who ultimately owns an interest in a legal entity or arrangement.

BRI: Belt and Road Initiative – BRI is a global infrastructure development initiative adopted by the Chinese government in 2013 to invest in over 150 countries around the globe. It is one of the centerpieces of Chinese foreign policy and critical to their influence around the world.

CECAF: Fishery Committee for the Eastern Central Atlantic – CECAF is a regional fisheries management advisory body responsible for the waters along the African coast between the Strait of Gibraltar and the northern border of Angola, extending to a midline in the Atlantic Ocean whereupon jurisdiction changes to other organizations. Members include Angola, Benin, Cameroon, Cabo Verde, Democratic Republic of the Congo, Congo, Côte D’Ivoire, Cuba, Equatorial Guinea, European Union, France, Gabon, Gambia, Ghana, Greece, Guinea, Guinea-Bissau, Italy, Japan, Republic of Korea, Liberia, Mauritania, Morocco, Netherlands, Nigeria, Norway, Poland, Romania, São Tomé and Príncipe, Senegal, Sierra Leone, Spain, Togo, and the United States of America.

COMHAFAT-ATLAFCO: Ministerial Conference on Fisheries Cooperation among African States bordering the Atlantic Ocean – COMHAFAT-ATLAFCO is an intergovernmental organization founded in 1989 which aims to set out the areas and modalities of Regional Fisheries Cooperation between member states. Member states include Angola, Benin, Cabo Verde, Cameroon, Côte D’Ivoire, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mauritania, Morocco, Namibia, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, and Togo.

COREP: Regional Commission of Fisheries for the Gulf of Guinea – COREP is an Intergovernmental organization and a specialized institution of the Economic Community of Central African States, responsible for coordinating, harmonizing, and promoting aquaculture and the development of the exploitation of fisheries in the Exclusive Economic Zone (EEZ) and the internal waters of Member States. Member states include Angola, Cameroon, Congo, Democratic Republic of Congo, Gabon, and São Tomé and Príncipe.

CSO: Civil Society Organization – A CSO is any non-profit group which is organized on a local, national or international level. These organizations perform a variety of services and humanitarian functions, bring citizens’ concerns to Governments, monitor policies, and encourage political participation at the community level.

DWF: Distant Water Fishing – DWF refers to the practice of fishing outside of one’s own exclusive economic zone. Fleets which fish in distant waters often travel long distances and spend extended periods of time at sea.

ECCAS: Economic Community of Central African States – The ECCAS is an economic group of the African Union for promotion of regional economic cooperation in Central Africa. Its aim is to achieve collective autonomy, raise the standard of living of its populations, and maintain economic stability through harmonious cooperation. Members include Angola, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Rwanda, São Tomé and Príncipe.

ECOWAS: Economic Community of West African States – The ECOWAS is an economic community of the African Union for promotion of regional economic cooperation in West Africa. It aims to establish collective self-sufficiency for its members. Members include Benin, Burkina Faso (suspended), Cabo Verde, Gambia, Ghana, Guinea (suspended), Guinea-Bissau, Côte D’Ivoire, Liberia, Mali (suspended), Niger, Nigeria, Senegal, Sierra Leone, and Togo.

EEZ: Exclusive Economic Zone – An EEZ is an area of the sea in which a sovereign state has exclusive rights regarding the exploration, conservation, exploitation, and management of living and non-living marine resources. It stretches 200 nautical miles from the coast of the state in question.

EMS: Electronic Monitoring System – EMS is a tool used to collect fishing data such as number of fish caught, fishing effort, and bycatch.

EU: European Union – The EU is a supranational organization of 27 member states located in Europe. It has an internal single market with standardized legal frameworks and legislation enabling the free exchange of goods and people between members.

FAO: Food and Agriculture Organization of the United Nations – The FAO is an agency of the United Nations that leads efforts to reduce hunger and to improve global nutrition and food security.

FCWC: Fisheries Committee for the West Central Gulf of Guinea – The FCWC is a regional fisheries management advisory body established in 2007 to facilitate cooperation between its members. Member states: Benin, Côte D’Ivoire, Ghana, Liberia, Nigeria, Togo.

FMFO: Fishmeal and Fish Oil – FMFO are nutrient-rich co-products commonly made from the reduction of wild-caught low trophic level fish species and/or fish processing waste.

Flag of Convenience: A business practice whereby a ship's owners register a merchant ship in a ship register of a country other than that of the ship's owners, and the ship flies the civil ensign of that country, called the flag state. These practices can be deceptive and tied to IUU fishing and trafficking. To register to a Flag of Convenience, a company may set up "shell companies" that enable false registration as national entities. This serves to conceal the identities of beneficial owners, precluding their identification and sanctions where their vessels engage in illicit activities.

Flag State: A flag state is a country where a company registers its commercial and merchant ships. For example, any ships registered with the United States will fly the U.S. flag and are therefore under the jurisdiction of U.S. authorities with respect to inspections, regulatory oversight, and taxes. Some states offer tax, port access and regulation incentives to encourage ships to register with them. A nation does not have to be a coastal state to be a flag state.

FDI: Foreign Direct Investment – FDI is an ownership stake in a foreign company or project made by an investor, company, or government from another country.

GGC: Gulf of Guinea Commission – The GGC is an organization aiming to create conditions of mutual confidence, peace, and security conducive to the harmonious development of member states. Members include Angola, Cameroon, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Nigeria, São Tomé and Príncipe.

ICCAT: International Commission for the Conservation of Atlantic Tunas – The ICCAT is a regional fisheries management organization responsible for the management and conservation of tuna and similar species in the Atlantic and adjacent seas. It has 52 members, including Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Liberia, Mauritania, the PRC, Senegal, and The Gambia.

IMO: International Maritime Organization – The IMO is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships.

IUU Fishing: Illegal, Unreported and Unregulated Fishing – Illegal fishing occurs in violation of applicable laws and regulations at the state, regional, and global levels. Unreported fishing refers to fishing activities which are not reported or are misreported to authorities in violation of national laws and regulations. Unregulated fishing occurs in areas or in relation to fish stocks which have no applicable conservation or management measures and where activities are conducted in an irresponsible manner.

Joint Venture: A joint venture is a commercial enterprise undertaken jointly by two or more parties which otherwise retain their distinct identities. In fisheries, this is often an agreement between a foreign government or a private company in exchange for local fishing rights.

These ventures are typically between a developed and a developing nation to support the developing nation to make better use of the fishery resources in their own waters, however, they can be used to comply with or circumvent local ownership requirements or minimum percentage local ownership.

MARA: Ministry of Agriculture and Rural Affairs of the People’s Republic of China – MARA is the cabinet-level office responsible for the agriculture and rural affairs of the country. It was founded in 2018, superseding the former Ministry of Agriculture.

MCS: Monitoring, Control and Surveillance – MCS refers to the continuous requirement for the measurement of fishing effort characteristics and resource yields (monitoring), the regulatory conditions under which the exploitation of a resource may be conducted (control), and the degree and types of observation required to maintain compliance with the regulatory controls imposed on fishing industries (surveillance).

MERL: Marine Ecological Red Line – The MERL is a marine spatial planning tool referring to the institutional arrangement of important marine ecological functional areas, ecological sensitive areas, and ecological vulnerable areas as key control areas which implement strict classified management and control measures to maintain marine ecological health and security.

MPA: Marine Protected Area – An MPA is a defined region designated and managed for the long-term conservation of marine resources, ecosystems services, or cultural heritage.

MSP: Marine Spatial Planning – MSP is defined as a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that usually have been specified through a political process. Characteristics of MSP include ecosystem-based, area-based, integrated, adaptive, strategic, and participatory approaches.

Port State: A port state is a nation that allows Port State Control (PSC) at its ports. The PSC is responsible for inspecting ships that dock in their harbor to ensure they are up to international codes and is facilitated through the IMO. Port State Control Officers can check any ship at their port, regardless of whether they fly the flag for their dock country. PSC is split into nine geographic regions, each of which must enforce international regulations set by the IMO. Ports within these nine regions communicate dutifully with each other to ensure they do not repeat unnecessary inspections on ships, helping conduct unique inspections.

PSMA: Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing – The PSMA is the first binding international agreement to specifically target IUU fishing. Its objective is to prevent, deter and eliminate IUU fishing by preventing vessels engaged in IUU fishing from using ports and landing their catches.

RFMO: Regional Fisheries Management Organization – RFMOs are international organizations made up of countries with a shared interest in managing or conserving fish stocks in a defined region or area, and that have mandates to adopt legally binding conservation and management measures, typically agreed to by consensus, and which are based on the best available scientific evidence.

SFPA: European Union Sustainable Fisheries Partnership Agreement – SFPAs are agreements made between the EU and a partner non-EU country. These agreements allow EU vessels to fish for surplus stock in these partner countries’ EEZ, while also ensuring equal rules, scientific management, and social empowerment, with a focus on sustainability, local growth, human rights and shared accountability.

SRFC: Sub-Regional Fisheries Commission – The SRFC is an organization that aims to reinforce cooperation between its member states and coordinate policy for conservation and management of shared fishery resources. Member states: Cabo Verde, Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, Sierra Leone.

TEU: Twenty-foot equivalent unit – TEU is an inexact unit of cargo capacity used for cargo ships and ports. Capacity is based on the volume of a twenty-foot-long intermodal container.

Track II Dialogue: Track II Diplomacy refers to the practice of non-governmental and informal contacts and activities between non-state actors. It assists official actors to resolve conflict by exploring solutions delivered from public perspectives without formal negotiation and bargaining.

Track 1.5 Dialogue: Track 1.5 Diplomacy defines a situation where official and unofficial actors work together to cooperate on conflict resolution.

VMS: Vessel Monitoring System – VMS is a satellite surveillance system used to monitor the location and movement of commercial fishing vessels. It is used to support law enforcement initiatives and to prevent violations of laws and regulations.

Yaoundé Code of Conduct: Code of Conduct concerning the Repression of Piracy, Armed Robbery against Ships, and Illicit Maritime Activity in West and Central Africa – The Yaoundé Code of Conduct is an intra-regional agreement between ECOWAS, ECCAS, and the GGC to tackle maritime crime, including IUU fishing, in the Gulf of Guinea. It is implemented through the Yaoundé Architecture, which establishes two regional centers, five Multinational Maritime Coordinating Centers, and 17 national maritime operations centers that coordinate information sharing across West Africa. Member States include Angola, Benin, Burkina Faso, Cabo-Verde, Cameroon, Côte d’Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Republic of the Congo, São Tomé and Príncipe, The Gambia, and Togo.



The Helen Mary, a German Supertrawler, hauls in Sardinella off the coast of Mauritania. © Pierre Gleizes / Greenpeace.

Executive Summary

West African countries and the People’s Republic of China (PRC) share a deep mutual interest in supporting the development of sustainable fisheries management throughout West Africa to ensure long-term economic, food, and environmental security in both regions of the world. To support these goals, the Stimson Center coordinated a comprehensive review of illegal, unreported, and unregulated (IUU) fishing, fisheries management, and the role of the PRC in the development of West Africa’s sustainable blue economy.

To complete this extensive body of work, the Stimson Center and its partners performed desk research, conducting over 40 hours of interviews with leading experts, including academia, journalism, local and international non-governmental organizations (NGO), and civil society stakeholders. Areas of expertise included fisheries, journalism, and a cross section of sustainable blue economy industries from West Africa and the PRC. The project culminated with a convening of civil society stakeholders from both West Africa and the PRC for a series of Track II and Track 1.5 dialogues. The goal of this expansive effort was to better understand how West Africa and the PRC’s fisheries interests and experiences converge, differ, and where more work and cooperation is needed to achieve long-term sustainable fisheries management in West Africa.

The Track II Dialogue, “Charting a Blue Future for West African-China Cooperation on Sustainable Fisheries,” was conducted over three sessions in May and June 2023. The dialogue brought together nine participants from Chinese environmental civil society organizations (CSOs) and 12 representatives from West African CSOs, journalism, and blue economy industries from Ghana, The Gambia, Mauritania, and Senegal. The Track II Dialogue accomplished its two main goals: (1) to develop a shared understanding of the perspectives of Chinese and West African participants on IUU fishing, fishmeal factory operations, marine ecosystem science and sustainable blue economies; and (2) identify and mutually agree upon ideas for policy changes for the governments of the PRC and West African states.

The Track 1.5 Dialogue, “Mapping opportunities for West African-China cooperation on sustainable fisheries and a blue future,” was held in Banjul, The Gambia, on 9 May 2023, as a closed-door, invitation-only event. The workshop brought together 21 stakeholders from Ghana, Mauritania, Senegal, and The Gambia in academia, NGOs, journalism, intergovernmental organizations, the fishing and tourism industries, and government ministries. Government representatives from the Embassy of the PRC in The Gambia and representatives from Chinese-owned fishmeal and fish oil factories located in West Africa were invited to participate but did not respond to repeated requests to attend. The purpose of the Track 1.5 Dialogue was to discuss the impacts of IUU fishing, fishmeal and fish oil factories, and Chinese investment in local communities and West Africa’s marine environment and sustainable blue economy. The workshop brought together key stakeholders for a constructive dialogue to identify potential areas for change on IUU fishing and fishmeal

factory operations in the region. Participants developed a series of recommendations for the governments of the PRC, Guinea-Bissau, Mauritania, The Gambia, and Senegal.

The following report offers a comprehensive understanding of the scale of IUU fishing in West Africa, the lasting impacts it has on local communities, the institutional weaknesses that are holding back long-term sustainable fisheries management, and the role of the PRC in the development of West Africa's sustainable blue economy.

Both the Dialogue and Workshop produced specific recommendations for the governments of the PRC and West African coastal fishing states, though several overlapping themes emerged. Calls for open governance, collaborative action, and a better understanding of the transboundary fish stocks echoed throughout the discussions. The following recommendations are directed at decision makers and stakeholders in China and West Africa who aim to develop and support a sustainable blue economy for West Africa that features a truly collaborative and productive approach to fisheries management.

► **OPENNESS IN FISHERIES GOVERNANCE**

Improve collaboration between the PRC and West African governments—and stakeholders—on fisheries management in West Africa.

- ▶ Commission an independent gap analysis to better understand the current landscape of regional fisheries management efforts (operational, technical, and institutional) in West Africa, including an analysis of strengths, weaknesses, and opportunities for improvement.
- ▶ Establish regular, productive communication channels between China's Ministry of Agriculture and Rural Affairs (MARA) and the national and regional fisheries authorities in West Africa.
- ▶ Create a regional framework for constructive engagement with stakeholders to facilitate information sharing related to fisheries management, with a particular focus on the operations of foreign-owned fishing vessels and companies in West Africa.
- ▶ Share data on fishing effort and improve transparency to better manage fisheries, especially migratory stocks.

► **COORDINATED REGIONAL ACTION**

Establish new regional and/or multilateral fisheries access agreements that can build upon or replace existing agreements.

- ▶ Develop multilateral fisheries access agreements to better balance negotiating power and streamline access to fisheries resources.

- ▶ Require that a percentage of access and/or licensing fees fund fisheries science, management, and enforcement.
- ▶ Establish and maintain a regional database of industrial fishing vessels.
- ▶ Encourage regional cooperation to form a stronger West African political block that can elevate shared concerns about sustainable fisheries management.

▶ SCIENCE AND TECHNOLOGY TRANSFER

Implement sustainable and science-based fisheries management in West Africa.

- ▶ Transfer PRC expertise in fisheries science and technology to strengthen the capacities of the West African authorities to implement long-term, sustainable fisheries management policies and programs.
- ▶ Provide Chinese expertise and on-the ground training to support marine spatial planning in coastal communities in West Africa.
- ▶ Include area-based conservation in West African national and regional fisheries management based on sound science.

▶ FOOD SECURITY AND BLUE FOODS

Promote best environmental management and labor practices for sustainable aquaculture development and fishmeal and fish oil production in West Africa.

- ▶ Take advantage of lessons learned from the PRC's domestic aquaculture development and fishmeal production to implement low impact, sustainable aquaculture production in West Africa.
- ▶ Learn from China's own experiences and capabilities managing their domestic fisheries and fishmeal factories.
- ▶ Implement more rigorous air, water, health, and safety standards for fishmeal factories in West Africa.
- ▶ Redirect Chinese investments into ecotourism and sustainable fisheries management, rather than unsustainable fishmeal and fish oil factories.

The authors are grateful to the trusted marine policy and fisheries experts from China and West Africa for their willingness to engage in open and frank discussions. The motivation to learn from one another and better understand the issues across nations, governments, businesses, and communities on both sides of the world was essential to the success of this work, as were their aspirations to work together to improve fisheries management in West African waters.



*Fish dry in front of the Nessim Fishmeal Factory in Sanyang, The Gambia.
Photo credit: Lily Schlieman / Stimson Center.*

West Africa's Blue Economy

West Africa, particularly the Gulf of Guinea, host some of the world's richest marine fishery resources. Stretching south from Morocco to Angola and west to Cabo Verde, the region's reported combined fish catch in 2019 was estimated at 5,578,000 metric tons.¹ The Canary Current and the Guinea Current upwellings support important transboundary stocks of small pelagic species, demersal species, cephalopods, crustaceans, and tunas.² The nutrient-rich waters also host essential habitats such as coral reefs, seagrass beds, mangroves, and estuarine environments that serve as crucial spawning grounds, carbon sinks, and biodiversity hotspots.

The fishery resources supported by the Canary and Guinea Currents are essential to West Africa's food, environmental, and economic security. Fish is an important source of protein in the region, accounting, for example, for 64% of annual protein intake in Guinea-Bissau,³ 70% in Senegal,⁴ and 80% in Sierra Leone.⁵ Artisanal and small-scale fisheries and the post-harvest processing sector directly employ over 1.7 million people in the region.⁶

IUU Fishing Impacts on West Africa's Blue Economy

Fisheries are important components of the cultural fabric of many coastal communities in West Africa. IUU fishing harms the ecological, food, and economic security of developing coastal states. It also undermines the rule of law and fisher's trust in authorities. West Africa loses up to USD \$9.4 billion each year to IUU fishing. Over 40% of global IUU fishing incidents take place in West Africa and catch derived from IUU fishing accounts for 37% of all seafood harvests in the region.⁷

IUU fishing in West Africa is perpetrated by foreign, regional, and domestic fishers. Foreign distant water fishing (DWF) fleets from the European Union (EU), Russian Federation, PRC, Republic of Korea, and Turkey target and exploit West Africa's rich fishing grounds, out-competing artisanal fishers and damaging marine habitats. Poor monitoring, control, and surveillance (MCS) and enforcement capacity results in foreign vessels overfishing and underreporting their catch. From 2000 to 2010, for example, the EU and Chinese-flagged DWF fleets were estimated to report only 29% and 8% of their total catch in West Africa, respectively, flouting reporting regulations and contributing to inaccurate stock data.⁸

Semi-industrial and small-scale vessels from regional states use illegal gear, fish in marine protected areas (MPAs), and fail to report their catch. The clandestine nature of IUU fishing allows human rights and labor abuses to occur in its shadows—on vessels, in port, and in processing facilities. IUU fishing is a “crime of convergence” and can also be connected to transnational organized crime and other illicit activities such as guns, drugs, wildlife, and human trafficking.

In Senegal, The Gambia, Mauritania, and Republic of the Congo, demand for fishmeal and fish oil drive IUU fishing and exacerbate the poor condition of already-overexploited stocks of small pelagic species. Fishmeal and fish oil (FMFO) are products derived from the reduction of wild-caught fish, fish trimmings, and/or waste from the fishing sector. The primary species targeted by factories in West Africa for FMFO production are small pelagic species, including round and flat sardinella, sardines, and bonga shad. Factory-owned fleets offload their catch directly to factory piers, where fish are processed and exported immediately with limited accountability or oversight.⁹

The artisanal post-harvest sector in West Africa is dominated by women. Women purchase fish from fishers as it is brought to shore and preserve it with traditional methods. Small pelagic species, mainly sardinellas, dominate this trade, and because they spoil quickly, must be processed soon after landing. Fish are either salted and sun-dried or smoked in traditional fish smokehouses. Once processed, these fish are brought to local markets across the region and sold to people as a source of affordable animal protein. Fish buyers and processors have struggled to compete with fishmeal and fish oil factories, as they purchase in higher volumes and offer a higher price for their catches.¹⁰

IUU fishing, poor management practices, and overexploitation exacerbate the impacts of climate change on the region’s fish stocks. Fisheries and fishing communities in the Gulf of Guinea are highly vulnerable to the impacts of climate change on their food and economic security. Across the region, climate change impacts are projected to decrease fisheries economic output by 10%.¹¹ Models show that catch may decrease by 30% or more by 2050 in equatorial Gulf of Guinea countries, including Côte d’Ivoire, Liberia, and Gabon.¹²

Fisheries Access and Development in West Africa

Most developing states, including those in West Africa, do not have the technical, operational, financial, or regulatory capacity to develop industrial fishing fleets to target the offshore fish stocks in their own exclusive economic zones (EEZ), those of their neighbors, or on the high seas. Despite underdeveloped local commercial fleets, countries still benefit from their fisheries resources by selling access to foreign fleets.¹³

TUNA FISHING IN GHANA

Ghana developed a robust local tuna industry to exploit offshore stocks in its territorial waters and process domestic and foreign-caught tuna. According to the International Commission for the Conservation of Atlantic Tunas (ICCAT) vessel register, there are 34 active tuna vessels flagged to Ghana.¹⁴ Pole and line and purse seine vessels harvest around 70,000 metric tons of yellowfin and bigeye tuna and tuna-like species each year.¹⁵ In 2013, the EU issued Ghana a yellow card for unreported transshipments of Atlantic-caught tuna by a Ghanaian flagged vessel.¹⁶ The yellow card was lifted in 2015 with the development of new legislation and fisheries management plans, but a new yellow card was issued in 2021. This new yellow card was based on various shortcomings in Ghana's ability to comply with its duties as flag, port, coastal and market State. In particular, the EU cited concerns regarding illegal transshipments at sea of undersized juvenile pelagic species between industrial trawl vessels and canoes in Ghanaian waters, as well as deficiencies in the monitoring, control and surveillance of the Ghanaian fleet, and a legal framework that does not reflect the international commitments made by Ghana.¹⁷ According to an interviewee in the industry, IUU fishing in the tuna fleet is less of a concern than in the trawler fleet as vessels are closely monitored at sea and when they come in to port. Purse seine vessels have 24-hour electronic monitoring systems (EMS) and human observers on board.

All vessels, including pole and line, have a vessel monitoring system (VMS) onboard. Ghana is party to the Agreement on Port State Measures (PSMA), and vessels that land their catch are required to report their catch to the Ghana Ports Authority, Ghana Revenue Authority, and Research and Scientific Unit of Ghana. However, he noted that the primary IUU fishing concern is how vessels harvest anchovies for bait. Many vessels use fishing lights, which are a prohibited gear type under Ghanaian law.

Under the 2002 Fisheries Act, joint venture agreements are permitted in the industrial tuna fleet, unlike in the industrial trawler fleet. In joint ventures, Ghanaians are required to have a minimum 50% share and comprise at least 75% of the crew.¹⁸ According to an industry representative, 90% of joint ventures in the tuna industry involve companies from the Republic of Korea; the remaining 10% are with Chinese companies.

Two Ghanaian tuna processing companies can tuna caught by the Ghanaian fleet and by foreign fleets operating in neighboring countries' waters and on the high seas. Pioneer Food Company (owned by Thai Union) and Cosmo Seafoods Company (owned by Silla), based around Tema, can tuna for export primarily to the EU and United Kingdom.¹⁹ The industry employs approximately 6,500 Ghanaians and processes 58,000 metric tons of tuna each year.²⁰

Foreign access agreements in West Africa take two forms: bilateral government-to-government arrangements and company-to-government agreements. The PRC, EU, Japan, Turkey, Russia, and the Republic of Korea have sought out West African governments to allow their industrial vessels flagged to these countries to fish in their territorial waters in exchange for revenue, including rents and licensing fees. Revenue varies between coastal states and their partners. In 2015, Sierra Leone received just over USD \$2 million in access fees from foreign-flagged bottom trawlers, while Guinea-Bissau and Guinea received USD \$97.7 million and USD \$103.2 million, respectively.²¹ Agreements have varying levels of public information accessibility; EU Sustainable Fisheries Partnership Agreements (SFPA) are available in multiple languages online at the EU's legal database.²² There is no publicly available information on PRC access agreements unless mandated by a country's participation in a third-party organization, such as the Fisheries Transparency Initiative. Some West African states' fisheries access agreements allow foreign-owned vessels to re-flag as domestic vessels. In Mauritania, for example, national vessels pay lower access fees and are allowed to fish for octopus and other species ordinarily reserved for Mauritanian nationals.²³

West African states also enter into bilateral fisheries access agreements with neighboring states that allow semi-industrial and small-scale fishers access to cross-border fishing grounds. Mauritania and Senegal have maintained a bilateral agreement since 2001 that allows Senegalese pirogues to harvest small pelagic species in Mauritanian waters.²⁴ Through *the Agreement between the Government of Ivory Coast and the Government of Senegal in the Field of Marine Fisheries (1977)*, for example, Ivorian and Senegalese tuna vessels are granted reciprocal fishing rights in their respective EEZs.²⁵

Some countries permit private companies to negotiate directly with national governments for fisheries access agreements. In 2010, Fuzhou HongDong Pelagic Fishing Co., Ltd. and the Government of Mauritania government signed a 50-year access agreement, allowing the company to catch up to 100,000 metric tons of fish in Mauritanian waters each year in exchange for foreign direct investment (FDI). The same year, the Mauritanian government signed a 25-year access agreement with another Chinese company, Poly Hongdong Co., Ltd. The agreement allowed 100 Poly Hongdong vessels to fish in Mauritanian waters and eliminated all import customs and taxes on profits for the first five years.²⁶ This differs from the practice of joint venture agreements because the two Chinese companies are not required to have a Mauritanian majority shareholder to receive the same benefits as the Mauritanian national fleet.

COMMON PRACTICES THAT UNDERMINE SUSTAINABLE FISHERIES MANAGEMENT

Fishing industry operations in West Africa are complex and there is little information to begin with about where vessels operate, who owns them, details about each harvest event, how fish is shipped and transshipped to market, the labor practices on board these vessels, and the access arrangements to other nations' waters. These factors make understanding the true ramifications of these fisheries almost impossible to understand, much less quantify.

This lack of openness is accompanied by a dearth of data regarding the scale of the industry, the motivations of its proprietors, and the impact these fishing practices are having on coastal communities and marine fisheries. The clandestine nature of the industry is marked by some common business practices that undermine any efforts to sustainably manage the local, regional, and global fish stocks for the long-term.

Beneficial Ownership: Foreign companies are known to use elaborate corporate structures to obscure the true ownership of foreign vessels. Different countries have different ownership reporting requirements and varying degrees of corporate regulations and oversight that can make it challenging to identify the extent of beneficial ownership practices.²⁷ Beneficial ownership can enable corruption, money laundering, IUU fishing, and other illegal activities while the opaque corporate structure shields the true owner from legal responsibility.²⁸ In Ghana, foreign ownership or foreign control of industrial trawlers and other non-tuna vessels is prohibited.²⁹ Despite this, a 2018 report by the Environmental Justice Foundation found that 90% of the industrial trawler fleet in Ghana is linked to Chinese companies through beneficial ownership practices.³⁰ Furthermore, Ghanaian interviewees stressed that the money earned by Chinese-owned trawlers in Ghanaian waters is sent back to China, not spent or invested in Ghana.

Shell Companies: Fishing companies may establish shell companies, where they pay local middlemen to establish and register domestic corporations that claim legal ownership of the international company and its vessels, allowing them to access waters where foreign vessels are ordinarily prohibited from fishing.

Joint-venture Agreements: These are partnerships established between foreign corporations and national governments or local enterprises in fishing countries.³¹ The terms and conditions of joint venture agreements are often obscure, and vessel ownership is often opaque and difficult to trace. EU and Chinese companies are engaged in legal joint venture agreements in multiple West African countries, including Angola, Guinea-Bissau, Sierra Leone, Gabon, Senegal, Mauritania, and Namibia.³²

Flags of Convenience: Several interviewees highlighted the use of “flags of convenience” as a practice that contributes to IUU fishing in West Africa. Flags of convenience is the practice of registering a vessel without having a legitimate connection to the flag state to obscure ownership and take advantage of poor flag-state oversight. Flag states have obligations under international law to regulate the activities of their vessels. Some states have little oversight over their flagged vessels and allow foreign vessel owners to register vessels to their flag without a legitimate link to the flag state. With poor flag state oversight, vessel owners may engage in IUU fishing and poor labor practices and commit other crimes at sea without accountability and the risk of punishment. Several states in West Africa are known to be flags of convenience, including Cameroon, Equatorial Guinea, Liberia, and São Tomé and Príncipe.³³ For example, through a bilateral fisheries access agreement, vessels flagged to Cameroon may fish for any species beyond 7 nautical miles in Gambian waters. Foreign-owned trawlers flagged to Cameroon exploit this loophole to fish in Gambian waters.³⁴

Flagging-In: This refers to the use and abuse of various local rules to flag a foreign-owned and operated vessel into a domestic African registry to fish in African waters. This practice, together with Flags of Convenience, gives risk foreign fishing operators more opportunities to fish unsustainably and illegally.³⁵

Chartering: Chartering is a type of joint venture agreement. Charters are lease agreements between a foreign vessel and a coastal country, which rents the vessel and crew to fish in its EEZ.³⁶ Guinea-Bissau and Mauritania use charter agreements to exploit their domestic fishery resources. Bissau-Guinean citizens and legal entities are allowed to charter foreign fishing vessels.³⁷ Mauritanian companies are allowed to charter foreign and artisanal vessels to harvest small pelagic species in Mauritanian waters under joint venture agreements. This arrangement allows vessels to retain their flag, but they are required to land their catch in Mauritanian waters and may only fish in the zone between the town of Ndiago and the Port of Nouakchott—local regulations that are hard to enforce and therefore routinely ignored.³⁸



The Hai Feng 823, a PRC-flagged reefer, is docked at the Port of Abidjan, Côte d'Ivoire. © tm-tracking.org.

OPERATIONAL, INSTITUTIONAL, AND TECHNICAL CHALLENGES IN WEST AFRICA

Beyond challenges posed by the complexity of fishing industry operations, sustainable fisheries management in West Africa remains a work in progress that is marred by institutional, operational, and technical challenges.

Institutional Challenges

Paper Fishing Laws: On paper, most West African countries have strong environmental and anti-IUU fishing laws, but lack the operational and institutional capacity and political will to effectively implement and enforce them. For example, Ghana banned the practice of *saiko*—a type of at-sea transshipment from industrial trawlers to artisanal canoes—in 2010, but the law was not enforced until 2022, when action was announced by Minister of Fisheries and Water Resources, the Hon. Hawa Mavis Koomson.³⁹ Many West African countries have steep fines for IUU fishing: in Liberia, fishing without a license is punishable by a fine of up to USD \$1,000,000, while in Ghana fines for catching juvenile fish or using illegal gear are USD \$100,000 to 200,000.⁴⁰ However, interviewees and dialogue participants reported that fines are rarely levied. Captains caught IUU fishing often pay bribes to avoid the full fine or flee the country to avoid paying.

Political interference protects well-connected individuals from receiving fines or prosecution and enables companies to skirt environmental and licensing laws. Vessel owners and operators with political connections are shielded from monitoring or seizures and can obtain permission to operate outside of their license or permit. An expert from Sierra Leone described an incident where a crew member onboard a vessel caught fishing illegally called a ministry official, who claimed jurisdiction over the vessel and set it free without a fine or seizure of the illegal catch. In Ghana, an interviewee noted that some local politicians are partial owners with Chinese companies and receive profit-sharing benefits. Vessels with political connections are protected from monitoring or seizure and can obtain permission to operate outside of their license. In The Gambia, activists and journalists have been offered bribes or threatened by government officials and fishmeal factory owners alike for reporting on fisheries issues and crimes.

Political will is also inconsistent throughout West Africa and enables bad actors to evade punishment by fleeing to neighboring states with weaker fisheries laws, MCS capacity, and political will. Ghana's Minister of Fisheries and Water Resources, Hon. Mavis Hawa Koomson has demonstrated incredible political will to combat IUU fishing and promote sustainable fisheries management. In March 2023 at the Eighth Our Ocean Conference in Panama, Minister Koomson announced Ghana's commitment to achieving 100% transparency through its industrial fisheries by 2025. Industrial vessels will be required to install an EMS with video cameras, remote sensors, GPS, and a hard drive. EMSs will monitor fishing activities and gather data and information on catch and labor standards.⁴¹ Building upon earlier commitments, in July 2022, the Ministry of Fisheries and Water Resources issued a directive on gear specifications for industrial trawlers to reduce the catch of small and juvenile fish and ensure safety at sea.⁴²

However, inconsistent action throughout West Africa enables bad actors to continue IUU fishing in the territorial waters of other regional states. In July 2022, Ghanaian vessels fishing illegally during the closed season fled to neighboring Togo's territorial waters, evading punishment.⁴³ Guinea-Bissau is a regional hub for IUU fishing, as bad actors exploit weak governance, rampant corruption, and poor MCS capacity. One-fifth of foreign vessels licensed to fish in Guinea-Bissau have committed previous IUU fishing violations or fisheries crimes.⁴⁴ Guinea-Bissau has weaker gear regulations and weaker

surveillance for artisanal fishers than neighboring states, so foreign artisanal fishers often choose to fish in Bissau-Guinean waters. In July 2017, the Guinea-Bissau authorities arrested 11 Senegalese pirogues for illegal fishing. Four pirogues escaped after taking a Bissau-Guinean law enforcement officer hostage.⁴⁵

Open Governance: Openness is important to combatting corruption and unfair fisheries access agreements. Mauritania has made great strides to improve the transparency of its fisheries management and governance mechanisms. The list of industrial vessels licenses and payments are publicly available, as are the terms of foreign access agreements. Mauritania participates in the Fisheries Transparency Initiative, a voluntary, global initiative to make fisheries management more transparent and sustainable.⁴⁶ Every two years, Mauritania is required to publish a report, detailing the government’s progress toward openness in 12 categories: public registry of national fisheries laws, regulations, and official policy documents; fisheries tenure agreements; foreign fisheries access agreements; the state of fisheries resources; large-scale fisheries; small scale-fisheries; the post-harvest sector and fish trade; fisheries law enforcement; labor standards; fisheries subsidies; official development assistance; and beneficial ownership.



Guinea-Bissau Fisheries Inspection Unit (FISCAP) authorities arrest the Saly Reefer and Flipper 4 for illegal transshipment. © Pierre Gleizes / Greenpeace.

Technical and Operational Challenges

Management Capacity: Many countries in the region do not have the funding or capacity to conduct fisheries stock assessments, which inform the basis of fisheries management and determine sustainable fishing levels. In Senegal, zero stock assessments have been conducted since 2016 because the government research vessel has been unavailable for use.⁴⁷ Gambian government officials participating in the closed-door Track 1.5 Workshop stressed the need to train more Gambian nationals in fisheries science and management to facilitate long-term sustainable fisheries management. In addition to technical and manpower constraints, many states also lack the capacity to effectively implement their anti-IUU fishing laws and regulations. In The Gambia, the Gambian Navy does not have the appropriate vessels nor gear to conduct anti-IUU fishing patrols. According to Dialogue and Workshop participants, poor MCS and enforcement capacity attracts bad actors to the region who know they can engage in IUU fishing with impunity.

MARINE SPATIAL PLANNING SUCCESS IN GABON AND CONGO-BRAZZAVILLE

Under the *Gabon Bleu* initiative, the Gabonese government and NGO partners developed a comprehensive marine spatial plan for the country's EEZ, zoning Gabonese waters for fishing, hydrocarbon exploitation, other economic activity, and conservation. The plan also designated six fisheries zones for subsistence, artisanal, and industrial fishers. In 2014, Gabon established 20 MPAs which protect 26% of the country's territorial waters.⁴⁸ Nine MPAs are designated as marine parks, where all extractive industries are banned. The remaining 11 MPAs are designated as aquatic reserves, which are mixed-use areas for both industry and conservation. Exceeding the timeline of the global 30×30 initiative—to protect 30% of the world's land and sea by 2030—Gabon has committed to protecting 30% of its territorial waters by 2023.

In August 2022, Congo officially announced the creation of the country's first three MPAs with the support of the Wildlife Conservation Society and other organizations. The MPAs cover 12.01% of Congo's territorial waters and protect more than 4,000 km of marine and coastal habitats. Congo's first Marine Spatial Plan was approved by the Ministry of Forest Economy in 2019 and identified 11 future MPA sites. The three MPAs announced are a marine extension to the Conkouati-Douli National Park on the border with Gabon, Loango Bay Community Marine Reserve, and Mvassa MPA.⁴⁹

West Africa’s Sustainable Blue Economy Beyond Fisheries

According to the World Bank, the blue economy is the “sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of [the] ocean ecosystem.”⁵⁰ Sectors in this space include fisheries and aquaculture, fish processing, coastal and marine tourism, marine transportation, renewable energy, shipping, and ports. The sustainable blue economy also indirectly contributes to economic activities through carbon sequestration, coastal protection, and the existence of biodiversity.⁵¹ The African Union estimates that the sustainable blue economy contributes USD \$300 billion to the African continent annually and generates 49 million jobs.⁵² In West Africa, the World Bank estimates that the sustainable blue economy contributes to 56% of the region’s GDP.⁵³ Fisheries are an important contributor to West Africa’s sustainable blue economy, but they are far from the only sector. Interview and workshop participants identified additional sectors—coastal and marine tourism, and shipping and ports—as important contributors to the region’s sustainable blue economy.

COASTAL AND MARINE TOURISM

The beaches and coastline of West Africa draw tourists from around the world. Several West African states have developed niche ecotourism industries focused on the sustainable enjoyment of the country and natural resources. In The Gambia, over 42,000 individuals are employed by the tourism industry, which contributes to 20% of GDP.⁵⁴ In Senegal, tourism revenues before COVID-19 contributed up to USD \$833 million to the economy each year. The industry employs approximately 150,000 Senegalese and is the country’s second largest source of foreign exchange, behind fisheries.⁵⁵ In 2023, Ghana’s tourism industry is projected to generate USD \$3.4 billion in revenue and create 150,000 new jobs.⁵⁶

The Gambia’s tourism industry is focused on responsible tourism, which promotes interaction with local communities and ensures they benefit directly from tourist dollars. Dialogue and Workshop participants from the Gambian eco-tourism industry noted that tourism companies provide education and healthcare services for women and children in local communities and provide full social security and benefits to workers. The three fishmeal factories in The Gambia were built in communities with strong ecotourism industries. Air, water, and noise pollution from the factories has driven away tourists and forced ecolodges to close.⁵⁷ Stakeholders noted that the loss of tourism jobs has forced former employees back into poverty and led others to migrate, sometimes embarking on dangerous and illegal journeys to Europe in search of employment.

SHIPPING AND PORTS

90% of international trade is transported by sea,⁵⁸ and shipping volume that passes through West African ports has doubled in the last decade.⁵⁹ From 2009 to 2020, container port traffic in Western and Central Africa has increased 204% from 2.66 million to 8.09 million TEU.⁶⁰ Data since 2000 demonstrates that GDP growth and container trade traffic are closely aligned.⁶¹

The Gulf of Guinea accounts for 63% of the African Continent's trade and 56% of port container traffic.⁶² From 2009 to 2020, container port traffic in Western and Central Africa increased 204% from 2.66 million to 8.09 million twenty-foot equivalent units (TEU). West Africa's primary ports are the Autonomous Port of Cotonou, Benin, Autonomous Port of Abidjan, Côte d'Ivoire, Port of Tema, Ghana, Conakry Port, Guinea, Freeport of Monrovia, Liberia, Lagos Port Complex, Nigeria, Autonomous Port of Dakar, Senegal, Port of Freetown, Sierra Leone, and the Port of Lomé, Togo.⁶³

Africa was especially hard-hit by the 2020 supply chain crisis. From the third quarter of 2020 to the second quarter of 2022, port traffic/shipping connections in Africa fell 12.4% (compared to the global average decline of 7.2%).⁶⁴ As a result, West African governments are pursuing ambitious port expansions and development projects to increase port handling capacity and improve efficiency to meet the demands of international shipping companies that increasingly prefer deep water terminals to better process larger, more efficient ships and to better demonstrate resilience in the face of changing global trade structures.⁶⁵



Chinese trawlers sit docked at the Port of Dakar, Senegal. © Environmental Justice Foundation (EJF).

The PRC's Involvement in West Africa

West Africa is a focus area for Chinese investment in both natural resources and infrastructure, and the PRC maintains close bilateral relations with many states in the region. Nineteen West African states have signed onto the Belt and Road Initiative (BRI) as of 2023.⁶⁶ Through the BRI, the PRC and Chinese companies have provided significant investments and loans to West African countries. In Ghana, for example, the PRC agreed to finance a USD \$2 billion investment deal to extract bauxite—a sedimentary rock with high aluminum content—in the Upper Guinean Forest in 2018.⁶⁷ The Chinese-owned Sinohydro Corporation financed the construction of the Bui Dam in Ghana, which was finished in 2013. The 400-megawatt dam cost USD \$790 million and had previously been rejected for financing by the World Bank and EU over concerns about its potential environmental impacts.⁶⁸

In many West African countries, fisheries and fisheries infrastructure are focus points for BRI investment. The PRC has made multiple large investments in Ghanaian ports; the Bank of China contributed USD \$231 million in a syndicate loan for the expansion of the Port of Tema, near Accra. China Harbor Engineering Company won the bid for the USD \$600 million development of the port of Aatabou on its far western coastline.⁶⁹ Chinese banks loaned Côte d'Ivoire USD \$875 million to expand the main port of Abidjan, a project with a total ceiling of USD \$934 million.⁷⁰ In May 2021, the PRC and Sierra Leone signed an agreement for USD \$55 million to build a 25-acre industrial fishing harbor and fishmeal processing factory on a beach and next to Western Area National Park, an area recognized for its rain forests and biodiversity. Local NGOs are fighting for more openness on the terms and negotiations of this deal, which they claim will harm fish stocks and the park.⁷¹

A 2020 report from the Overseas Development Institute detailed that Ghana maintains the largest registry of Chinese DWF vessels (137), despite Ghanaian law prohibiting foreign ownership of industrial trawler vessels.⁷² According to experts, Chinese beneficial owners enter the industrial trawler fleet using front companies, some with influential local business partners. A 2021 report by the Coalition for Fair Fisheries Arrangements found that of 80 industrial fishing vessels based out of the port of Abidjan, Côte d'Ivoire, 55 were joint ventures owned by Chinese companies. The joint venture vessels are of Chinese origin and are either re-flagged to Côte d'Ivoire or chartered, maintaining their Chinese flag. Ivorian-flagged vessels and those in joint venture agreements receive fuel subsidies, reduced port taxes, and lower licensing costs.⁷³



Two vessels owned by China National Fisheries Corporation (CNFC) sit docked at the Port of Freetown, Sierra Leone. ©tm-tracking.org.

Chinese companies have also developed “fishing bases” in Mauritania, Ghana, Guinea-Bissau, and Angola.⁷⁴ Fishing bases are developed as “one-stop-shops” for the Chinese fishing industry and comprise PRC-owned ports, processing facilities, and fishing and support vessels developed under the BRI. The 13th and 14th Five-Year Plans on Distant Water Fisheries highlight the development of overseas fishing bases as strategic priorities key to the success of the industrial DWF.⁷⁵ Functioning as private ports, bases are not subject to the same level of inspection or oversight as public landing sites.

Fisheries Management in the PRC: Successes and Failures

The expansion of the PRC’s fisheries industry and interests to West Africa and other parts of the world is closely tied to its domestic fisheries policies. Managed by the Ministry of Agriculture and Rural Affairs (MARA), the PRC’s early domestic fisheries policies emphasized economic growth and growing domestic food supply, at the expense of fish stock and marine environmental health in their domestic waters. Beginning in the 1970s and 1980s, fish stocks in the PRC’s domestic waters collapsed as a result of overexploitation and mismanagement. Ambitious targets for fish self-reliance coupled with market reforms introduced by the Open Door Policy (1978) called for the rapid development of the PRC’s fishing industry.⁷⁶ No. 5 Central Document (1985) aimed to accelerate the development

of the PRC's marine fisheries, both domestically and internationally. The policy pushed for the privatization of fishing vessels, supplemented by expanding blue foods production and the growth of distant water fishing fleets.⁷⁷ Annual marine catch production grew from five million tons in 1978 to 13.3 million tons in 1998.⁷⁸ The introduction of price controls and the private sector into the fishing industry made previously unprofitable forms of fishing viable, further expanding the industry.⁷⁹ By the mid-1990s, the PRC had become the largest fishing nation in the world, with over 250,000 registered vessels operating in domestic and international waters and on the high seas.⁸⁰

Intense fishing pressure in the PRC's domestic waters and lax enforcement of conservation and management regulations severely damaged coastal and marine ecosystems, causing the domestic fisheries to suffer. By the 1990s, finfish stocks in the PRC's EEZ had collapsed, driven by overexploitation and poor management. By 2017, over 50% of the PRC's coastal wetlands, 57% of mangroves, and 80% of coral reefs had been lost to development.⁸¹ Intensive aquaculture in coastal waters has also led to increased nutrient pollution, fish diseases, and harmful algal blooms.⁸²

In response, the PRC government has implemented a series of management mechanisms and pilot projects aimed at rehabilitating previously overexploited marine resources and conserving important coastal and marine ecosystems. Vessel buy-backs and fisher relocation programs have reduced the fishing effort on some of the PRC's domestic waters. The introduction of closed seasons and total allowable catch has introduced controls on output.⁸³ Stock assessments and fishery resources surveys are regularly conducted, although the PRC suffers from a lack of historical fisheries data to support important management benchmarks.⁸⁴

BLUE FOODS

The PRC's demand for seafood far outweighs the supply from wild-caught domestic and overseas fisheries. To meet the market's appetite, the PRC has invested heavily in blue foods, including fish, invertebrates, algae, and plants cultivated or caught in aquatic ecosystems.⁸⁵ By 2020, coastal areas devoted to mariculture exceeded two million hectares and produced over 21 million metric tons.⁸⁶ Inland aquaculture covered over five million hectares and produced over 30 million metric tons.⁸⁷ Dialogue participants with expertise on Chinese fishery and aquaculture policy said the central government believes that blue foods are the future of Chinese and global food security.

While important to the PRC's domestic food security, aquaculture and mariculture operations require feed stock, which incentivizes the harvest of small pelagic species, juvenile, and "trash fish" for fishmeal production. Prior to the 1980s, blue food production in the PRC focused on the cultivation of clams, mussels, and plant-eating fish species like carp. Beginning in the 1980s, the PRC introduced mass farming of high-value marine and

freshwater carnivorous species, including shrimp, perch, yellow croaker, and salmon.⁸⁸ Carnivorous species are fed with fishmeal. It is estimated that four million metric tons of trash fish are caught in Chinese waters each year and turned into aquaculture and mariculture fodder.⁸⁹ The PRC's demand for fishmeal has driven fishing and processing companies overseas. A Chinese fisheries expert believes that DWF vessels off the coast of West Africa are incentivized to target small pelagic species because they are processed into fishmeal and exported back to the PRC.

MARINE SPATIAL PLANNING

The PRC was one of the first countries to implement science-based marine spatial planning. Article Seven of its Marine Environmental Protection Law (1999) mandates the state to develop a marine zoning scheme in addition to national and regional marine environmental protection plans.⁹⁰ The State Oceanic Administration (SOA) undertook a national exercise to zone the PRC's coastal areas based on their natural and socioeconomic characteristics. The SOA developed two forms of marine spatial planning: marine functional zoning (MFZ) and marine environmental functional zoning (MEFZ). MFZ divides the PRC's waters into zones according to their major use (tourism, fishing, aquaculture, conservation, petroleum exploitation, etc.) considering both national development goals and environmental protection. MEFZ divides the ocean into different ecological function areas based on water quality protection.⁹¹

Local and provincial governments have a strong say in zoning their marine and coastal areas, but it is ultimately up to the central government to approve the plans. This mixed top-down, and bottom-up approach was noted as a disadvantage of the program by a Chinese expert. He highlighted that it is difficult for the central government to hold the local and provincial governments accountable and strictly comply with their own zoning, and countries in West Africa or elsewhere that wish to adopt this approach should be mindful of the PRC's experience.

MARINE PROTECTED AREAS

The PRC has a network of 326 MPAs and aquatic germplasm reserves, protecting almost 13% of the country's marine and coastal habitats.⁹² Articles 21, 22A, and 23 of the Marine Environmental Protection Law (1999) directs the Central and local governments to establish MPAs in areas with unique or threatened marine biodiversity.⁹³ There are several different types of MPAs, ranging from fully protected, no-take zones to multi-use areas. Marine nature reserves are no-take zones designated to protect endangered species and critical ecosystems. Ecotourism and research are allowed in buffer zones, while the reserve itself is protected from all human activity. Special MPAs allow for ecotourism, mariculture, research, and sustainable fishing. Zones of special MPAs can be designated as no-take. Fishery conservation zones protect commercially important and rare fish species. They are often located in breeding

grounds or along migratory routes. However, according to Chinese fisheries experts, most MPAs allow and/or allow commercial fishing and mariculture within their boundaries, and reflect the sometimes competing priorities of the government bodies responsible for these areas, including the Ministry of Natural Resources, the Ministry of Ecological Environment, as well as the Ministry of Agriculture and Rural Affairs and relevant local bodies.⁹⁴

SEASONAL FISHERIES CLOSURES

Since 1995, fishing moratoria have been implemented in the Bohai Sea, Yellow Sea, South China Sea, and East China Sea to allow stocks to regenerate. In waters north of 35°N in the Bohai and Yellow Seas, fishing bans last from 1 May to 1 September each year. In waters between 35 °N and 26°30 N in the Yellow Sea and the East China Sea, fishing is banned annually from 1 May to 16 September. Vessels that use truss trawls, cage and pot, gill nets, or lift nets may apply for special permits to fish for shrimp, crab, or small pelagic species during the closed season in these waters. In waters between 12 °N and 26°30 N in the East China Sea and the South China Sea, fishing is banned from 1 May to 16 August.⁹⁵ The Chinese Coast Guard patrols fishing grounds and ports to enforce the bans. Recognizing the economic impact on fishers, in the 2022 closed season, the city of Qingdao, Shandong province provided USD \$10.6 million in marine conservation subsidies to fishers affected by the bans.⁹⁶

Current Fisheries Policy Priorities in the PRC

The PRC's 14th Five-Year Plan for economic development was approved by the National People's Congress in March 2021. The plan details the PRC's near-term economic, defense, political, technological, social, cultural, environmental, and other policy priorities for 2021-2025.⁹⁷ The 14th Five-Year Plan also establishes long-term objectives for 2035, the first of the PRC's five-year plans to do so.

The 14th Five-Year Plan explicitly discusses ocean issues and indicates a renewed interest in and prioritization of ocean issues by the Chinese Communist Party. Article 33 directs the PRC to “adhere to . . . mutually beneficial cooperation, coordinate and promote marine ecological protection, maritime economic development, and maritime rights maintenance, and accelerate the construction of a maritime powerhouse.”⁹⁸ It establishes three priorities: (1) build a modern maritime industry system; (2) build a sustainable ecological environment; and (3) deeply participate in global ocean governance.

The first section of the 14th Five-Year Plan highlights the further sustainable development of the PRC's blue economy, including through blue foods and states “We will optimize the layout of offshore green aquaculture, build marine pastures, and develop sustainable pelagic fisheries.” Section two directs the relevant agencies to establish integrated coastal, riverine, and marine management systems (“We will accelerate the comprehensive governance of

key maritime areas, establish a river basin-estuary-coastal waters linkage mechanism for the prevention and control of pollution, and promote the protection and construction of beautiful bays”), and to improve pollution controls and states, “We will expand the scope of control over the total discharge of pollutants into the sea and ensure the water quality of river sections entering the sea”. Section three emphasizes the need to develop partnerships with other coastal and maritime nations and participate in global ocean governance to promote the construction of “a maritime community with a shared destiny” (“We will actively develop blue partnerships, deeply participate in the formulation and implementation of international ocean governance mechanisms and related rules, promote the construction of a fair and reasonable international maritime order... We will deepen practical cooperation with coastal nations in the fields of marine environmental monitoring and protection, scientific research, and maritime search and rescue and strengthen the survey and evaluation of deep-sea strategic resources and biodiversity.”) Notably, while the 14th Five-Year Plan calls for biodiversity conservation and improved management in domestic water, it does not address sustainability issues in the PRC’s DWF.⁹⁹

The Opinions of the Ministry of Agriculture and Rural Affairs on Promoting the High-quality Development of Pelagic Fisheries During the 14th Five-Year Plan (“14th Five-Year Plan on Distant Water Fisheries”) establishes the main objectives for the sector’s development and management through 2025. The plan’s objectives are to stabilize the total output of DWF by 2025 at 2.3 million tons; stabilize the number of DWF vessels, improve their quality and reduce incidents of non-compliance; enhance the capacity of fishery resource surveys; and improve supervision, management, and international compliance measures.¹⁰⁰ The document serves as guidance for provincial and local governments to implement the 14th-Five Year Plan in the DWF sector. It is “soft law,” without any penalties, and optional for state and local governments to implement.

The 14th Five-Year Plan on Distant-Water Fisheries establishes six general principles: insist on green development; adhere to win-win cooperation and development with other states; adhere to the development of the whole supply chain; adhere to safe and stable development; enhance the comprehensive governance capacity of the DWF fleet; and deepen participation in international fisheries governance. Notably, it suggests the development of a comprehensive regulatory mechanism for the DWF fleet through vessel monitoring, electronic fishing logbooks, remote video surveillance, high seas re-export supervision, and product traceability.¹⁰¹

Political Will in Support of Oceans and Environment

Environmental and ocean issues are of high political salience for the national government. Stakeholders from Chinese environmental CSOs stated that the government has moved environmental issues to the center of domestic policy making, and the long-term value of a healthy environment is well understood. The Environmental Protection Law (1989)

mandates the incorporation of environmental protection into national and economic development plans, and directs the State to, “adopt economic and technological policies and measures favourable for environmental protection.”¹⁰² Under Article 10, the governments of provinces, autonomous regions, and municipalities (people’s governments) are empowered to establish standards for environmental quality and pollution discharge that are more stringent than national level standards. Projects that may cause pollutants are required to conduct environmental impact assessments¹⁰³ and to adopt effective measures to reduce discharge.¹⁰⁴ Similarly, the Marine Environmental Protection Law (1999) establishes responsibility for marine environmental protection, outlines requirements for marine conservation and resource use, and establishes strict pollution controls.¹⁰⁵

In 2018, “Ecological Civilization” was enshrined in the Constitution of the People’s Republic of China. The concept refers to a set of values and development concepts to promote sustainable development in policy and implementation, both through domestic reform efforts and, increasingly, in China’s advocacy for environmental concepts around the world, such as through its recent presidency of the UN Convention on Biological Diversity (CBD).⁹¹ It is a concept closely linked to President and Communist Party General Secretary Xi Jinping, alongside other slogans such as the “Community of Common Destiny”, and closely associated with his well-publicized speeches at the UN in 2020 and 2021, which set significant domestic and overseas decarbonization goals.⁹²

Much of the PRC’s conservation policies, including the CBD, are informed by spatial planning and particularly by the concept of “ecological conservation redlines” (ECRL), which are used to delimit especially functional, unique, or fragile ecological areas for large-scale, holistic environmental management. Inside redlined areas, development and construction are not allowed.¹⁰⁶ Under this policy, 25% of the PRC’s land has been designated for protection.¹⁰⁷ The concept of ECRL has been adapted for marine conservation as marine ecological redlines (MERL). MERL refers to waters zoned to protect ecologically sensitive, ecologically functional, and ecologically fragile marine areas through the implementation of strict control measures and legal protection.¹⁰⁸ Notably, however, MERL focuses on restricting development and improving water quality, rather than controlling fishing or other extractive activities for biodiversity conservation.¹⁰⁹

The PRC’s legal and policy doctrine of oceans and environmental protection related to water quality and pollution has seen some successes. One Chinese expert noted that beginning in 2013, city and provincial governments have issued sweeping reforms for the fishmeal industry to tackle water and air pollution. The city of Rongcheng, Shandong province issued the Fishmeal Industry Environmental Comprehensive Improvement Implementation Plan to reform fishmeal production, end illegal business practices, mandate facility and sewage system upgrades, and establish an industry credit system. In 2017, the Central Environmental Protection Inspection Units visited fishmeal factories across Sichuan, Shandong, Zhejiang, and Hainan provinces. Following the visits, they suspended operations and ordered companies to carry out environmental reforms to tackle air pollution.

Coastal and marine ecosystem protections have rehabilitated previously degraded habitats and supported the population rebound of endangered species. From 2016 to 2020, the PRC restored 1,200 kilometers of coastline and 23,000 hectares of coastal wetlands.¹¹⁰ Now, 22% of shallow water habitats (<10m) and 20% of waters 10-50m are protected by some form of MPA.¹¹¹ In 1992, the PRC established the National Nature Reserve for Spotted Seal in Dalian, Liaoning province. Conservation efforts in the reserve and in neighboring waters have resulted in an increase in spotted seal population numbers from 890 individuals in 2007 to 2,000 individuals in 2015.¹¹²

The PRC's incorporation of ecological and conservation considerations into domestic policies and investments is slowly making its way overseas. The 14th Five Year Plan on Distant-Water Fisheries suggests that DWF companies "adhere to green development" and "support green and environment-friendly resource utilization."¹¹³ PRC policymakers are working to "green" the BRI in line with the UN 2030 Agenda for Sustainable Development. The Green BRI promotes quality bilateral and regional cooperation with a special focus on green infrastructure, green energy, and green finance.¹¹⁴ In 2021, the Green Development Guidelines for Overseas Investment, published jointly by the Ministry of Commerce and the Ministry of Ecology and the Environment, encouraged Chinese companies to adhere to the "green development concept" and implement environmental impact assessments and due diligence.¹¹⁵ Furthermore, it encouraged Chinese businesses to "follow international green rules and standards" when those of host countries are insufficient."¹¹⁶

Offshoring the PRC's Fishing Industry

The PRC has the largest distant water fishing fleet in the world. It defines this fleet as vessels fishing in the EEZs of other countries and on the high seas, but not in adjacent seas (Yellow Sea, East China Sea, South China Sea). According to official statistics, in 2021 there were 2,559 legally registered and Chinese-flagged DWF vessels, landing a total catch of 2.2456 million tons.¹¹⁷ These statistics do not include vessels that are owned by Chinese companies but are flagged to other states, like the Fuzhou Hongdong Pelagic Fishing Co., Ltd. fleet flagged to Mauritania, or are owned under joint-venture agreements abroad, like vessels in Ghana's tuna fleet. According to an expert in the PRC's fisheries policy, if a vessel de-flags from the PRC and re-flags to another country or entity, it must undergo a formal, recorded cancellation or annulment procedure with PRC fisheries authorities. Chinese-owned vessels that are not flagged to the PRC are not subject to Chinese laws and regulations, instead these vessels are the responsibility of their chosen flag state.



The PRC-flagged Lu Yan Kai Luan 877, 315, and 316 transship in waters of Sierra Leone. ©tm-tracking.org.

From 2019 to 2021, the DWF fleet fished in the EEZs of 80 countries, concentrating their fishing effort in the Pacific Islands, West Africa, and off the coast of western South America.¹¹⁸ The PRC's DWF fleet, like those of other nations, obtains legal permission to fish in foreign waters through fisheries access agreements. To fish in foreign EEZ's, DWF vessels must obtain a license from the Ministry of Agriculture and Rural Affairs. From 2019 to 2020, 62% of offshore licenses approved by MARA were for operations in the territorial waters of West African states.¹¹⁹ MARA has taken steps to increase openness and now publishes data on vessels approved to operate outside of Chinese waters and information retrieved from the Criminal Record of Fishing Vessels on PRC-flagged vessels.¹²⁰ According to a PRC fisheries policy expert, the consulates and embassies of coastal countries also have a record of these licenses. Notwithstanding this, Dialogue and Workshop participants stated that they are unable to access lists of PRC-flagged or other foreign vessels fishing in West African countries' territorial waters, unless mandated by an external initiative like the Fisheries Transparency Initiative.

The PRC DWF fleet's first access agreement in West Africa was signed with the government of Guinea-Bissau in 1985. Economic reforms in the 1980s allowed private enterprise to invest overseas with the condition of having a local partner.¹²¹ The 1986 Fisheries Law privatized fishing vessels, making fisheries a viable industry for overseas investment.¹²² According to an expert on Chinese DWF, fisheries served as a pilot project for such investment. The State

Council, deeming fisheries as less strategic than the poultry, livestock, or agriculture sectors, released the sector from National Planning and allowed private capital to flow in. At the same time, the PRC was expanding its diplomatic relationships, enabling the establishment of more bilateral fisheries access agreements.

According to an expert on the PRC's fisheries, with the collapse of many of the PRC's nearshore fisheries in the 1970s and 1980s, the government directed the expansion of the DWF fleet with the goal to bring fish caught overseas back to the PRC for human consumption. Around this time, the PRC's growing youth population found ample employment opportunities aboard DWF vessels.

The “Going Out” policy, implemented in 1999, further facilitated the growth of the DWF fleet through the promotion of greater foreign direct investment. A primary focus of the 13th Five-Year National Fishing Industry Development Plan (2016-2020) was the expansion of investment in DWF capacity.¹²³ Specifically, it looked to develop new squid and tuna fisheries through the “Base + Boat” model and highlight the BRI as a framework for MARA to pursue future bilateral fisheries access agreements.¹²⁴ The 14th Five-Year Plan on DWF recommends “deepen[ing] foreign exchanges” in DWF under the principles of mutual cooperation and benefits as members of a “maritime community with a shared destiny.”¹²⁵

Although the DWF represents less than 0.1% of PRC overseas direct investment, it is a point of contention with other coastal and fishing nations.¹²⁶ The PRC's DWF fleet has developed a reputation for IUU fishing and unsustainable practices around the world, as MCS and enforcement has been unable to keep up with fleet expansion. From 2019 to 2021, PRC-flagged DWF vessels were found to have violated conservation measures in the remits of three RFMOs: ICCAT, the Western and Central Pacific Fisheries Convention, and the Inter-American Tropical Tuna Convention.¹²⁷ PRC-flagged and owned vessels have been caught IUU fishing in all 10 West African states profiled in this report.¹²⁸

The PRC has implemented a series of reforms intended to combat IUU fishing in its DWF fleet. DWF vessels are required to have a VMS turned on at all times while at sea. The Fisheries Bureau can conduct random inspections of automatic identification systems and VMS data; such inspections are warranted when a certain vessel diverges into irregular ship routes, or its signal is missing. All Chinese vessels operating on the high seas across the globe are mandated to have observers aboard and to comply with the RFMO regulations. Vessels operating inside other countries' EEZs are not subject to the Chinese government's mandate of observers onboard, and the government defers to the coastal states' regulations on this issue. According to Chinese fisheries experts, since 2021, there has been a significant increase in coverage of government observers onboard Chinese DWF vessels on the high seas.

In 2017, MARA published the first blacklist of PRC DWF vessels, companies, and captains known to have engaged in IUU fishing. Blacklisted captains and company bosses are banned from working in the fishing industry.¹²⁹ Chinese fisheries experts said this measure was

particularly effective because the blacklisting of individuals endangers the future ability of companies to apply for DWF permits; thus they are afraid of the risks of IUU fishing. DWF companies self-report compliance with laws and regulations to an index. The initiative is rolled out to increase the transparency of fishing companies to the public. Index scores are published annually, and companies are ranked, which has implications for their capital-raising efforts, IPOs, reputation, and product sales.



Local workers take a break at the Chinese-owned Lem Seafood Factory in Nouahibou, Mauritania.
© Liu Yuyang / Greenpeace.

Track II Dialogue: Charting a Blue Future for West African-China Cooperation on Sustainable Fisheries

Overview

Building on the research and interviews covered over three years, the Track II Dialogue was held over three days in May and June 2023 to discuss key fisheries and blue economy issues. Nine participants from international and domestic environmental civil society organizations from the PRC and 12 representatives from international, regional, and local environmental civil society organizations, academia, journalism, and the small-scale fishing and tourism industries from Ghana, Mauritania, Senegal, and The Gambia met in a hybrid format over three sessions to discuss key fisheries and blue economy issues.

The objectives of the Track II Dialogue were to bring together participants from Chinese and West African CSOs to develop a shared understanding of West Africa's blue economy related to fisheries, and challenges West African countries face from industrial fishing, including FMFO operations. Discussions centered on four key themes, described below.

Key Themes

OPENNESS IN GOVERNANCE

Both Chinese and West African stakeholders identified opaque and poorly implemented governance as obstacles to sustainable domestic fisheries management and international cooperation on sustainable blue economy development. The lack of openness in fisheries management and governance also reduces the public's confidence in the authorities. West African CSO participants described how there is very little publicly available information on fisheries access agreements, foreign investment, and the outcomes of investigations into allegations of IUU fishing or other breaches of environmental laws.

Dialogue participants noted that enforcement of anti-IUU fishing and other environmental laws and regulations are often compromised by corruption, in addition to a lack of financial, technical, and human resources and capacity. For example, the Gambia Ministry of Fisheries and Water Resources posts observers at all landing sites to record and inspect incoming vessels and catch. However, according to one expert, they are paid poorly and are driven to

take bribes to make ends meet. West African CSO participants said their governments do not, but should, ensure public access to the outcomes of government investigations on IUU fishing or non-compliance cases in the West Africa region.

The details of fisheries access agreements in West Africa, apart from EU SFPAs, are not available to the public, and there are no public accountability mechanisms to ensure that funds received through the agreements are distributed according to the terms of those agreements. Opaque ownership structures obscure who owns vessels, what subsidies they receive, and the terms of their licenses. Information about foreign investment, by Chinese and other foreign companies, is similarly opaque. However, West African CSOs noted that it is particularly difficult to get engagement with Chinese stakeholders, including embassy and company officials.



Local fishermen land their pirogue in Guinea-Bissau. Half of the reefers and trawler boats visible in the background are under arrest for fishing offenses. © Pierre Gleizes / Greenpeace.

FOOD SECURITY AND BLUE FOODS

Food security challenges was a second theme shared by both West African and Chinese CSOs. In the 1980s in China, concerns regarding domestic food security drove the PRC to substantially increase its DWF fleet at that time. A growing population required additional sources of high-quality protein, and many young people needed jobs. Today a similar situation has taken hold in West Africa, where concerns over local food security are heavily featured in discussions of IUU fishing and fishmeal factories. Local communities rely on sardinella, bonga shad, and other small pelagic species for food and economic security that are also targeted by foreign fishers and used as raw materials in fishmeal factories.

Dialogue participants expressed the need to develop a balanced and open approach to FMFO factory development and operations in West Africa. Chinese participants noted that they were not previously aware of the food and economic security concerns shared by West African communities and thought it was possible that the PRC government in Beijing was also likely unaware. This is despite local community outreach to PRC embassies in West African capitals and protests against Chinese-owned fishmeal factories reported in the international media. However, for the PRC government to act on the concerns related to overseas fishmeal factories, one expert suggested, it should be incorporated into broader discourse around food security, because formal action by the PRC government on such a specific sector is unlikely. Another participant suggested that in addition to environmental impact assessments prior to siting new FMFO factories, Chinese companies should be required to conduct community impact and labor welfare surveys before building factories. West African CSO representatives stressed that while PRC vessels and Chinese-owned factories do engage in unsustainable and detrimental business practices, it is also up to West African governments to develop, implement, and enforce laws that limit damage to the environment and communities.

According to research and interviews, the PRC's blue foods revolution started in the 1980s, but had environmental problems. Aquaculture ventures often damaged the coastal environment, particularly through toxic and polluted water runoff, loss of fish habitat, fish die-offs, and human health concerns due to overuse of chemicals to prevent fungal and parasitic diseases, and antibiotics, like oxytetracycline, which is used to prevent bacterial infections. Early outcomes of actions and policies were uncertain, yet after 40 years, the PRC has developed cutting-edge technology and regulations intended to balance food production and economic growth with environmental protection. Government and private sector stakeholders have recommended that these lessons and technologies could be transferred to West African states, some of whom are just beginning to invest in their domestic expansion of blue foods and employed by Chinese companies. For example, in July 2022, Senegal announced a plan to increase oyster farming by 500 percent by 2032. Mirroring the conditions that sparked the growth of blue foods in China, this was a reaction and alternative to depleted fish stocks caused by IUU fishing and overfishing. Oysters are farmed in Senegal's southern provinces of Casamance and Siné-Saloum, mostly by women. The industry expansion aims to catalyze economic and social development and women's empowerment in a model that is more financially and environmentally sustainable than wild capture fisheries.¹³⁰

TECHNOLOGY AND SCIENTIFIC TRANSFER

Chinese stakeholders in the Track II Dialogue series expressed that the PRC government cares deeply about its relationship with West African countries and sees itself as a partner for good through South-to-South development cooperation. West African CSO representatives were receptive to that notion. All agreed it would be fruitful to have experts work together and that West Africa stakeholders could benefit from Chinese funding to build essential fisheries research, monitoring, and management capacity, as well as marine protection.

In addition, PRC expertise could transfer badly needed technical skills in marine science, fisheries management, and environmental protection to West African institutions. This type of mutual support could be helpful to West African countries, so long as the relationship is balanced, open, and accountable to the public.

The PRC's 14th Five-Year Plan on Distant-Water Fisheries aims to strengthen bilateral fisheries cooperation by considering the fisheries policies and development needs of local countries. West African CSO representatives identified the lack of capacity and funding to conduct stock assessments as an area that the PRC could assist with. PRC researchers and academics could work alongside their West African colleagues in government, civil society, and academia to conduct joint scientific research and author joint publications, develop and implement new technologies, and help design marine protected areas and zoning schemes while sharing best practices. This suggestion closely aligns with the 14th Five-Year Plan's maritime priorities to deepen cooperation with other coastal nations in marine environmental monitoring and protection and scientific research,¹³¹ and the 14th Five-Year Plan on Distant Water Fisheries direction to deepen bilateral fisheries cooperation by considering the fisheries policies and development needs of local countries.¹³²

REGIONAL ACTION

West Africa's productive fishery resources are essential to the food and economic security of the region. Small pelagic species, tunas, and even demersal species migrate up and down the coast of West Africa as the seasons change, crossing multiple EEZs, territorial seas, and even into the high seas. Yet, fisheries are not managed as a bloc, but by individual countries. Unsustainable fisheries management and overexploitation in one country can have direct effects on the region's stocks. Track II Dialogue participants highlighted that bilateral fisheries access agreements, including those between the PRC and Chinese-owned companies with individual West African nations creates a "race for fish" that incentivizes maximum exploitation for short-term gain.

Participants expressed the need for transboundary stocks to be understood and managed at the regional level and for national governments to overcome the 'race to the bottom' mindset of domestic overexploitation. Greater regional cooperation—and sharing the burden—of resource intensive MCS and enforcement was also discussed as important to a regional approach to combating IUU fishing. Some national governments have made attempts to implement this model through bilateral agreements: Ghana and Côte d'Ivoire, for example, conduct joint sea patrols and joint inspections of fishing and fishing-related vessels in port.¹³³ In March 2022, the governments committed to implement a simultaneous fishery closed season.¹³⁴

As individual countries, West African states lack bargaining power in negotiations for bilateral fisheries access agreements with the larger and wealthier states like the PRC. As a bloc, West African states could stand on more equal footing to negotiate fair and balanced

access agreements. Beyond negotiating power, unified regional management could establish clearer anti-IUU fishing regulations, as DWF vessels would be required to comply with a standardized set of regulations throughout the region, rather than a series of specific, often inconsistent rules that change from country to country.

NEGOTIATING FISHERIES ACCESS AS A BLOC: THE SOUTH PACIFIC TUNA TREATY

The Treaty on Fisheries Between the Governments of Certain Pacific Island States and the Government of the United States of America, also known as the South Pacific Tuna Treaty, is the only truly multilateral framework for fisheries access and cooperation in the Pacific, as well as the most transparent access agreement of any kind in the Pacific region.¹³⁵ The South Pacific Tuna Treaty provides fishing access for U.S. commercial purse seine vessels to fish for tuna within the EEZs of 16 Pacific Island parties to the Treaty (Australia, Cook Islands, Federated States of Micronesia, Fiji,

Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu) in a vast area of the western and central Pacific Ocean where approximately 60% of the world's tuna catch occurs. The United States and the Pacific Island parties have historically viewed the Tuna Treaty not simply as a fisheries access agreement, but as a foundation of the economic and political relationship between the United States and the Pacific Island parties. In addition to providing the terms of fishing access, the South Pacific Tuna Treaty also outlines opportunities for joint sustainable fisheries management, as well as cooperation on MCS efforts in the region and maritime security.¹³⁶

Recommendations

The goal of these discussions was to better understand from the perspectives of the two civil societies where West African countries' and China's fisheries' interests and experiences converge and differ, and where more work and cooperation by the PRC and West African nations is needed, with the goal of achieving sustainable fisheries management and resource protection in West Africa.

The Track II Dialogue generated numerous recommendations agreed upon by all participants, which were edited for length and clarity and organized by theme by the Dialogue organizers. The following recommendations are intended for the governments of countries in the Gulf of Guinea and the PRC, although they may be globally applicable.

► OPENNESS IN FISHERIES GOVERNANCE

Improve collaboration between the PRC and West African governments—and stakeholders—on fisheries management in West Africa.

- **Commission an independent gap analysis to better understand the landscape of existing regional fisheries management structures (operational, technical, and institutional) in West Africa, including an analysis of strengths, weaknesses, and opportunities for improvement.**

The fisheries of the Gulf of Guinea are governed by several fisheries management bodies, in addition to national governments, each with ambitious and, at times, overlapping mandates. These bodies each aim to conserve and sustainably manage West Africa's marine resources, promote cooperation in the region, and combat IUU fishing. A lack of trust in these existing bodies is compounded by language, bureaucratic, and funding barriers. A gap analysis will help the various relevant bodies to identify where there is appropriate reinforcement or redundancy, and where action and funding are needed to fulfill their mandates.

- **Establish regular, productive communication channels between China's Ministry of Agriculture and Rural Affairs (MARA) and the national and regional fisheries authorities in West Africa.**

With routine engagement and data sharing between authorities, including the use of VMS and automatic identification systems, new communications channels between fisheries management and enforcement authorities from West African countries and the PRC could improve diplomatic and operational exchanges on sustainable fisheries management in West Africa. Key items for communication would include access agreements, fisheries stock assessments, and incidents of IUU fishing.

- **Create a regional framework for constructive engagement with stakeholders to facilitate information sharing related to fisheries management, with a particular focus on the operations of foreign-owned fishing vessels and companies in West Africa.**

Such a framework would enable Chinese and West African stakeholders involved in fisheries governance (e.g., national authorities, civil society, industry representatives, and other stakeholders) to work together to better understand the complexities of the seafood supply chain. Key stakeholders should include West Africa's industrial and artisanal fishers; processors, including fishmeal and oil factories; and importers and exporters, particularly those exporting seafood products from West Africa to China, Turkey, and the EU.

► COORDINATED REGIONAL ACTION

Integrate new regional and/or multilateral agreements into the existing (and primarily bilaterally focused) fisheries management structures.

- **Develop multilateral fisheries access agreements to better balance negotiating power and streamline access to fisheries resources.**

With a collaborative approach to fisheries access agreements, West African states can better manage their transboundary fish stocks, with the goal of long-term sustainability. Establishing multilateral fisheries access agreements will increase West African bargaining power and offer a role for regional economic organizations (e.g. ECOWAS, ECCAS) as well as RFMOs and subregional fisheries bodies. Beyond increasing bargaining power for West African nations, multilateral fisheries access may be particularly enticing to foreign-owned enterprises by offering a more streamlined approach.

- **Require that a percentage of access and/or licensing fees fund fisheries science, management, and enforcement.**

Fisheries stock assessments are required to combat IUU fishing and better manage West African fisheries for the long-term. Such a percentage requirement, accompanied by an accountability mechanism to ensure that funds were distributed appropriately, would help secure the funding needed to support data collection, fish stock assessments, and capacity building to improve monitoring, control, and surveillance of foreign-flagged distant water fishing vessels.

- **Establish and maintain a regional database of industrial fishing vessels.**

Managed by an existing regional fisheries management body, an effective and useful regional registry of vessels would include all industrial, commercial, and semi-industrial fishing vessels operating in West Africa, with the vessel name, call sign, and registration numbers; active permit or licensing information; captain, crew, and ownership information; as well as gear types and target species. Comparable information on artisanal vessels would also be helpful, as would updated information on stock status, catches/landings, processing, trade, and exports.

► SCIENCE AND TECHNOLOGY TRANSFER

Implement sustainable and science-based fisheries management in West Africa.

- **Encourage the PRC to share its expertise in fisheries science and technology to strengthen the capacities of the West African authorities to implement long-term, sustainable fisheries management policies and programs.**

Exchanges in science, technology, and best practices on effective ecosystem-based management between the PRC and West African states, as well as with relevant regional and sub-regional fishery organizations, could result in a specific plan to implement science-based fisheries management throughout the Gulf of Guinea. This may include joint stock assessments, collaboration on enforcement efforts, and providing operational assistance to implement domestic fishery management schemes.

- **Encourage the PRC to provide on-the-ground training to support marine spatial planning in coastal communities in West Africa.**

The PRC has developed extensive marine spatial plans that establish zones for recreational activities, industry, and conservation in its domestic waters. Few West African countries, aside from Gabon and the Republic of Congo, have implemented marine spatial planning, which could reduce the conflict between industries over the same space and promote marine conservation. PRC scientists, academics, and government officials could share their expertise and experience with their West African counterparts to support the development of local, national, or regional marine spatial plans.

- **Include area-based conservation in national and regional fisheries management.**

The PRC has implemented MPAs and fishery closures in its nearshore domestic waters to conserve important marine habitats and allow for stock regeneration, as have some West African countries, notably Gabon, Republic of the Congo, and Côte d'Ivoire. Working together, Chinese, and West African scientists, academics, and policymakers could collaborate to identify potential locations, develop legal and policy framework, design and implement MPAs, and conduct MCS and enforcement to integrate MPAs into national and regional fisheries management.

► **FOOD SECURITY AND BLUE FOODS**

Promote best environmental management and labor practices for aquaculture development and fishmeal and fish oil production.

- **Take advantage of lessons learned from the PRC's domestic aquaculture development and fishmeal production efforts to support West Africa's ability to implement low impact aquaculture.**

Implementing a sustainable, low-trophic-level FMFO program can provide responsible and affordable blue food to local communities in West Africa and produce products for export to the global market. Stakeholders from the PRC and West Africa can design and implement a balanced approach to FMFO production, including adapting remaining fishmeal production capacity to levels commensurate with available amounts of fish waste or trash fish unfit for human consumption. To support this work, governments can encourage the reconversion of FMFO processing capacity towards products for human consumption. Civil society can establish a sub-regional coalition to adequately address the issues of fishmeal factories, gender equality, and the rights of coastal communities.

- **Implement more rigorous air and water quality requirements for fishmeal factories in West Africa that are comparable to international standards.**

Fishmeal factory host communities in West Africa have complained that air pollution from fishmeal factories has caused respiratory diseases, driven away tourists, increased the number of pests in community gardens, and reduced the quality of life for residents.¹³⁷ Untreated liquid factory waste pumped into nearby lagoons and offshore has caused elevated levels of arsenic, nitrogen, and phosphates which harm the ecosystem and promote the growth of harmful algal blooms. The PRC's local authorities have suspended operations of its domestic fishmeal factories due to air and water pollution that exceeded stringent domestic pollution standards. Overseas factories should adopt Chinese or international standards on pollution and environmental protection if host countries lack comparable laws. West African governments should, in turn, strictly enforce existing environmental laws and develop new, science-based laws and policies where there are shortfalls.



Artisanal fishers pull in a seine net off the coast of Kafountine, Casamance, Senegal. © Clément Tardif / Greenpeace.

Track 1.5 Workshop: Mapping Opportunities for West Africa-China Cooperation on Sustainable Fisheries and a Blue Future

Overview

The Track 1.5 Workshop, “*Mapping Opportunities for West Africa-China Cooperation on Sustainable Fisheries and a Blue Future*,” was held on 9 May 2023 in Banjul, The Gambia, as a closed-door, invitation-only workshop. 21 stakeholders from community groups, NGOs, intergovernmental organizations, the government of The Gambia, journalism, and the fishing and tourism industries came together to discuss IUU fishing, FMFO factories, and West Africa’s blue economy.

The workshop developed a series of recommendations for the governments of the PRC, Senegal, Mauritania, The Gambia, and Guinea-Bissau to implement to promote open governance, improved fishmeal factory operations, sustainable development, and a more equitable blue economy.

Key Themes

COMMUNITY IMPACTS

FMFO factories and associated IUU fishing have negatively affected the environmental, social, and economic health of local coastal communities in Mauritania, Senegal, The Gambia, Guinea-Bissau, and the Republic of Congo. FMFO factories target and process hundreds of thousands of tons of small pelagic species which are a crucial source of income and protein for West African fishing communities. Originally, FMFO factories were established to utilize waste from fish processing operations, but as international demand for fishmeal—particularly to support aquaculture operations in the PRC and Northern Europe has grown—most of the raw material used today is fresh fish. Workshop participants stressed that fish prices have risen in the local markets because of the factories’ fresh fish consumption. In The Gambia there has been a four-fold increase in the price of fish, raising concerns that a crucial source of protein is now unaffordable to many Gambians. According to Gambian fisheries experts, fishmeal factories hire Gambians as day-laborers, while the salaried technical positions are given to Chinese citizens.

The “race for fish” has also resulted in the overexploitation of already depleted fish resources and competition among fishermen, fish buyers, and fish processors. Women buy, process, and market fish at coastal and inland markets. Workshop participants noted that many women are outcompeted by the fishmeal factory suppliers, as these suppliers can offer higher prices for landed fish. As a result, many women have been forced to leave the industry and move away from their communities to find work.

The waste produced by fishmeal production has caused environmental and public health concerns. Untreated liquid waste is dumped in nearby waters and the smoke from factory chimneys has an intense, noxious odor, which participants noted has caused respiratory problems in surrounding villages. In addition to ecological and health impacts, workshop participants stressed that the development of factories has caused a decrease in coastal tourism in villages that depend on it for revenue and their livelihood.

REGIONAL ACTION

CSOs have played crucial roles in raising awareness around IUU fishing, fishmeal factories, and other environmental issues. In Senegal and The Gambia, the Cayar and Gunjur communities filed separate lawsuits against fishmeal factories for the environmental and socioeconomic damages incurred since the start of their operations. These concerns have been elevated by journalists and public media campaigns. Although these campaigns have gained global attention, they have not been successful in implementing more stringent environmental regulations nor in bringing about significant restitution to communities for loss and damage.

Workshop participants agreed that regional collaboration is needed between West African national authorities and CSOs for West Africa to effectively address ocean and environmental issues at a regional level. Enhanced cooperation between and among West African states and stakeholders could produce a stronger political foundation and allow for more balanced negotiations on foreign investment, particularly when it comes to the PRC. Many West African countries are small and may lack the resources needed to be able to effectively study and manage their fisheries. Participants agreed that transboundary stocks could be better managed if regional regulations were implemented instead of or in addition to existing national management schemes.



Members of the Kayar Community, Senegal, outside the High Court of Thiès, which heard a lawsuit against a Spanish company over the negative environmental and health impacts of its fishmeal factory. © Annika Hammerschlag / Greenpeace.

REGULATORY WEAKNESS IN WEST AFRICA

According to regional fisheries experts, the typical vessel engaged in IUU fishing in West Africa does have a license to fish but commits infractions such as using illegal gear, (particularly nets with mesh below minimum size requirements), fishing in restricted areas, exceeding catch quotas, mis-declaring or underreporting catch, and conducting illegal transshipment at sea. Many foreign-owned vessels operating in the region fly flags of convenience or a flag from the country they are fishing in rather than their home country.

Regulatory weakness in West African countries extends to the post-harvest sector on land, including FMFO factory operations. CSOs stressed that the PRC's stringent domestic environmental standards and regulations should be enforced on Chinese-owned factories operating abroad. This reflects recommendations of the Green BRI, which suggests that Chinese companies operating overseas should adopt the PRC's or international standards on pollution and environmental protection if host countries lack comparable laws.¹³⁸ Workshop participants agreed that the BRI offers opportunities for beneficial and sustainable development across West Africa, but stressed that there be open lines of communication for engagement and participation between Chinese and West African stakeholders are essential to ensure fairness and openness.

Among the challenges of regulating fishing fleets across the West African region, there are research gaps that need to be filled and capacity building is needed for long-term sustainability of the fisheries sector. One possible solution is to carve out a percentage of licensing agreement fees to go toward research programs, fisheries management, and enforcement of fishing policies.

OPEN GOVERNANCE

There is a clear need for open governance practices in West Africa and China. Many community members do not have access to information that is required for effective fisheries management and MCS. There is distrust between civil society and government, different governments in West Africa, and West African countries and China. Open governance and community participation and advocacy could help improve the current situation, which is unsustainable.

Recommendations

► Provide open data to better manage fisheries, especially migratory stocks.

In the PRC, open data and open governance laws already in place should be adhered to when Chinese companies are operating in the West African region. There is a need for proactive disclosure of investments made, resources being exploited and to what level, and which access agreements are in place. There is also a call to connect policy makers and government officials with community activists and civil society groups who are on the ground and experiencing issues directly. This will allow for more public participation and engagement in policy decisions made regarding fisheries management and fishmeal factory allowances.

► Learn from China's own experiences and capabilities managing domestic fisheries and fishmeal factories.

The PRC experienced devastating fisheries collapse in its domestic waters due to overexploitation and mismanagement. In response, the Central government initiated an intensive reform of fishing laws and increased marine spatial planning. The PRC also spearheaded the concept of “ecological red lines,” which have become a signature policy in Chinese environmental governance, to remove humans from important ecological areas that have been heavily impacted and allow them to recover. The PRC has also played a substantial role in supporting research and science to better inform environmental policies and innovations at home. This should be required in West African countries to ensure that Chinese investments are not causing environmental or socio-economic harm.

► **Encourage regional cooperation to form a stronger political foundation and be able to elevate concerns in West Africa more easily.**

Throughout the workshop, stakeholders stressed the need for regional cooperation and collaboration across West Africa. Many important fish stocks are migratory and regionally shared; managing them fairly requires reaching agreement on how to balance short-, medium-, and long-term sustainability goals. Without regional commitment to sustainable management, there will continue to be a race to fish. Fishers and community members should be empowered to be involved with regional policy making and implementation of those policies. They are on the ground and working within communities that have themselves been victims of poor environmental regulations and investments. More capacity-building programs and knowledge exchange will also help to improve the current situation.

► **Redirect investments into ecotourism and better fisheries management rather than fishmeal factories.**

Currently, there is a mismatch in national level policies, where some focus on addressing food security and environmental issues, and others focus on improving economic opportunities and profits. Until these concerns are harmonized, green investment strategies will be challenged. Growth should be inclusive, and development should not come at the cost of people and the ecosystems they rely on. For example, Chinese fishmeal factories have negatively impacted ecotourism operations in The Gambia. Chinese investments could be better directed toward ecotourism ventures and better fisheries management strategies.



Workers on board a Chinese trawler sort fish in Guinea-Bissau's EEZ. © Liu Yuyang / Greenpeace.

Conclusion

Over the past decade, Chinese-owned and -flagged DWF fishing vessels have expanded their presence in West Africa, along with fisheries access partnerships and fishing enterprises. This rapid expansion is occurring in a region of small nations who often suffer from a lack of financial, technical, operational, and institutional capacity and where the political will to improve fisheries monitoring and management, enforce against illegal fishing, and address labor abuses in their waters and coastal communities is either limited or constrained by corruption.

As the PRC continues to grow its DWF fleet, construct new fishing bases, and expand FMFO factories in West Africa, a lack of openness pervades these ventures, accompanied by a reluctance on the part of the PRC government to police its foreign fishing operations. However, this is not unique to the PRC's fishing industry; there is a lack of openness across the global seafood supply chain. The clandestine nature of the industry has led to IUU fishing and other illicit activities that threaten the long-term sustainability of fishery resources and the economic, food, and environmental security of West African coastal countries. Furthermore, concern from West African governments and local fishing communities about the growth of China's DWF operations is increasing as the loss of domestic revenues and jobs becomes clear, along with the obvious harm to the region's shared marine resources. West Africa's sustainable blue economies are increasingly threatened by an opaque system that shuts out stakeholders and ignores community needs.

Despite China's lack of transparency across its DWF fleet and growing concerns about the fleet's impact in West African coastal fishing nations, recent evidence suggests China is moving to improve its image in this arena and reposition itself as a global power. The Chinese Bureau of Fisheries has started to deny some blacklisted IUU fishing vessels from entering Chinese ports and deny licenses to Chinese fishing vessels caught engaging in IUU fishing overseas. China continues to say it will accede to the Port State Measures Agreement and the Cape Town Agreement on the protection of labor rights in the seafood industry. China now requires the use of AIS and VMS on its DWF vessels and agreed to include marine governance as one of its themes in their "greening" of the BRI. China's 14th Five-Year Plan on Distant-Water Fisheries calls not only for comprehensive governance of its DWF fleet, but also for greater participation in international fisheries governance. Overall, the evidence suggests that the PRC is seeking to position itself as

a more responsible player within the seafood industry. With these new rules and laws, continuous implementation, monitoring, and enforcement is required to turn good intentions into sustainably managed fisheries.

There is a need to craft local, regional, and global policy solutions that address both industrial and small-scale fishing operations. Just as IUU fishing operations are varied, so must be the responses. Given the economic, food, environmental, and national security implications inherent to IUU fishing, all vessels, and fleets, both domestic and foreign, industrial or small-scale, must be held accountable to local, national, and international fisheries management regimes. Without a cohesive and robust strategy to combat IUU fishing, the over-exploitation of the ocean will continue unfettered, alongside its attendant security problems.

To make real, measurable progress in this area, productive, open, and regular engagement between the West African region and the PRC is needed. Any solution to combat IUU fishing and to improve fisheries management in West Africa must include the PRC. Similarly, any solution to the threats posed by foreign fleets and fishing enterprises in West Africa must include local and regional stakeholders.

To meet this challenge, the Stimson Center engaged trusted marine and fishery experts from the PRC and West Africa, representing academia, government, businesses, and NGOs, to better understand how West Africa and the PRC's fisheries interests and experiences converge, differ, and where more work and cooperation is needed to achieve long-term sustainable fisheries management in West Africa.

The outcomes of this expansive effort are set of clear, concise, and actionable recommendations aimed at decision makers and stakeholders. When set into the context of the broader report, which offers a comprehensive understanding of the scale of IUU fishing in West Africa, including the role of the PRC in the development of West Africa's sustainable blue economy, decision makers can pinpoint exactly how to improve policies, implementation, and enforcement actions by China and with governments throughout the West African region.

Armed with the findings of this report, we hope decision makers can take action that will result in better fisheries management and greater economic sustainability for fisheries-dependent communities, while reducing harmful IUU fishing in the West African region.

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*Market workers throw ice on freshly landed catch at the Tanji Landing Site, Tanji, The Gambia.
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