

**ILLEGAL UNREPORTED AND UNREGULATED
FISHING IS A THREAT TO MARINE
SECURITY. THE NEED TO STRENGTHEN EXISTING
MECHANISMS.**

SHAMIRA ABDULAI YAKUBU

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DISCLAIMER

The views expressed herein are those of the author and do not necessarily reflect the views of the United Nations, The Nippon Foundation of Japan, Ministry of Fisheries and Aquaculture Development, Fisheries Commission or the University of Rhode Island (Coastal Institute Department of marine affairs).

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I wish to extend my sincere gratitude to the United Nations Division of Ocean affairs

ISSF International Seafood Sustainability Foundation
ISPS Code International Ship and Port Facility Security Code
ITLOS International Tribunal on the Law of the Sea
IUU Illegal, Unreported and Unregulated
LOA Length Overall
LOSC Law of the Sea Convention
MCS Monitoring, Control and Surveillance
MLRA Marine Living Resources Act
MOF

UNCTOC United Nations Convention on Transnational Organized Crime

UNCLOS United Nations Convention on the Law of the Sea

UNFSA the 1995 United Nations Fish Stock Agreement

UNGA United Nations General Assembly

UNICPOLOS United Nations Open-ended Informal Consultative Process on Oceans and the U.S United States

VMS Vessel Monitoring System

USAID United States Agency for International Development

WARFP West Africa Regional Fisheries Programme

WATF West Africa Task Force

WTO World Trade Organization

WWF World Wildlife Fund

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SUPERVISORS

Professor Richard Burroughs
Coastal Institute- Marine Affairs Department
University of Rhode Island- United States of America

Valentina Germani
Programme Advisor
Division of Oceans Affairs and the Law of the Sea-
Office of Legal Affairs of United Nations (UN-DOALOS-OLA)
New York, United States of America

INTRODUCTION

The West African subregion is well endowed with coastal marine resources and is immensely significant to the socio-economic development of the region. This region has been a global hotspot for industrial fishing vessels to exploit fisheries resources. The coastal habitats include marshes, coastal forests, dunes, beaches, rocky shores, mangroves, seagrass beds, and coral reefs, which support rich and complex populations of marine species. The diversity of the ecosystems offers vital goods and services to the rising population of the continent. The main economic activities based on these resources include mineral and oil and gas exploration and exploitation, tourism, trade, and fishing¹.

Despite the undeniable significance of the subregion, it is well ravished by numerous challenges along the West coast of Africa, by illicit activities such as piracy, armed robbery attacks against ships, human trafficking, and arms smuggling as well as IUU fishing.

Illegal, unreported, and unregulated (IUU) fishing in recent times has been a great concern to most developing coastal states and a global problem². It is one of the major trending factors that threaten most coastal marine environments due to its compelling ability to undermine national and regional efforts to manage fisheries sustainably as well as strategies to conserve marine biodiversity³. It affects economic development, food security, and ocean ecosystems around the world by undermining legitimate fishers and communities that rely on them then then then then theand

According to the Food and Agriculture of the United Nations (FAO) annual report, the amount of global assessed marine fish stocks fished has reached the peak of biologically unsustainable levels therefore fish stock has severely dwindled world total marine catch was 79.3 million tonnes in 2016, representing a decrease of almost 2 million tonnes from the 81.2 million tonnes in 2015

management measures. However, while these policies were well constructed, they have not been adequately implemented or enforced; failure in tackling the issue of IUU has resulted in the re-issuance of a second yellow card warning by the European Union, and Ghana is the second country ever to have been re-carded in this way and must now urgently work to eliminate and combat illegal fishing by vessels flying its flag and operating in its waters¹⁰. The reasons for the second yellow card identified by the EU includes shortcomings include illegal transshipments at sea of large quantities of undersized juvenile pelagic species between industrial trawl vessels and canoes in Ghanaian waters, deficiencies in the monitoring, control and surveillance of the fleet and a legal framework that is not aligned with the relevant international obligations Ghana has signed up to. The sanctions imposed by Ghana to vessels engaging in or supporting IUU fishing activities are not effective and not an adequate deterrent. Ghana should ensure effective monitoring and control of

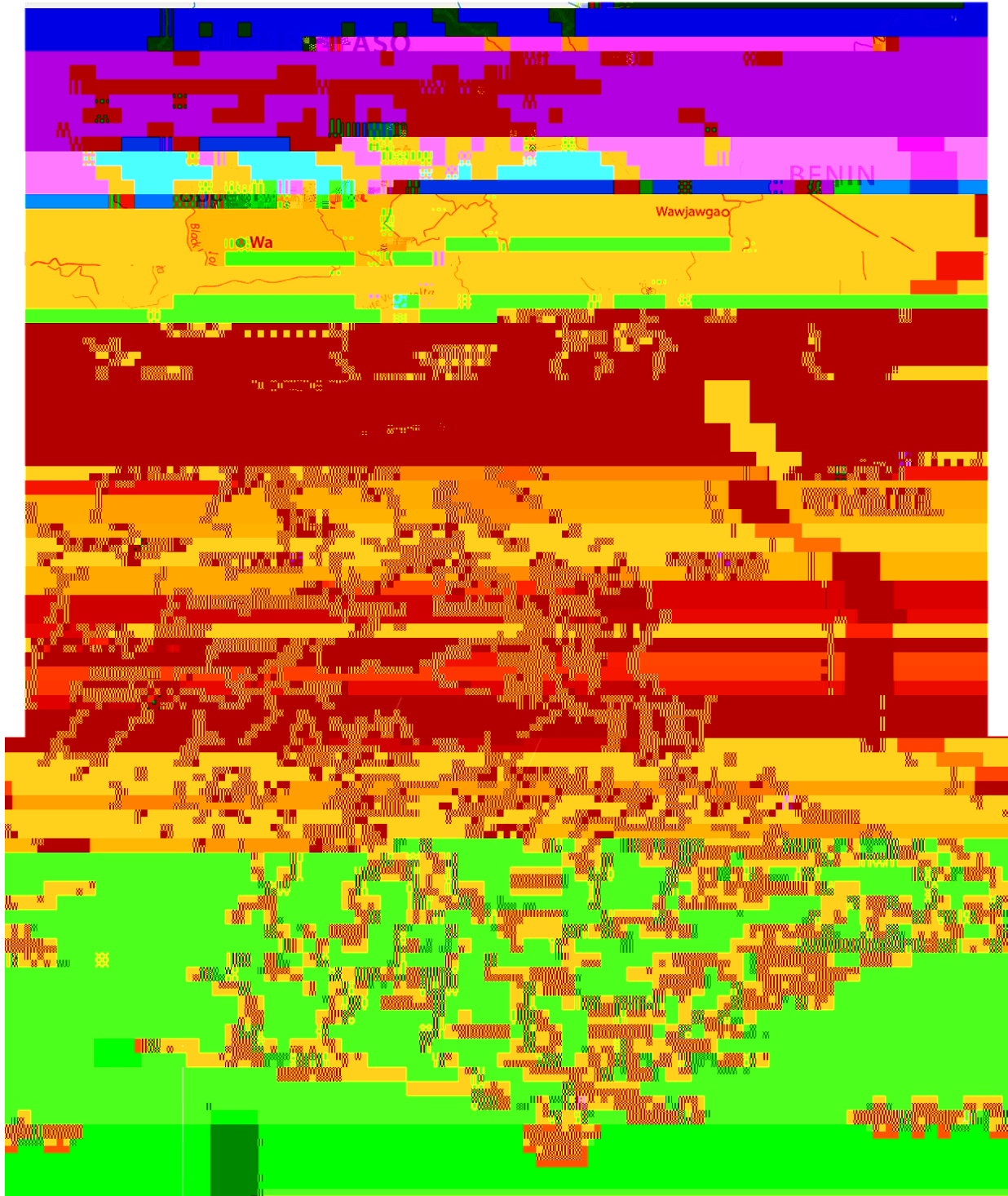
control and

directly and indirectly, including their dependents. Significantly, fish accounts for 60% of animal protein consumption in Ghana

large pelagic (tuna and tuna-like species) and they land their catches at the two major ports in Ghana which are the Tema and Takoradi ports. The operations of these fleets are run by a joint business venture managed by both Ghanaians and foreigners according to the Fisheries Act 625 Act 2010, section 50 (1) The owner of a local industrial or semi-industrial fishing vessel licensed under this Act shall employ a master, officers, and crew of which not less than seventy-five percent are citizens of Ghana.

b) The Industrial Trawl Sector

canoes ranges from 3 meters to almost 20 meters LOA and are made out of a single Wawa (*Triplochiton spp.*)



Source: <https://www.worldatlas.com/maps/ghana>

1.1.3 GHANA FISHERIES LEGAL FRAMEWORK

The legislation governing the fishery industry is the fisheries includes the Fisheries Act 625 Act 2002 and Regulation 2010 (L.I 1968), both laws were amended in 2014 (Act 880) and 2015 amended (L.I 2177). The development of the Fisheries Act 2002 has created an avenue for the establishment of a national fisheries policy to address the issues of declining stocks, marine pollution and IUU fishing. Other policy documents developed include Ghana Shared Growth Development Agenda (GSGDA II), 2008 Aquaculture policy, 2011-2016 Ghana fisheries and aquaculture sector development plan, 2014 National Plan of Action to prevent deter and eliminate IUU Fishing, and the Marine sector fisheries management policy.

Pursuant to the Fisheries Act 2002 (Act 625) the Ministry of Fisheries and Aquaculture Development and the Fisheries Commission have established the Fisheries Enforcement Unit (FEU) under the Monitoring

IUU fishing with the various species of interest... Examples of IUU in sardinella, tuna, and seabream fisheries are shown. (Samira ó you may want to add some more specifics to this table.)

	Definition	Sardinella	Tuna	Seabream
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Illegal

refers to activities:
conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;
conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that

	laws and regulations; or undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of ν cv'qti cpk cv'qpö0		reporting of the total ecvej ö .	
Unregulated	refers to fishing activities: in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; Or in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international π y ö0	Act 2002 Act 625 (84, 89(C))	Regulation 2010 (Reg. 24)	Regulation 2010 (Reg. 33, 74)

Coastal resources from Mauritania to Ghana are noted as one of the most endowed with valuable collections of marine fish stocks in West Africa. Most of the fish stocks are shared resources. The fisheries sector contributes to the livelihood of the populace, food security and the socio-economic development of the countries. Despite the relevance of this natural asset, the sector is presently not contributing significantly to the increase in economic development and poverty reduction of the region since it is not well managed²².

For over a decade now Ghanaian waters have been surging with incidents of illegal fishing practices. IUU fishing in Ghana has plagued all kinds of fisheries; Small-scale and industrial. Thus, it involves small-scale canoes, semi-industrial, and large offshore fishing fleets. Both demersal and pelagic species are being



Fig.2 news article on illegal fishing in Ghana²⁴

This was done through the support of the International Development Association (IDA) of the World Bank (WB) which was designed to assist countries to address these constraints by providing support to collaborate to (i) strengthen the governance of the use of marine fisheries resources so that they recover to much more environmentally sustainable and economically profitable levels, while at the same time (ii) invest where needed to increase the portion of the value of these resources that is captured locally within the region²⁵.

The formulation of these new policies however, have not been adequately implemented nor enforced and failed in tackling the issue of IUU which resulted in the re-issuance of a second yellow card warning by the European Union, and Ghana is the second country ever to have been re-carded in this way and must now urgently work to eliminate and combat illegal fishing by vessels flying its flag and operating in its waters. This would come with economic sanctions that could see the country completely lose access to the lucrative European seafood export market.

A recent report from the Environmental Justice Foundation (EJF) disclosed that Ghana is losing a sum of 14.4 to 23.7 million US dollars each year in licensing fees and fines from trawlers as a result of illegal fishing²⁶. These fees are meant for local vessel operators. Approximately 90% of industrial fishing vessels are owned in part or in total by foreign companies who import their vessels and obtain licenses through nature of ownership is pervasive in

²⁴ [South Korea, Ghana and Curaçao must act quickly to combat illegal fishing | WWF \(panda.org\)](https://www.panda.org/our-work/illegal-fishing/south-korea-ghana-and-curaçao-must-act-quickly-to-combat-illegal-fishing/)

²⁵ Commission Sous Régionale des Pêches, West Africa Regional Fisheries Program (WARFP)

²⁶ Environmental Justice Foundation report, Ghana losing millions of dollars as Chinese fishing trawlers hide ownership, 2021. Available at <https://ejfoundation.org>

while committing illicit infractions

at sea to be sold at local markets. It is the common form of illegal fishing prevailing in the coastal region of Ghana. Fishing trawlers spend longer days at sea in order to engage in Saiko with appropriate fishing licenses and these catches are labelled as bycatch which are sold to the artisanal fishers and bycatch buyers. The UNOFA's study on the illegal fishing in the Central Atlantic around Guinea and Guinea-Bissau, including Cape Verde, Senegal and Gambia, while the other is found in the Gulf of Guinea, including Ghana, Togo, Benin and Nigeria³¹.

Figure 3: An image of transshipment between an industrial trawler and a canoe within Ghana EEZ.

Source: EJF report

Most of these catches are mostly juvenile species and it poses a significant threat to stock decline. Saiko is a competitive business venture and lucrative among the trawlers and canoes, by-catch buyers and fishers that engage it. It has gained fertile ground as a full-

The use of unauthorized nets involves monofilament nets with mesh size less than twenty-five millimeters in the case of small-scale fishers and less than sixty millimeters stretch in diagonal length with regards to industrial trawlers used in the marine waters. Most these nets are hidden and taken to sea and mostly land juvenile fishes³³.

c) HARVESTING OF MARINE MAMMALS AND ENDANGERED SPECIES

The capture and killing of marine mammals (sharks, rays, dolphins and turtles) in recent times along the coast of Ghana has been a major concern to authorities and fishers and other stakeholders in the fishery industry. This form of fishing is prohibited under the Ghana Fisheries Act 625 Act 2002 and Regulation L.I 2010³⁴. This practice was observed along the western coast of Ghana. The practice is illegal because these species have been reported to be endangered and must be conserved, not killed. Catches from these mammals are source of major delicacies (sharks, rays, dolphins and turtles) and also highly lucrative when been sold in the markets which the reason why these mammals are been caught.

Image of sharks landed at Tema Canoe landing beach.

d) CYANIDE FISHING

sinks to the bottom of the sea. In a discussion with them, some leaders express the fact that the dead fish that sinks to the bottom of the sea may affect the environment in which the fishes live. They believe that these chemicals are poisonous and may affect fish and other marine species health conditions as well as the quality of the water. During light fishing, fishermen usually use a small canoe. The generators, light, and other accessories for the light fishing are placed in it and operated by two crew members. They mentioned that when light is used to catch the fish, it does not affect the appearance and quality of the fish. It is when the chemicals are used in fishing that the fish attract all kinds of fish irrespective of their sizes. The practice, however, threatens the sustainability of the fish stock and fishing occupation³⁶.

f) Use of Chemicals (DDT and Carbide) and Explosives (Dynamite) in Fishing

Chemical and explosive fishing is another method adopted by small-scale fishers. It involves the use of

Figure 5. Fisher lost his hand and severely injured when suspected dynamite meant for fishing exploded

In March 2020 a fisherman from Akwidaa in the western region suffered from dynamite explosion fishing causing him to lose his hand and wounds on his face and other parts of his body, he was rushed to the Effia-Nkwanta Hospital, but due to the magnitude of his injury, he was transferred to the Korle-Bu Teaching Hospital in the Greater Accra region for further medical treatment. However, since the practice is prohibited and the fear of him facing the legal prosecution, he reported to officials that he was attacked by a shark. But the medical officers at the time of the incidence indicated that the wounds were caused by shrapnel from an explosive source, hence scattering the all over his upper body, shoulders and face³⁷. The use of chemicals and explosives are prohibited under the Ghana Fisheries Act 2002(Act 625) and Fisheries Tgi wrcvkqp"4232"NK3; 8: #Hkuj gtkgu"T gi wrcvkqp"ö33"e+C"r gtuqp"uj cm'pqv'y kj lp"vj g"Hkuj gt{ "y cvgtu"qh" this country use explosives, obnoxious chemicals and any other prohibited fishing methods which render fish more gcukñ "ecwi j vö³⁸.

Dichlorodiphenyltrichloroethane (DDT) which is a pesticide mostly used for pest control. It has been used in Ghana marine waters by some artisanal fishers along the coastal communities as a medium for easy catching of fish stock. DDT is a highly persistent chemical called organophosphate. DDT is problematic because it enters the food chain and bioaccumulation occurs. When DDT is sprayed or poured into water

³⁷Fisheries Committee for the West and Central Gulf of Guinea news report. *Ghana: Is it a shark or dynamite?* Available at <https://fcwc-fish.org/other-news/ghana-is-it-a-shark-or-dynamite>. Assessed on August 8, 2022.

³⁸ See Fisheries Regulation 2010 (L.I 1968).

bodies, it affects various fish species whose eggs are developing and it may affect development. It is a chemical known to be carcinogenic and affects the reproductive development of fish³⁹.

Some fishing communities along the coast of Ghana have resorted to the use of chemicals such as DDT and carbide. Fishes caught through illegal means are brought to the shore lifeless and discolored with broken flesh and sunken eyes, which indicate that they are not freshly caught. The use of chemicals such as DDT, carbide, and explosives like dynamite pose a serious health danger to fish consumers. It can affect the nervous system, causing excitability resulting in tremors and seizing as a result of consuming fish caught with chemicals⁴⁰.

Aside the health consequences on fish consumers and processors, the practice is also deepening poverty among fishermen and fishmongers, largely women as the quality and quantity of fish are adversely affected after smoking. Some fishmongers mentioned they incur huge debts as a result and explained that an illegal method of fishing causes fish to rot soon after catch. Fishes caught with these methods break into pieces when exposed to smoke and heat, thereby affecting prices and sales. Fish quality is compromised when light fishing is combined with chemicals and explosives⁴¹.

Formalin is a solution in water of gas formaldehyde (H₂O). The liquid is used as an embalming fluid and for preservation of animal specimens and tissue samples. Some fishermen use DDT to kill the fish, collect them and preserve them with formalin before landing them to make them last longer. A discussion with fishers indicates that the practice is rising because fishers have little knowledge on the effects of the use of formalin in the preservation of fish and deteriorating feature of the fishing industry. The formalin is normally added to the water used as ice to preserve fishes. Some fish processors mentioned that, they could smell the formalin when the fish is landed and refuse to buy them. They also stated that fishes preserved with formalin when eaten have corrosive effect in the mouth, tongue and esophagus thus causing pain, vomiting and sometimes bleeding. They also suffer some ill effect through inhalation of the vapor.

h) Use of a Mixture of Powdered Detergent and Gari

Fishers along the coast have developed a practice of mixing powdered detergent with gari which is made from cassava, a local cereal. The gari serves as bait while the detergent suffocates the fish and decrease the surface tension of the water, making it difficult for the fishes to move and this makes it easy for fishers to harvest⁴².

³⁹ Ibid P14-18

⁴⁰ Ibid P14-18

⁴¹ Ibid P14-18

⁴² Ibid P14-18

has also been a contributing factor in calling on authorities to address the Saiko method of fishing since it is destructive to the industry⁴⁵.

1.2 ENVIRONMENTAL AND ECONOMIC IMPACTS

1.2.1 Environmental impacts

Despite the obvious benefit of the fisheries sector support to the livelihood of many Ghanaians, IUU fishing is adversely affecting food security, their livelihoods, and contributing to poverty fishing communities. IUU fishing degrades marine ecosystems through loss of habitats, declining fish stock, destruction of the food web, resulting from the use of unauthorized fishing gear, pollution, and overcapacity⁴⁶.

IUU fishing contributes to the capture of endangered, protected, and threatened species and other marine mammals such as sharks, dolphins, rays, and other marine living organisms (turtles). IUU fishing exacerbates the adverse effects of climate change on aquatic production, biodiversity, and the resilience of the ecosystem⁴⁷. IUU fishing is a and legal fishing efforts are the major driver of declining stocks in Ghanaian waters⁴⁸

Which is estimated to contribute about \$271 million, is making \$169 million annually; hence losing about 37% of the potential rents. The tuna sector, could possibly make a maximum \$225 million profit annually, however, they were currently making \$139 million, hence losing about 38 percent of their potential rents. While industrial trawlers could make a maximum yearly profit of \$78 million, they were currently making \$37 million, meaning that they are losing about 52 percent of their potential rents. The semi-industrial sector loses about 19 percent of their potential rents due to IUU fishing, pointing out that whereas they (semi-industrial) could make a maximum yearly profit of \$21 million, they are currently making \$17 million⁵⁴.

Ghana heavily depends on fish exports; however, unsustainable fishing practices are threatening biodiversity. Ghana like many other countries every year export about 2,000 and 3,500 tons of cuttlefish, octopus and squid harvested by the trawl sector to the European Union market, mostly to Portugal, Italy and Spain.⁵⁵

Graph 1: Major export destinations for Ghanaian fishery products in 2017.⁵⁶



Source: Riccardo Venturi, Lorenzo Colantoni and Daniele Fattibene, *Ghanagri*, cit., p. 122

China been the major markets for Ghanaian exports (10,914 tonnes of fishery products in 2017), followed by Iran (9,533 tonnes)

⁵⁴ Losing out to IUU fishing; the cost Ghana bears available at <https://www.graphic.com.gh/features/features/losing-out-to-iuu-fishing-the-cost-ghana-bears>

⁵⁵ EJF Report. Warning to EU over imports from vessels fishing illegally in Ghana, July 2020.

⁵⁶ Riccardo Venturi, Lorenzo Colantoni and Daniele Fattibene, *Ghanagri*, cit., p. 122

and Thailand (7,285). Yet, European countries also import Ghanaian fish (i.e., tuna), in particular the United Kingdom, France, Italy, Portugal and Spain

Ghana has recently been importing a considerable volume of fish from other parts of the world including Mauritania, Morocco, Belgium, Panama, and Japan due to declining stocks. Local production of about 60% is insufficient to meet the demand of the entire population⁵⁷. This is a problem looming in the fishery industry. Therefore, making Ghana import about 40% of fish and fish products to the country. Inadvertently, during the period 2000 to 2016 fish production decreased by 37% from 364,000 tons with a substantial loss, especially with the harvest of pelagic species⁵⁸.

Ghana imported about 343,000 MT of seafood products in 2021. The familiar species imported into Ghana are the likes of mackerel, sardines, and hake. Ghana imported nearly \$290 million in seafood and fish

1.3 I J C P C U C E V I Q P U V Q ' E Q O D C V ' K W W H K U J R P I

1.3.1 EXISTING INITIATIVES TO ELIMINATE IUU IN GHANA

In 2013 Ghana, South Korea and Curacao were issued the EU yellow card, which placed a temporal trade embargo on their fish and fishery product from the EU market. This coupled with the declining of fish stock has compe

ii) Imposition of dissuasive sanctions against IUU fishing, including fines of up to 4 million United States Dollars and revocation of any license or authorization granted in respect of the fishing vessel deletion of the fishing vessel from the Ghana Shipping Registry.

iii) Incorporating FAO Port State Measures (PSMA) Agreement and ICCAT Recommendation 97- 10 into domestic legislation and enforcement action.

How many of these objectives were accomplished? Did the EC comment specifically on initiatives i-v when they issued the second yellow card in 2021?

5. Adoption of catch certification⁶⁶

Establishing credible procedures to endorse catch certificates and processing statements and ensure credible traceability of fishery products from landing to export to the EU after processing.

A robust system is now in place which mandates that fisheries products and export consignments are verified by VMS and fishing logbook of areas of fishing, catch and catch composition, licenses and landing declarations. The scheme has enabled Ghana to prevent the exportation of IUU-tainted fish.

The above-mentioned elaborate measures clearly indicate the serious gaps that existed prior to the imposition of the yellow card by the EU. They also indicate the efforts that the Government through the Fisheries Commission and its collaborators have put in place in the past years to restore the confidence of the international community which would have completely shut the international markets on us, with the consequence of massive job and income losses in the fisheries sector. However, the removal of the yellow card is not the end of the matter; we need to sustain the fisheries reforms and avoid sliding back.

To be able to sustain the gains, it must be realized that fisheries management and enforcement can be effectively achieved through the shared responsibility and vigilance by all stakeholders, the public sector, the private sector and consumers of fish and fish products. The bottom line is that all legislation relating to fisheries and the maritime environment must be complied with, whilst the fisheries law enforcement agencies are given the necessary support to conduct their activities without any hindrance.

6. ADOPTION OF CLOSED SEASON

Another effort made by the fisheries commission to end IUU fishing as well as replenish the dwindling fish stocks in Ghana is the adoption of fishing closed season. The closed season policy is in accordance with sections 76(3) and 84 of the Fisheries Act, 2002 (Act 625) with the objective to reduce the pressure and over-exploitation of fish stocks. Before the adoption of the closed season, the

⁶⁶ See Ibid

MoFAD and Fisheries Commission conducted a series of consultations with stakeholder in the industry to discuss the

The implementation and enforcement of the program in Ghana have lessened illegalities at sea.

1.3.1 THE ROLE OF REGIONAL FISHERIES MANAGEMENT ORGANIZATIONS (RFMOs) AND SUB-REGIONAL COMMITTEES IN COMBATING IUU IN GHANA

RFMOs are inter-governmental organizations that are formed by countries to regulate regional fishing activities in the high seas⁷³. They play a vital role in the management and governance of global fishery resources and, they are also an enabling mechanism for cooperation between coastal, port, flag and market states with a mutual interest in the conservation of straddling and highly migratory fish species that migrates across national EEZ boundaries and areas beyond national jurisdictions in accordance with international agreements under the United Nations Convention on the Law of the Sea (UNCLOS, 1982) and the United Nations Fish Stock Agreement (UNFSA,1995).⁷⁴

Over the years RFMOs and sub-regional committees that Ghana is a party to have stepped up contributing to the fight against IUU fishing, advocating for best fishing practices, and pointing to the existing loopholes. Several RFMOs and other non-governmental organizations (NGOs) and civil society organizations (CSOs) have been working hand in hand with the government of Ghana to curtail the menace of the persistent IUU fishing. Below we shall discuss the RFMOs Ghana is a party to and their contributions to eliminating IUU fishing in Ghana.

INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNA - (ICCAT).

The International Commission for the Conservation of Atlantic Tunas is an inter-governmental fishery organization that superintends the conservation of tunas and tuna-like species in the Atlantic Ocean and its adjacent seas⁷⁵. It is among the many RFMOs that engage its member countries in the discussion and development of international fisheries management mechanisms to ensure sustainable fisheries management⁷⁶. For some time now, ICCAT has been developing strategies and measures that are focused on combating IUU fishing. Among these strategies includes the establishment of Integrated Monitoring Measures (IMM) working group, sharing information on ICCAT IUU vessels to its member states, developing a proposal, and enabling member countries to adopt this proposal to address deterring factors of IUU fishing such as stopping people and corporations profiting or supporting IUU fishing through service

⁷³ https://oceans-and-fisheries.ec.europa.eu/fisheries/international-agreements/regiona_regiona

provision to IUU listed vessels. Services such as financial support, insurance, and certification, surveyed

- b) National plan of action to control illegal fishing,
- c) installation of VMS on all Ghanaian flagged fishing vessels to monitor the activities of these vessels

Amended legislation on deterring sanctions on violators of the laws and regulations.

FISHERIES COMMITTEE FOR THE WEST CENTRAL GULF OF GUINEA (FCWC)



The FCWC a six-member country committee with its regional secretariat located in Accra Ghana. In July 2005, at the sixth Ministerial Conference on Fisheries Cooperation among African States Bordering the Atlantic Oceans (COMHAFAT) meeting in Rabat, Morocco, they made an appeal to FAO to evaluate the prospects of creating a sub-regional committee that oversees the fisheries in the West and Central area of the Gulf of Guinea. FAO adhered to the plea and carried out a feasibility study in March 2006 and an

approval was granted for the establishment of the sub-regional fisheries committee known as the Fisheries Committee for the West Central Gulf of Guinea (FCWC).

In July 2006, a ministerial meeting of Fisheries meeting. The Ministers signed the Declaration of July 2006, establishing the Committee. The first Ministerial Conference in Cotonou, Benin in November 2007 approved the Convention for the Establishment of the Fishery Committee as well as the Rules of Procedure.

The six-member countries include

a platform for increased cooperation as part of the implementation of the FCWC Regional Plan of Action to combat illegal fishing adopted in 2009. The WATF is a regional working group formed in 2015 to aid FCWC member states to work together to combat IUU fishing and fisheries-related crimes. The WATF is also an arm of the FCWC that seeks to overcome obstacles in inter-departmental, inter-agency, and inter-country cooperation by providing a shared communications platform; establishing NWGs involving all relevant agencies; holding regular Task Force meetings and regional training; and supporting all activity through the FCWC and the wider Technical Team.

Those involved in the National Working Groups (NWG) vary by country and reflect the needs and issues of each member. The NWG participating agencies in member states consist of Air Force, Immigration, Environment, Natural Resources, the Regional Maritime Security Centre, Prefecture Maritime, High Council of the Sea and Foreign Affairs.

To exhibit the WATF work in optimum operation to stop illegal fishing requires cooperation and collaboration at the national, regional and international levels. At the **National** level, they liaise with the appropriate institutions to improve compliance with domestic fisheries legislations and other policies. An increase in compliance consequently will yield in sustainable conservation of marine resources under their jurisdictions. This in a long run will support the livelihoods of those that depend on them. Also, the WATF has created national working groups (NWGs) for all the sub-regions to ensure inter-agency collaborations

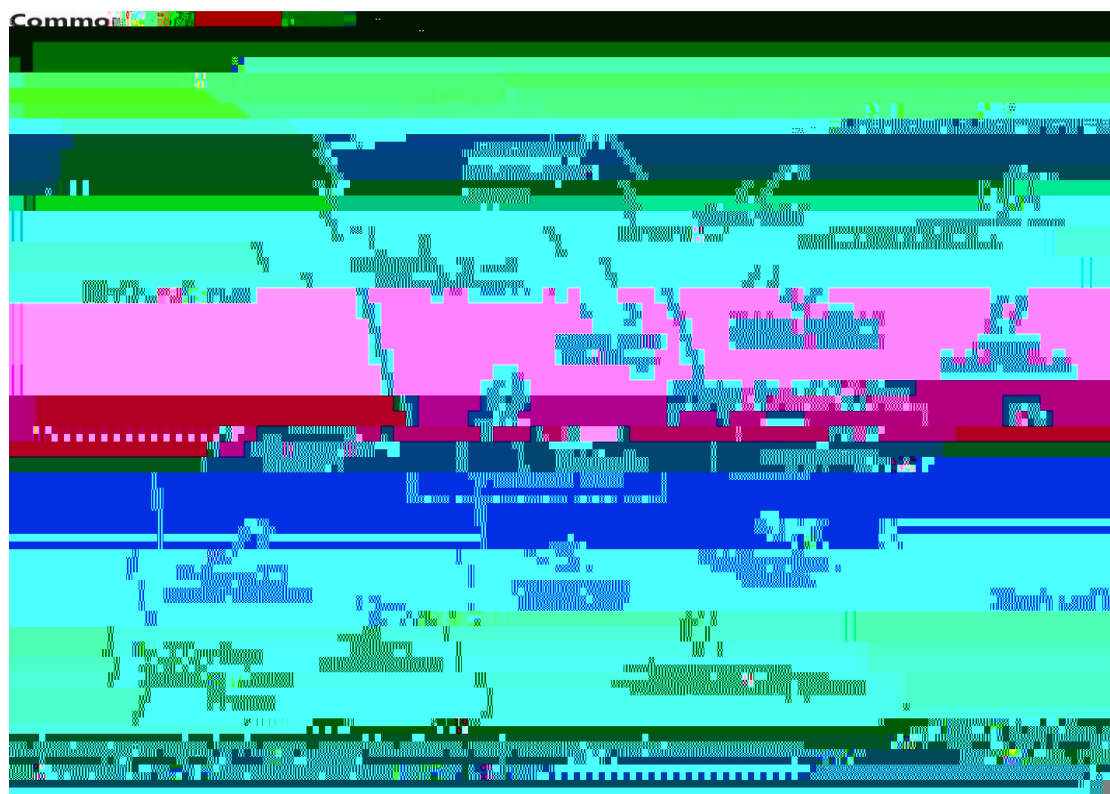
The WATF is supported by the FCWC secretariat, the Norwegian Consultancy firm NFDS, Trygg Mat Tracking (TMT) the pan-African working group Stop Illegal Fishing (SIF) and funded by the NORAD, Norwegian international development agency⁸⁰.

Establishment of Fisheries Intelligence and MCS support in West Africa Project, the FCWC has made a toolbox available for its member countries to access training manuals, MCS document templates, intelligence reports developed to support IUU cases, introduction to technological tools, case studies from successful operations in the region providing lessons learned and best practices, meetings presentations⁸¹.

CHAPTER TWO

2.0 GLOBAL OVERVIEW OF IUU FISHING

Figure 2. common forms of IUU fishing activities illustrated.



Source: office of the Director of National Intelligence Council (NIC) USA September 2016

⁸⁰ N. Lazar, K. Kent, M. Diallo, and V. Ndiaye (2017). Regional and International Fisheries Management and Governance in West Africa. USAID/Senegal COMFISH Plus project, implemented by the University of Rhode Island, Coastal Resources Center, RI, 17 pp.

⁸¹ <https://fcwc-fish.org/what-we-do/fight-illegal-fishing/watf-toolbox>

The use of the term "IUU" traces its origin to the work of a Regional Fisheries Management Organization (RFMO), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) in 1997. The term was adopted at the 16th Sessions of Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) conference where it emerged from discussions concerning illegal and/or non CCAMLR-compliant fishing activities by Parties (illegal and unreported) and non-Parties (illegal and unregulated) in the management area of CCAMLR⁸². Soon after the concept was also adopted other international organizations like the FAO of UN and was incorporated into global policy framework⁸³. Target 14.4 of the United Nations Sustainable Development Agenda 2030 singles out IUU fishing as one of the pressing problems to be eliminated by the year 2020 in order to achieve sustainable development in the oceans, seas and coastal areas⁸⁴.

Illegal, unreported, and unregulated (IUU) fishing remains one of the greatest threats to marine ecosystems due to its potent ability to undermine national and regional efforts to manage fisheries sustainably as well

2.1 INTERNATIONAL RESPONSE TO IUU FISHING

2.1.2 INTERNATIONAL LEGAL FRAMEWORK

Over the last decades, the international community has been developing legally binding and non-binding instruments and in addition to other powerful suites of tools that are geared towards combatting IUU fishing. The 1982 United Nations Conventions on the law of the sea (UNCLOS) is a legally binding document that defines how state parties carry out their rights and responsibilities with respect to global oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources. Most of these legal documents were designed in conformity with the UNCLOS. The UNCLOS together with other relevant international binding and non-binding instruments are developed towards the management and governance of ocean resources are listed below;

LEGALLY BINDING INSTRUMENTS

1982 United Nations Convention on the Law of the Sea (UNCLOS)

- x Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December (1982) Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995) (UN Fish Stocks Agreement).
- Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (FAO Port State Measures Agreement 2009)
- Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (1994).

NON-LEGALLY BINDING INSTRUMENTS

FAO Code of Conduct for Responsible Fisheries 1995

International Plan of Action for The Management of Fishing Capacity (IPOA-Capacity)

The International Plan of Action for G{Agre1 0 0 1 10 1 / 0 0harM)-2(ig)-2(r)5(atory3(tate Measure)-4(s Agreem)-

The International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (1999).

The International Plan of Action for the Conservation and Management of Sharks (1999).

These legislations and other non-binding instruments are encouraged to be adopted and incorporated into domestic fisheries and maritime laws of most coastal developing and developed states so that they can be efficiently coordinated and harmonized with international legal frameworks and RFMOs. Inter and intra agency collaboration between and with countries plays a vital role in global response to combatting IUU fishing. These collaborative efforts include information sharing, collection of scientific data and improved MCS operations and facilitate awareness creation of IUU and its impact on sustainable management of resource⁸⁶.

The international community agenda in raising awareness to the public on the deleterious effects and actions to eliminate IUU fishing, the General Fisheries Commission for the Mediterranean (GFCM), at its thirty-ninth session in 2015, proposed that an initiative be launched within the remit of FAO to declare an International Day for the Fight against IUU Fishing. Following the declaration, this proposal was endorsed by the Committee on Fisheries (COFI), at its thirty-second session. The General Assembly of the United Nations (UNGA) at its seventy-second session in November 2017 passed a resolution to declare June 5th as the International Day for the Fight against IUU Fishing. The first observation of the international day was in June 5th 2018. This date was purposely chosen because it was the day the first treaty design to combat illegal fishing and the FAO Port States Measures Agreement (PSMA) came into force⁸⁷. The FAO who is a prominent member in the UN systems plays active roles in numerous partnership and collaborative operations. This include joint FAO/IMO ad hoc Working Group on IUU Fishing and Related Matters, which was established in October 2000, other international organizations such as INTERPOL, UNODC, WTO and experts in the international Monitoring Control and surveillance (IMCS). The IMO Sub-Committee on Flag State Implementation has a standing item on IUU Fishing and Related Matters. The benefit of these working groups supports information sharing, intelligence-led MCS and also making it competent enough to deal with IUU fishing. The FAO has also developed Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels (Global Record). This is a collaborative global initiative intending

reliable and rapid way to contrast data with other sources. This initiative also helps improve transparency

FAO Compliance Agreement

The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement) was unanimously approved, subject to acceptance, at the 27th Session of the Conference of the FAO in November 1993 and entered into force on 24 April 2003. The FAO Compliance Agreement was developed in order to address concerns over the practice of reflagging of fishing vessels in order to avoid high seas conservation and management measures determined by regional fisheries organizations. The Compliance Agreement strengthens the duties of flag States by improving the regulation of fishing vessels on the high seas. This is done through the obligation of parties to maintain an authorization and recording system for high seas fishing vessels and to ensure that vessels registered under their flags do not undermine international conservation (anim)-4(o1 4to)s dt 3(on)-4-70(3(flags)2(

The International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds) arose out of concerns over the impacts of the incidental catch of seabirds in various commercial longline fisheries in the world. The objective of the IPOA- Seabirds is to reduce the incidental catch of seabirds in longline fisheries where this occurs. Thus, the IPOA- Seabirds applies to States in the waters of which longline fisheries are being conducted by their own or foreign vessels and to States that conduct longline fisheries on the high seas and in the EEZ of other States. The IPOA-Seabirds provides that States implementing the IPOA should carry out a set of activities in conjunction with relevant international organizations based on an assessment of the incidental catch of seabirds in longline fisheries. The States with longline fisheries should conduct an assessment of these fisheries to determine if a problem exists with respect to incidental catch of seabirds and adopt a National Plan of Action (NPOA) for reducing the incidental catch of seabirds in longline fisheries, if such a problem exists. On the other hand, States which determine that an NPOA is not necessary should review that decision on a regular basis, particularly taking into account changes in their fisheries, such as the expansion of existing fisheries and/or the development of new longline fisheries. The IPOA-Seabirds encourages States to cooperate through regional and subregional fisheries organizations or arrangements, and other forms -

assess its implementation at least every four years for the purpose of identifying cost-effective strategies for increasing its effectiveness; while States which determine that a Shark-plan is not necessary should review that decision on a regular basis taking into account changes in their fisheries, but as a minimum, data on catches, landings and trade should be collected.

IPOA-IUU

The International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) was adopted by consensus at the Twenty-fourth Session of COFI on 2 March 2001 and endorsed by the Hundred and Twentieth Session of the FAO Council on 23 June 2001. The objective of the IPOA-IUU is to prevent, deter and eliminate IUU fishing by providing all States with comprehensive, effective and transparent measures by which to act, including through appropriate regional fisheries management organizations established in accordance with international law.

2.1.3 GLOBAL MONITORING CONTROL AND SURVEILLANCE MEASURES

Fisheries Monitoring, Control and Surveillance (MCS) plays a fundamental role in fisheries management. MCS are key components of responsible fishery resource management that provide mechanisms to coastal state fisheries enforcement organizations to improve efficiency and effectiveness through enhanced coordination, collaboration and information sharing. Is about maintaining compliance with fisheries management regimes in coastal and non-

1. To decrease the chances and incentives for IUU fishing by:

P

multilateral fisheries management regimes

satellite-based GPS, with data fed into maps and models to describe and analyze the Spatio-temporal dynamics and ultimately fishing effort of fishers¹⁰². VMS has been deployed by states in a large number of fisheries at both the national and regional levels¹⁰³. VMS is a near real-time positional



Image depicting how the VMS operates

Source: <https://houseofocean.org>

AUTOMATIC IDENTIFICATION SYSTEM

AISs are very high-frequency (VHF) radio-based tools that support safe navigation and collision avoidance by automatically transferring information about the ship to other ships and coastal authorities. More recently AIS has been identified as a useful tool to contribute to fisheries enforcement efforts. Although fishing vessels are exempted from an International Maritime Organization (IMO) requirement that vessels above 300gt and engaged in international voyages use AIS, some flag and coastal States do mandate the usage of AIS by fishing vessels flying their flag or operating in their waters. In addition, large numbers of fishing vessels use AIS voluntarily as an aid to navigation, and as an operational and safety tool. AIS receivers have been placed on low-earth orbit satellites since 2008, which has greatly increased coverage and means that AIS signals can be detected from vessels operating beyond the 40nm range of land-based AIS

receivers¹⁰⁹. There are some technical limitations to AIS, however, providers are continuously taking steps to improve AIS performance, including the recent launch of more and improved satellites.

All of these factors have contributed to increasing the utility of AIS as a fishery monitoring tool. AIS data analysis, like any other fisheries monitoring tool, AIS has advantages and disadvantages and is most effective when used in combination with other intelligence sources. AIS is the least expensive vessel monitoring system capable of both near shore and high seas monitoring, and has the benefit of transparency, as data is unencrypted and can be received by anyone with the appropriate equipment. However, software and human analytical capacity is required to translate raw AIS data into usable intelligence, and this is an integral cost of using AIS¹¹⁰.

The relevance of the AIS tool in fisheries enforcement and management cannot be underestimated as, firstly, it aids in navigation and prevent vessels from colliding. Collision of fishing vessels could result in loss of human life as well as loss of properties. This turned to pose financial loss the fishing companies as they will need to repair the damages on the vessel or buy new spare parts.

CHAPTER THREE

THE LINKAGE BETWEEN IUU FISHING AND MARITIME SECURITY IN GHANA

Maritime safety and security is essential to the role of oceans and seas in promoting the economic, social and environmental pillars of sustainable development¹¹¹. Maritime security is understood as a state of affairs of the global maritime domain, in which international law and national law are enforced, freedom of navigation is guaranteed and citizens, infrastructure, transport, the environment and marine resources are protected¹¹². It can also, mean freedom from threat or danger within a maritime context¹¹³. Traditionally maritime security has been understood in terms of direct or physical security. Typically, this concerns military or policing issues, such as inter-State conflicts, piracy, or trafficking. Many commentators have drawn a link between the initial rapid increase in piracy of the so-called "holy grail" of the 21st century and IUU fishing by foreign fleets, citing IUU fishing as one of the root causes of piracy in the region. The

¹⁰⁹ FISH-I report on 'The Potential Use of AIS as a Fisheries Monitoring Tool' published by stop illegal fishing

¹¹⁰ Ibid

¹¹¹ See United Nations General Assembly (UNGA) Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its ninth meeting, 2008 para 3.

¹¹² European Union maritime security strategy June 2014.

¹¹³ Richard Barnes and Mercedes Rosello. Fisheries and Maritime Security: Understanding and Enhancing the Connection

Abshir Boyah and Mohamed Abdi Garaad, was that they turned to piracy after foreign trawlers destroyed their livelihoods as fishers in the mid-1990s and because illegal dumping by foreign vessels was poisoning their fishing grounds. This situation is currently not different from what is happening in Ghana as a result of illegal fishing methods such as (illegal dumping, and transshipment, etc.), it is anticipated that the recent robbery attacks on most Ghanaian fishing vessels are natives of Ghana and Nigeria, according to fishers. I have a disastrous effect on the sustainable management of fisheries resources in Ghana.

IUU fishing

mqv'qh'j tgcw'pqv'qpn' 'q'j g'eqcucn'ucv'gu'geqqo lgu'dw'cnu'q'o ctkko g'uchgv' 'cpf' 'ugewtkv' 'lp'c'dtqcf gt" sense¹²³.

Maritime piracy and armed robbery against the ship, IUU fishing, and human rights abuse at sea are many of the present-day challenges of the maritime industry around the world of which Ghana is not exempted from. These phenomena have an impact on global maritime trade and security. Nowadays, the Gulf of Guinea waters is considered high-risk areas in terms of piracy and armed robbery against ships activities. Ghana being part of the region is confronted with the same challenges as many coastal states along the Gulf of Guinea region in terms of maritime piracy and armed robbery against ships threat level, and the organization as well as the response capacity to tackle these crimes. Most of these attacks are targeted at fishing vessels, tcnpgtu."ecti q"xguugnu"ge0'ucklpi "y kj kp"I j cpcu"G \ "cpf "ku"pgki j dqtłpi "dqtf gtu0'K'ku" termed a high-risk zone for armed robbery attacks against Ghanaian-flagged fishing vessels and other eqo o gtekn'xguugnu"j cv'uckl'j tqwi j "I j cpcu"GG\ 0'Vj g"łpm'dgy ggp"knzi cn"f gutwełk'g"qt"gzegułk'g" fishing activities and wider maritime insecurity is not something that can be readily established in a short study such as the present one. However, there is growing evidence of this in academic scholarship. An emerging body of literature has progressively clarified the evidence on the effect that IUU fishing has in the perpetuation of criminality. It also highlights the manner in which insufficient governance of fishing vessel activity, particularly in respect of monitoring and compliance, is having on the security of some States and maritime regions. However, the specific implications of good fisheries management for wider maritime security are at best implicit. The preamble of the UNCLOS reaffirms that the problems of ocean space are closely interrelated and need to be considered as a whole, as an important contribution to the maintenance of peace, justice and progress for all peoples of the world¹²⁴. Illegal facilitates and is facilitated by organized crimes as well as other ancillary forms of misconduct such as fraud and forgery of documents.

In Australia, Lindley et al have highlighted the operation of fishing vessels as a convenient cover and transportation mechanism in the organization

fishing method that has destructive effects on the seabed, which is detrimental to benthic habitats, reducing biodiversity and reducing the productivity of target and a broad range of non-target species¹²⁷.

Hqt "gzco r rg. "vj g" WUP cvkqpcn'Utcvgi { "hqt" O ctkko g" Ugewtk { "4227+" kpf lecvf <:eqo r gvkkqp "hqt" f gerdkpi " marine resources has resulted in a number of violent confrontations as some of the y qtrf au' huj gtlgu'tguqt v' vq "wprcy hwn'cevkxk\ø¹²⁸. Later it warns of increasing incursions into US waters from foreign fishing vessels resulting in unlawful and hostile damage, conflict and regional instability¹²⁹. Thus, fisheries fall in part under economic and political security.

Uko kactn\ . "vj g" GW' o ctkko g" utcvgi { " kpenmf gu< -Vj g" r tqvgevkqp" qh" geqpqo le" kvgtguu." kpenmf kpi " vj g" safeguarding of maritime energy resources, the sustainable exploitation of natural and marine resources in the different maritime zones and the high seas, the control of illegal, unregulated and unreported (IUU) fishing, the security of Member States' fishing fleets and the delimitation of maritime zones, such as the exclusive economic zone, which presents a potential for growth and jobs. Ghana currently does not have a stand-alone maritime strategy or law that sets out measures to counter piracy, illegal fishing, hijacking, kidnapping for ransom and other maritime crimes. To counter all these menaces Ghana should develop a maritime strategy or framework and law that incorporates all of these challenges faced by its maritime sector in order to ensure stability in its waters. There is currently on-going development of a maritime bill that will enable the prosecution of maritime criminality in Ghana.

FISHERIES RELATED CRIMES

Crimes in Fisheries Sector cover a range of illegal activities that are often within, transnational and organized in nature. These activities include illegal shipments of marine resources, illegal fishing, corruption, money laundering and document and tax fraud¹³⁰. To succeed in the fight against these crimes, and in addressing IUU fishing, the traditional fisheries management approach needs to be complemented by a criminal justice approach.

IUU fishing involves complex webs of actions and entities and is not limited to the illegal harvesting of fish but also includes the shipment, processing, landing, sale, and distribution of fish and fishery products. Support and provisioning of vessels and providing financing are also part of the IUU continuum. To monitor and control IUU activities, emphasis must not be limited to tracking the harvesting vessel but also must be

¹²⁷ BD Steward, and LM Howarth, 'Quantifying and Managing the Ecosystem Effects of Scallop Dredge Fisheries' in *Developments in Aquaculture and Fisheries Science* (2016) 585-609, 585.

¹²⁸ US, National Strategy for Maritime Security (2005) p 6. Available at <https://www.state.gov/documents/organization/255380.pdf>

¹²⁹ *Ibid*, p 12.

¹³⁰

O cp{ "uwf lgu"j cxg"hwpf "c"õutkñpi "tgrvñpuj kr "dgy ggp"vj g"rgxgr'qh'i qxgtpcpeg"qh'c"eqwpx { "cpf "ku" vulnerability to IUU fishing.

FIGURE: ILLEGALITY IN THE FISHERIES SECTOR

The above diagram demonstrates the links between IUU fishing and crimes in the fisheries sector i.e., fisheries-related crimes and crimes associated with the fisheries sector¹³⁵.

õWP QFE "f kxf gu"etko gu"lp"vj g"ñkj gtlgu"ugevqt "lpvq"vy q"ecvgi qtlgu0'Hktuv."etko gu"cuuqekcvgf "y kj "vj g" fisheries sector that have no direct connection with fishing operations but take place on fishing vessels, in fishing facilities or use fishing operations to commit or cover crimes. An example of crime associated with the fisheries sector would be the trafficking of firearms¹³⁶.

Second

fraud and forgery, corruption, money-laundering, tax crimes, customs and fiscal fraud as well as trafficking
þ'r gtuppuö¹³⁷.

LABOUR AND HUMAN RIGHTS ABUSE AT SEA

IUU fishing has been linked with numerous crimes which take advantage of, and violate the rights of vulnerable people. In particular, IUU fishing is linked with illegal immigration, human trafficking, numerous violations of labour standards and safety regulations, modern slavery, sex trafficking and other components of the sex industry. There are several reasons as to why the crew of an IUU vessel is particularly at risk of human trafficking and human rights violations:

1. Fishing operators involved in marine living resource crimes are already involved in a criminal enterprise and display a commitment to profit-seeking and lack of moral judgment.
2. Vessels engaged in IUU fishing are often old and unsafe as they run the risk of forfeiture. This makes hiring qualified crew more difficult and expensive and leads unscrupulous operators to resort to forced

and human trafficking and abuse relates to trafficking for the purpose of prostitution. Women and children in fishing ports are vulnerable to organized sexual exploitation by fishers. There are also reports of women

became too overwhelming when the authorities and the vessel owners realized that three Korean crew and the captain of Marine 711 were kidnapped and their location unknown. It was the second time in 4 years the vessel was under armed robbery attacks in the Ghanaian EEZ¹⁶⁴. Similar occurrences have taken place on other vessels. In 2015, an armed robbery attack on Lu Rong Yuan Yu 917 a Ghanaian fishing trawler which occurred off Dixcove in Ghanaian EEZ on January 29, 2015, the crew was assaulted and feared for their lives, the armed robbers upon hearing that the Togolese Navy was approaching to rescue the vessel commanded the entire crew forced to jump off the vessel into the sea. This resulted in the death of 4 crew and the other crew was rescued by the Togolese Navy. The armed robbers disembarked onto a speedboat and sped off. The captain sailed back to Tema port and inspections were carried out. Onboard the vessel the inspection team found a variety of guns and ammunition and homemade explosives¹⁶⁵.

Furthermore, on March 13 2016 there was another horrific armed attack on Mengxin 2 and Lu Rong Yuan Yu 966 in Ghana EEZ. They assaulted the crew and stole their personal items, navigational equipment, and siphoned fuel from the vessel; however, there were no incidents of death. At the reception of Marine 711 at the Tema Port on the evening of 28 March 2018, it was learned that about three vessels including an oil tanker were hijacked within the same period by the same group of armed robbers who operated in the Tema anchorage. These cases of attacks have undoubtedly caused fear and panic in vessel crews and the fishing industry.

Another case of attack took place on June 2020 when Ghanaian flagged tuna vessel Panofi Frontier fishing in Benin waters was under pirate attack, five Korean foreign crew and one Ghanaian crew were captured and held hostage to demand huge sums of dollars from the vessel owners

o go dgtu0Qvj gt'r kcvg"cevkkgu"j cxg"qeewtfg "lp"l j cpcø"gttkqtken'y cvgtu."uwej "cu'y g"cwgo r vgf "cttacks

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Fokqkg."Nldgtk."Ukgttc"Ngqpg"cpf"I wpgc+"qh"GEECU."yj g"Tgi kqpcn"O ctkwo g"Wpkxgtukv{."gzgtekug"
OBANGAME express, AMLEP, Geographically, Ghana is situated in the west coast of the GoG region.

to national and regional security in GoG. As the plethora of maritime threats in the GoG region became more problematic, heads of state and governments of ECCAS, the Economic Community of West African States (ECOWAS), and leaders of the Gulf of Guinea Commission (GGC) convened in 2013 in Yaoundé, Cameroon, for a summit on maritime safety and security in the GoG. While the summit was heavily focused on issues related to piracy and armed robbery at sea, there was also high-level discussion on broader maritime security challenges and the need for a comprehensive strategic response. The summit resulted in the adoption of the Yaoundé Code of Conduct (YCC).¹⁷¹ hereafter the Yaoundé Code of Conduct (YCC). The YCC, identified 13 maritime threats,¹⁷² some interrelated and which can manifest transnationally across GoG states. Crucially, the YCC recognized IUU fishing as a transnational organized crime that threatens the sustainable development of States in West and Central Africa¹⁷³. Moreover, the YCC also endorsed and expanded the maritime security governance framework laid out by ECCAS, urging coastal states to co-operate and collaborate in using law enforcement in monitoring, control and surveillance (MCS) of fisheries and other maritime activities¹⁷⁴. With increasing illicit activities in fisheries, most empirical studies have focused on the environmental, socio-economic and security implications of these criminal activities in particular GoG states¹⁷⁵.

Control measures in the approaches to these ports remain weak. When a vessel is boarded by pirates, equipment and cargo are often stolen. Occasionally members of the crew are kidnapped for ransom. Ships may be hijacked and sailed to distant locations across maritime borders where cargo is transferred to other vessels.

Recent attacks in the Gulf of Guinea indicate a preference for ships laden with crude oil and oil products. Such attacks are known to have occurred along the Ghana-to-Angola and Nigeria-to-Côte d'Ivoire axes. Cote d'Ivoire and Nigeria are particularly vulnerable to piracy and armed robbery at sea. Reflecting the interconnected nature of this threat, enhanced patrolling around.

In the meantime, drawing on lessons learned from the Gulf of Aden, the shipping industry created the Maritime Trade Information Sharing Centre for the Gulf of Guinea (MTISC-GOG). With the goal of

¹⁷¹ ECOWAS and ECCAS, 'Code of Conduct'.

¹⁷² The threats include: Piracy and Armed Robbery at sea; Human trafficking and human smuggling; Drug trafficking; Illegal arms trafficking; Illegal dumping of toxic waste; money laundering; vandalism of offshore oil installations, crude oil theft, illegal oil bunkering; Illegal, unreported and unregulated fishing; maritime terrorism and hostage taking.

¹⁷³ ECOWAS and ECCAS, 'Code of Conduct', p. 8.

¹⁷⁴ Increasing illicit activities in the Gulf of Guinea, p. 295.

the Roma Lyon Group should therefore discuss these and other international models, with a view to applying them to the maritime sector in regions such as West Africa. Moreover, in its cooperation with West Africa, for example on implementing the EMSS action plan, Europe should adopt innovative solutions developed in other regions to combat illegal fishing.

Security impacts

Vj g"Hqwtvj "GW"Chlec"Uwo o k'F gerctvqrp"*4236+"ucvgu"vj cv<"Y g"y kn'cnuq"r c{ "ur gekri'cwgpvqrp"vq"vj g" issue of maritime security including counter-piracy efforts, the fight against Illegal, Unregulated and Unreported fishing within the framework of the African Integrated Maritime Strategy 2050 and the EU Kpvgi tcvgf "O ctkko g'Rqrke{ ."cpf "ci ckpuv'vqzle"y cuv'f wo r kpi ø¹⁷⁷. Interestingly, the EU Common Fisheries Policy addresses food security only in the context of aquaculture¹⁷⁸.

Tackling maritime insecurity in order to enhance the blue economy, restore ocean health, but also to utgpi vj gp'dnwg'lwuleg.'eqpvkwgu'q'dg'qpg'qh'vj g'b clqt'ej cngpi gu'ht"vqf c{ ø'i qxgtpo gpvøø vej "cwgpvqrp" is being paid to these ocean challenges in countries across the African continent. For outside observers, Ghana has emerged as an African role model on what can be done to address maritime security. As a major port state, rich in offshore fossil resources, located in West Africa and part of the Gulf of Guinea region, Ghana has made significant efforts. It has also received substantial support from the international community.

Less attention, however, has been paid on the process through which increased securitization of the fisheries sector has taken place in the GoG. Indeed, more generally research on securitization in the GoG remains nascent and broad in scope. João Piedade for example argued that securitization has been initiated in West and Central Africa in relation to maritime challenges, with regional strategies and plans adopted to deal with threats¹⁷⁹. Yet while this research highlighted an emerging trend in regional maritime security governance, it did not seek to undertake a detailed analysis of securitization. Others such as Ian Ralby have gædqtcvgf "j qy "b ctkko g'hpugewk{ "j cu'gxqixgf ."b cr r kpi "vj g'y c{ ":-ø kxct{-dcengf "eqqr gtcvixg'lpkicvixguø'

robbery at sea and mostly outside of the GoG¹⁸¹. The lack of research on the process of the securitization of fisheries in the GoG means that there is also limited awareness of what the day-to-day response to IUU fishing looks like in practice. Such an understanding of practice allows us to map key actors, locate policy trends, and highlight response mechanisms that influence regional geopolitics through to the lives of coastal communities. Moreover, for those interested in what security does, exploring practice is a prerequisite to being able to subsequently examine the wider implications of securitization on the lives and livelihoods of those for whom security policies and practices are presented as being intended to protect. Many countries negatively affected by maritime insecurity struggle with developing the appropriate capacities to effectively respond. In consequence, many international donors are assisting these countries through capacity building projects. Ghana is no exception to this¹⁸².

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

So, in concluding, it is evident from the research findings, that the lack of laws, inadequate laws or grey

of militating factors. For the FEU to function at their maximum potential, the research suggest: **Legal Education-** Government should really educate officials within the FEU on the Fisheries laws and other international instruments. This will significantly increase their knowledge on IUU fishing and enforce the provisions on IUU fishing according to the dictates of the law. This responsibility is shared by the flag state, port state, market state and coastal state. In-depth knowledge on the law will help them implement the provisions of the law without any ambiguities.

Political Interference- Government and other political actors should stop interfering in the activities of the FEU. Ghana has a long history of letting fisheries law offenders go without punishment because of political interference.

in many forms ranging from wildlife refuges to research facilities¹⁸³. MPAs restrict human activity for a conservation purpose, typically to protect natural resources.

marine acoustics, underwater archaeology, ocean engineering, and related fields¹⁸⁵. Specifically on fisheries, it will enable Ghana carried out periodic fish stock assessments. This will enable Ghana determine the state of health of some of its very commercially valued species like Tuna and set accurate total allowable catch levels. It could also help local marine uelgwu carry-out research into marine pollution, fishing gear and anthropogenic underwater noise and its impact on the reproduction and growth of fish species.

Purchase Fisheries patrol vessels

the point of the collective detriment of corruption on efforts to end IUU fishing in Ghana. Government should use this campaign to engender patriotism in fishers and FEU officials as well as bring to their consciousness their civic duties on corruption as a citizen of Ghana and the harm corruption has on i qxgtpo gpvau'ghhtv'q"rtqxkf g"lphcutwewtg and social services. Government can also partner with the National Commission on Civic Education and produce a documentary film on negative effects of IUU fishing. This film should be broadcast on all media platforms, in schools and in all social centers if possible to sensitize the public on the hazards of IUU fishing

Conservation clubs: Government should explore the possibility of setting up Conservation clubs in Schools and even incorporate into the regular academic curriculum. This will enable students grasp the concept of IUU fishing and general marine environmental conservation from a tender age. Once they imbibe the subject of IUU fishing at a young age, they are likely to depart from such practices when they find themselves in the fishing business because they truly understand the harm it poses to the marine environment, economy and social well-being of fishing communities.

Media: Government through the Ministry of Fisheries could use television, radio and even social media platforms to send the message of hazards of IUU fishing to the general public. If the general public is aware of international efforts to use trade and market-related means to stop IUU fishing, they will be conscious of the source of the fish they eat and not unwittingly contribute to the course of IUU fishing. They will be more likely to check for fish certification on fish products before purchasing them.

REFERENCES

1. Diop S, Arthurton R, Scheren P, Kitheka J, Koranteng K, and Payet R (2011) The Coastal and Marine Environment of Western and Eastern Africa: Challenges to Sustainable Management and Socioeconomic Development. In: Wolanski and McLusky DS (eds.) Treatise on Estuarine and Coastal Science, Vol 11, pp. 3156335. Waltham: Academic Press.
2. <https://www.fisheries.noaa.gov/national/us-interagency-working-group-iuu-fishing>
3. <https://www.fao.org/iuu-fishing/en/>
4. <https://www.state.gov/key-topics-office-of-marine-conservation/illegal-unreported-and-unregulated-fishing/>
5. General Assembly resolution A/RES/60/31 2006 (para. 33).
6. FAO. 2018. The State of World Fisheries and Aquaculture 2018 - Meeting the sustainable development goals. Rome. Licence: CC BY-NC-SA 3.0 IGO. <https://www.fao.org/iuu-fishing/en/>

42. Fish from Ghana risks ban on EU markets. <https://citibusinessnews.com/2014/06/fish-from-ghana-risks-ban-on-eu-markets/>
43. Green Means Upholding the Fisheries Laws. <https://www.mofad.gov.gh/green-means-upholding-the-fisheries-laws/>
44. See National plan of action to prevent deter and illuminate illegal unreported and unregulated fishing2014.https://www.fao.org/fishery/docs/DOCUMENT/IPOAS/national/Ghana/NPOA_IUU.pdf
- 45.

59. ICCAT takes important steps towards strengthening measures to combat IUU fishing.
<https://europe.oceana.org/en/blog/iccat-takes-important-steps-towards-strengthening-measures-combat-iuu-fishing>.

60.

76. UNCLOS 1982
77. Hilde M. Toonen & Simon R. Bush (2020) The digital frontiers of fisheries governance: fish attraction devices, drones and satellites, *Journal of Environmental Policy & Planning*,
78. FAO international plan of action to prevent, deter and eliminate Illegal, unreported and Unregulated fishing, Rome 2001.
79. Howard, B. C. (2016). Watch how drones fight pirate fishing from the sky. *National Geographic*.
80. Maxwell, S. M., Hazen, E. L., Lewison, R. L., Dunn, D. C., Bailey, H., Bograd, S. J., Crowder, L. B. (2015). Dynamic ocean management: Defining and conceptualizing real-time management of the ocean. *Marine Policy*, 58, 42650. doi: 10.1016/j.marpol.2015. 03.014
81. Bush, S. R., Bailey, M., van Zwieten, P., Kochen, M., Wiryawan, B., Doddema, A., & Mangunsong, S. C. (2017). Private provision of public information in tuna fisheries. *Marine Policy*, 77, 1306135.
82. Hilde M. Toonen & Simon R. Bush (2020) The digital frontiers of fisheries governance: fish attraction devices, drones and satellites, *Journal of Environmental Policy & Planning*.
83. Cordes, B. and California Environmental Associates: Illegal, Unreported and Unregulated (IUU) Fishing: A Whitepaper. Packard Foundation, 2015.
84. Witt, M. J., & Godley, B. J. (2007). A step towards seascape scale conservation: Using vessel monitoring systems (VMS) to map fishing activity. *PLoS ONE*, 2(10), e1111.
85. Hanich, Q., Teo, F., & Tsamenyi, M. (2010). A collective approach to Pacific islands fisheries management: Moving beyond regional agreements. *Marine Policy*, 34(1), 85691.
86. Fisheries and Oceans Canada. The National Vessel Monitoring System. Newfoundland and Labrador.
87. Cordes, B. and California Environmental Associates: Illegal, Unreported and Unregulated (IUU) Fishing: A Whitepaper. Packard Foundation, 2015.
88. FISH-Ktgr qt v"qp" :-Vj g"Rqvgpvkri"Wug"qh"CKU"cu" c"Huj gtlgu"O qpkqt kpi "Vqqmø"r wdrukj gf "d{ "uqr " illegal fishing.
89. United Nations General Assembly (UNGA) Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its ninth meeting, 2008 para 3.
90. European Union maritime security strategy June 2014. Available at
91. Richard Barnes and Mercedes Rosello. Fisheries and Maritime Security: Understanding and e Security: Un

109. Ugg'öVwpc'Tcpej lpi 'Uckf 'v' dg'kpxqkxgf 'y kj 'O chlc.'Krgi cri'K o ki tcpv'Vtchhenkpi ö"
The Malta
110. Independent (Malta), June 25, 2010. Available at
<http://www.independent.com.mt/articles/2007-08-05/>
111. news/tuna-ranching-said-to-be-involved-with-mafia-illegal-immigrant-trafficking-
177404/
112. WP QF E "4233-3: . 'ugg'cnuq'92. 'eklpi 'Rctpgm "öRqcej gtu'Vvtp'v'Cu{nwö "Vtcf g.ö'Vj g"
Australian, July 8, 2010
113. Kklf 0'47. 'ugg'cnuq'Nci qp. 'O ctmR0öP gwłpi 'Rgqr rg<Vtgc'vku'Tgf wełpi 'Krlk' Hkuj lpi 'cpf "
J wo cp'Vtchhenkpi ö'Eqwpek'lp' Hqtgki p' Tgrcvkpu. Hgdwtct { "34. "42360
114. ILO Mekong Sub-tgi kqpcn'Rtqlgev'v'Eqo dc'v'Vtchhenkpi 'lp'Ej krf tgp'cpf "Y qo gpö'Vj g"
Mekong Challenge: Underpaid, Overworked and Overlooked: The Realities of Young Migrant
Y qntgtu'lp'Vj ckrcpf ö'KNQ. 'Lcpwct { . "42280C'xckrcdrg'cv"
[http://www2.ilo.org/public/english/region/asro/bangkok/child/trafficking/downloads/underpaid-
eng-volume1.pdf](http://www2.ilo.org/public/english/region/asro/bangkok/child/trafficking/downloads/underpaid-eng-volume1.pdf) (accessed January 1, 2015), 82; see also UNODC 2011:36
115. Ugg'hqt'gzco r rg'Uwtvggu. 'Tgdgeecö'öVtcr r gf "cv'Ugc<'Włpi 'y g'Ngi cri'cpf "Tgi wrcvt { "
Hco gy qtn'v' Rtgxgp'v'cpf 'Eqo dc'v'v'g'Vtchhenkpi 'qh'Ugchrtgtu'cpf "Hkuj gtuö'I tqpkpi gp'Lqwtpcn'
of International Law, 1:2 Human Trafficking (2013), 91-153, 96.
116. WP KCR. "öGzr młkcvkqp'qh'Eco dqf kcp'O gp'cv'Ugc<'Hcew' Cdqw'v'g'Vtchhenkpi 'qh'
Eco dqf kcp'O gp'qp'v'Vj ck' Hkuj lpi 'Dqcv.ö"422; 7. "ekgf "d { "WP QF E"4233-560
117. Surtees 2013.
118. See for example Whitlow/ITF 2004 cited in UNODC 2011:54-55.
119. EJF. All at Sea: The Abuse of Human Rights Aboard Illegal Fishing Vessels. 2010:8
and 9, cited in
120. UNODC 2011:53.

126. Hkj gtlguö'I qxgtpepeg"cpf "Vtkr ctvuo 'F gr ctvo gpv'- Special Action Programme to Combat Forced Labour
127. (SAP-FL), Sectoral Activities Department (SECTOR), 2013. Available at http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_214472.pdf
128. RgtwugnöEj krf "Ncdqwt'lp'yj g"Y qtrf "Geqqo {ö'P gy "Rqikleu."; <ö"4226+=F cxkuöG0' Other Forms of
129. Gzr nqkcwqp"cpf "Vtchhenkpi .ö'lp"Vtchhenkpi "qh'Y qo gp"cpf 'Ej krf tgp'lp'kpf qpgukc0Gf 0' Rosenberg. 2003:11;
130. and United States Depctvo gpv'qh'LwvlegöVtchhenkpi 'lp'Rgtuqpu'Tgr qt v.ö'4223< 9."cm' cited in UNODC
131. 2011:48.
132. Ibid
133. Stølsvik 2010:9.
- 134.
- 135.

145. 39 pirate attacks recorded in Ghana between January and October 2021 ó Ghana Navy
<https://www.modernghana.com/news/1111185/39>

163. "Marine Protected Areas". National Ocean Service. National Oceanic and Atmospheric Administration.
164. R.P. Dinsmore, in Encyclopedia of Ocean Sciences (Second Edition), 2001.