

TRADE MEASURES TO DETER ENTRY OF ILLEGALLY CAUGHT FISHERIES PRODUCTS INTO MARKETS IN TANZANIA

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ABSTRACT

Illegal, unreported and unregulated (IUU) fishing is globally considered as a serious threat to the health of fish stocks with negative impacts on food security for countries that depend on fish resources. In many countries of the world, operators of IUU are increasing their ill-gotten revenue by 'laundering' their catches through the market and Tanzania is no exception. To enhance efforts for sustainable management of fisheries resources, Tanzania has been implementing a number of additional regulatory measures specifically trade and market-place measures to address IUU fishing. The goal is to tackle the IUU problem from the perspective of trade related actions. This paper provides an overview of the current trade and market-place measures that are being implemented in Tanzania to reinforce international fisheries conservation and management provisions with the objective of thwarting IUU fishing activities to attain sustainable fisheries management. Information for this study was collected through review of numerous reports from both government and non-governmental agencies responsible for fisheries, environmental conservation, standards, revenue and trade. The information gleaned was corroborated and validated with interviews with key informants. The findings revealed existence of policies and practices to monitor and track fish and fishery products from the time they are harvested to when they reach final consumers. These trade measures to great extent complement existing regulatory approaches to curb IUU fishing and thus facilitate IUU operators to minimize the scope for their fishing operations. Interestingly, the study found that Tanzania is increasingly investing and is currently implementing trade and market place-related measures such as catch documentation scheme and traceability system that form core incentives to IUU operators to minimize the scope for their fishing operations. The findings imply that proper and cohesive mainstreaming of fisheries regulations that build partnership between government and non-government actors is of great importance towards actions to eliminate IUU and enhance traceability for legally caught fish in both local and international markets.

Keywords: IUU fishing; trade measures; sustainable fisheries; Tanzania; traceability; fish catch

Introduction

Fish and fisheries products in Tanzania are the most traded commodity in the food sector. Government records show that the trade in fish and fishery products has become increasingly important for the economy of the country whereby in 2016 exports amounted to about 39,691,462.0 Kg, valued at USD 257,257,100.48 and 40,540,950.7 Kg valued at USD 257,029,627.5 in 2015. Despite existing potential, the contribution of fisheries sector to the national economy is still low, standing at 2.5% (MLF, 2016). The immense potential of fisheries sector in Tanzania is yet to be tapped attributed to a number of constraints that made the sector to lag behind in the overall contribution to the country's GDP. A vast majority of the fisheries products are exported to international markets in China, Hong Kong, Singapore, United Arab Emirates, the European Union and the United States of America. Regional markets on the African continent particularly Democratic Republic of the Congo, Rwanda, Zambia and Burundi also form the main destination for fisheries products from Tanzania.

While Tanzania is one of the fishing nations in Africa, fish production has not been able to meet the growing demand for its population. Currently, Tanzania imports fish for domestic consumption from China, Vietnam, Yemen, India, Portugal, Oman, South Korea, and Spain. In 2015 a total of 16,743.964.40 Tons, valued at USD 15,338,684.90 were imported into the country. Such a trading pattern is known to have adverse impact on management of fisheries in the country with a great likelihood to boost existence of illegal, unreported and unregulated fishing (IUU) activities.

Over the past years, Tanzania has waged a war against IUU and illicit fish trade. The scourge of IUU is widely recognised for undermining national and international efforts to ensure sustainability of fisheries resources (Agnew et al., 2009; Pomeroy et al., 2007; Sumaila et al., 2006). The aftermath of IUU includes among others damages to fish habitats and their ecosystems attributed to overfishing and irresponsible fishing practices and associated techniques as well as threats to aquatic biodiversity (Riskas *et al.*, 2018). IUU practices also violate existing laws, international obligations as well as relevant conservation and management measures (Young, 2016). It adversely impact the fisheries and associated ecosystems, food security and livelihoods for coastal communities which mostly are dependent on fisheries (Pedroza, 2013). IUU fishing also contributes to unfair trade competition between fishers and operators who abide to the rules and those who do not (Stokke, 2009). Various studies (e.g. Agnew *et al.*, 2008; Edyvane and Penny, 2017; Falautano et al., 2018) have shown that IUU cause major threats to the sustainable development of fisheries and aquaculture resources globally.

Globally, it is widely known that IUU fishing practices can have a major impact on livelihoods, food security and economic growth in many areas of the developing countries (FAO, 2016). In recognizing the magnitude of IUU fishing operations and

its adverse effects on ecosystems and community livelihoods, Tanzania have in recent years introduced new strategies and actions to combat IUU and increased the use of trade measures initiatives to stamp out any actions that threaten sustainability of fisheries resources. This paper therefore, focuses solely on trade measures designed to eliminate IUU fishing in Tanzania. It aims to provide the state of art knowledge on how such measures have been practiced included the challenges facing them. It is envisaged that the findings of this paper carry message to decision makers and researchers on country based strategies to eliminate IUU.

Recorded trends of IUU in Mainland Tanzania

IUU fishing activities can be conducted in many forms, from the use of illegal fishing methods and gears, fishing without a licence to poaching in another countries' waters. Most of the IUU activities in the Tanzania's artisanal fisheries include the use of illegal gears such as use of dynamite to catch fish, beach seines, under mesh sized fishing gears and fishing without registration or license. Table. 1 provides a trend of IUU recorded in artisanal fisheries.

Table 1 Trends of IUU in artisanal fisheries of Tanzania

IUU event recorded	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Beach Sein	3,602	1,358	665,141	*****	1,342	544	968
Monofilament	1,186	3,158	1,046	*****	11,952	12,222	15,753
Dynamite	25	51	129	*****	73	74	17
Boat	686	807	483	505	194	359	338
Under mesh gillnets	12,412	7,659	*****	*****	20,329	7,921	3,096

*****No records were made during this year

Source: Compiled from various reports of the Department of Fisheries (Tanzania)

Trade measures to control IUU or entry of IUU catches in Tanzania

The International Plan of Action (IPOA–IUU) encourages states to take steps, consistent with international law to prevent fish caught by vessels identified by the relevant Regional Fisheries Management Organizations (RFMO) to have been engaged in IUU fishing being traded or imported into their territories (Lobach, 2006). Appreciating the importance of combating IUU fishing and to align with FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated fishing, Tanzania has embarked on a range of trade measures to restrict access to markets for IUU fishery products as a means of ensuring the long-term conservation and enhancing sustainability of fisheries resources. Trade or trade-related measures currently existing in Tanzania include catch documentation schemes, traceability requirements, lists of IUU vessels, and import bans.

Methodology

This paper based on qualitative methods merging document, comparative legal analysis of measures and initiatives, also including interviews of the key informants to evaluates the appropriate placing of trade and market-based measures as a best approach to address IUU fishing in Tanzania. The existing measures, policies and approaches which have been used in Tanzania were identified and reviewed and then lists the different sets of trade measures that used to curb IUU fishing activities.

Results and Discussion

Catch Documentation Scheme (CDS)

A catch documentation scheme is one which uses certifications at the point of harvesting and applies to all fish which are caught, landed and/or trans-shipped (FAO, 2002). The Fisheries Development Division in Tanzania is the Competent Authority responsible for certifying fish and fishery products for export to international markets. The Division has an obligation to ensure that fishery products processed, transported and traded are caught using legally methods and gears and conform to the national laws, regional and international obligations as well as specific markets requirements with regard to safety of the products in question.

The European Union in response to the international call for fight against IUU fishing initiated a war against irresponsible fishing through Council Regulation (EC) No. 1005/2008- to prevent, deter and eliminate illegal, unreported and unregulated fishing effective on 1 January 2010 (*Information Note, EC Regulation 1005/2008*) The regulation requires that fish and fishery products exported to the EU are accompanied by a catch certificate verified and validated by the Competent Authority in the country of origin with information about the species, catch location, fishing vessel, date of capture, and any trans-shipments that have taken place.

In order to meet the EU Regulation for the IUU, Tanzania issues a Simplified Catch Certificate for the wild caught fish and fishery products from artisanal fishers in accordance with the Council Regulation (EC) No. 1005/2008 whose model is well prescribed in commission regulation (EC) No 1010/2009 of 22 October 2009. The simplified catch documents include details on registration particular(s) of the vessel, validity of the fishing license for the current year; species and quantity supplied per vessel Area(s) where fishing was carried out, name(s) of the boat/owner.

Tanzania also instituted a Catch Documentation Scheme (CDS) for importers of fish and fish products to track origins, landings and trade flows of fish and fish products of the fish entering the markets; determine whether the fish were caught in a manner consistent with the conservation measures of the fisheries management agreement; and to reinforce the already adopted fisheries management. During importation, the importer must show the catch certificate from country of origin (Regulation 92 (2) of

The Fisheries Regulations of 2009 of mainland Tanzania). With this scheme in work, a number of IUU events has gone down although the exact figure is not known due to lack of baseline data. So far, the current study uncovered that Tanzania has succeeded in implementing its CDS as per international requirements and obligations.

Traceability

The FAO IPOA–IUU calls on states to take steps to improve transparency of their markets to allow the traceability of fish or fish products. Tanzania has also put in place the traceability system in all the existing fish processing establishments which allows the factory to trace individual products to individual fishermen supplying product to collectors, this scheme ensure full traceability of fish and fishery products traded within and outside the country. This was also to comply with the Article 18 of Regulation (EC) No 178/2002 that establishes the general principles of traceability of food which aims to introduce a comprehensive traceability system to track all fish and fisheries products throughout the market chain. All fish/fisheries products landed at landing site are accompanied by traceability forms and movement permits to processing and consumption. Fish only from licensed fishers and boats which do not engage in IUU fishing are accepted and given movement permit for transport from landings to processing, markets or for export.

Measures by Regional Fisheries Management Organisation

In East Africa the three countries sharing lake Victoria, through Lake Victoria Fisheries Organisation of which Tanzania is a member, have committed to tackling IUU fishing in Lake Victoria through implementation and enforcement of the Regional Plan of Action(RPOA-IUU) which was adopted in 2004. The major goal of this plan is to develop and implement coordinated, harmonized, unified, and effective management measures to prevent, deter and eliminate IUU fishing in Lake Victoria and its basin. In line with this objective, the plan defined the scope and nature of IUU fishing activities which restricts use of certain fishing gear, as well as prohibits fishing in closed areas. Based on this plan, the countries put efforts to pin down the use of illegal fishing gears, practices and control the size of Nile perch fish in Lake Victoria. Recently, Tanzania has initiated special efforts to curb the IUU fishing. The operation dubbed as "Operation Sangara" began effectively early 2018 and is shown to have yielded remarkable results. It is too early however to comment on the long term outcomes of the operation taking into account the short span it has already taken place.

Tanzania has been a member of the Indian Ocean Tuna Commission (IOTC) – a regional Fisheries Management Organisation (RFMO) which is an intergovernmental organisation responsible for the management of tuna and tuna-like species in the Indian Ocean since 2007. As a member of IOTC the country is required to abide with the several resolutions made by IOTC members partners. The implementation is

done through the Deep Sea Fishing Authority (DSFA), covering the Exclusive Economic Zone (EEZ) and excluding the territorial sea. These trade-related measures includes:-

Vessel lists and the prohibition of transshipment of IUU fish product

IUU fishing Vessel lists have been drawn up by the IOTC with the aim of identifying legal operating fishing vessels and illegally operating. Tanzania as a member of the commission used it to identify those vessels engaged in IUU fishing in order to smooth the progress of the prohibitions on landings and transshipment. Tanzania is often crosschecking the IOTC list to ensure that vessels prohibited are not plying in its EEZ.

Port and flag state control Port state measures to prevent, deter and eliminate illegal, unreported and unregulated fishing

The United Republic of Tanzania currently implement and enforce the Port State Measure (PSM) adopted by IOTC- resolution and port state measure. Tanzania has enacted a Deep Sea Regulation of 2017 which ensures inspection of fishing vessels is conducted before they get licensed according to IOTC PSM Resolution. The country has also upgrading the Vessel Monitoring System (VMS) from Met fishery to Themes System in order to expand a wide range for monitoring all fishing vessels entering its EEZ through AIS system and mirroring it to Tanzania Mainland.

In addition, Tanzania continues to conducting air patrol and sea patrol through joint venture with IOC SmartFish PRSP within the Regional Mission in order to combat and curb IUU Fishing within Tanzanian waters. Furthermore there is national Monitoring Control Surveillance (MCS) Committee for curbing IUU fishing within Tanzania waters namely Multi-Agency Taskforce (MAT) which include Ministry of Defence, Ministry of Home Affairs, Ministry of Natural Resources and Tanzania Intelligent System.

Products Certification

Eco certification is an independent certifier which verifying that the products meet certain environmental criteria or standards, the schemes encourages sustainable fishing even though it does not directly target an IUU fishing. Tanzania is in the process of obtaining environmental labels of private standards from the Marine Stewardship Council (MSC) for the Octopus fishery. Tanzania has already developed management plans for octopus fishery and currently is at a stage of undertaking fish improvement programs (FIP). The MSC label will help the customs to verify that octopus products originating from fisheries have been certified according to the MSC Principles and Criteria for sustainable fishing which are line with FAO Code of Conduct for Responsible Fisheries. On the other hand there are fisheries management plans in place for prawns, small pelagic; and tuna and tuna like species. Besides the MSC certification, Tanzania has adopted certification from other sources. Currently, a number of fish processing establishments in Bukoba, Mwanza and Musoma are certified by Naturland in which their products bear an eco-label.

Legal measures and regulations

FAO IPOA-IUU necessitate national legislation to address all aspects of IUU fishing in an effective compartment. To address all these aspects, Tanzania mainland put in place a National Fisheries Policy and Strategy Statement in 2016. The overall goal of this policy statement is to promote conservation, development and sustainable management of the fisheries resources for the benefit of the present and future generations. The Tanzania Mainland Fisheries Act No. 22 of 2003 has put in place better regulation provisions related to the management and development of fisheries in the internal and territorial waters of Tanzania Mainland and matters connected therewith and incidental thereto The Fisheries Regulations 2009, provides measures regarding fishing activities in domestic waters, all vessels and fishermen shall, have a license to fish and Regular patrols will be conducted to inspect. Fisheries is not a Union matter thus the Legal system applied in Tanzania on fisheries is differed in terms of territorial water and EEZ. Each party managed its territorial water but in term of EEZ both Tanzania Mainland and Zanzibar collaborate on managing the EEZ through Deep Sea Fishing Authority Act No.1 of 1998 (as amended 2007) and Deep Sea Fishing Authority Regulations which established the Deep Sea Fishing Authority (DSFA) to regulate deep sea fishing (and other uses) in the EEZ.

Stakeholders in combat of the IUU

IUU fishing is a dynamic and complex problem that cannot be effectively addressed by any single approach, its solution requires coordinated efforts of numerous different actors at multiple levels across the country. Many of such approaches at international, regional and national levels require involvement of stakeholders in fisheries sector. Tanzania have been carrying out many initiatives to address the challenges of illegal fishing predominantly in the area of monitoring, control and surveillance (MCS) both in inland and marine waters including the EEZ. This have been implemented together with several stakeholders among them including the international players like European Union (EU)-funded and IOC-through SmartFish programme which provides funding, training and expertise; and international NGO especially World Wide Fund for Nature.

At national level the country established a Governmental Multi-Agency Task Team (MATT) in 2014 under the lead of Tanzania's Police. The MATT is designed to address organized environmental crime including fishery crimes such as blast fishing and IUU fishing. On the other hand, the government, through the Fisheries Act Number 22 of 2003; Section 18 and its principal Regulations of 2009; Regulation 133–136, provides for establishment of participatory resource management approach by involving local fishing communities, a system commonly known as co-management through Beach Management Units. The government decided to involve local communities in fisheries management through Beach Management Units (BMU) as they are the beneficiaries, they have vast experience and indigenous knowledge on the behavior of the fishery resources and they are the

first to suffer when the resource is completed. This brings advantage to them (BMU) to be involved in managing the resources, protect, conserve, utilize in a sustainable manner and involved in decision making, conservation and protection of fish in their locality in collaboration with the government (Sobo, 2012).

Outcome of the efforts to deter and control IUU

The country has good policies and practices in place to monitor and track fish and fishery products from the time the fish are caught to when they reach final consumers. It is revealed that, these trade measure to address IUU fishing in the country to great extent complement existing regulatory approaches to curb IUU fishing and thus facilitate IUU operators to minimize the scope for their fishing operations. More efforts is needed to have a proper and cohesive mainstreaming of fisheries regulations that will build partnership between government and non-government actors is of great importance towards actions to eliminate IUU and enhance traceability for legally caught fish in both local and international markets.

Conclusion

Tanzania like many other developing countries is known to have suffered disproportionately due to IUU. The wide spread impacts of IUU on Tanzania's economy and aquatic ecosystems are known. Implementation of trade measures as elaborated in this paper has in part, helped the country to forge and create environment to thwart new entry and expansion of IUU activities. Measures which are implemented, despite their inherent weaknesses as helped to stop coming of IUU catches. While other developing countries may borrow a leaf from Tanzania, it remain clear whether trade and trade based measures will offer long term solution to IUU as the operators are also changing their strategies every now and then. All in all, proactive actions are required and the measures discussed in this paper offer a theoretical background that could be adopted by other countries.

REFERENCES

- Agnew, D., Pearce, J., Peatman, T., Pitcher, T.J., Pramod, G., 2008. The global extent of illegal fishing, MRAG, London, UK, and FREE, Fisheries Centre, UBC, Vancouver.
- Agnew, D.J., Pearce, J., Pramod, G., Peatman, T., Watson, R., Beddington, J.R., Pitcher, T.J., 2009. Estimating the worldwide extent of illegal fishing. PLoS ONE 4, e4570.
- Council Regulation (EC) no. 1005/2008 of 29 September 2008 establishing a community system to prevent, deter and eliminate illegal, unreported and unregulated fishing.
- Edyvane, K.S., Penny, S.S., 2017. Trends in derelict fishing nets and fishing activity in northern Australia: Implications for trans-boundary fisheries management

- in the shared Arafura and Timor Seas. *Fish. Res.* 188, 23–37.
<https://doi.org/10.1016/j.fishres.2016.11.021>
- Falautano, M., Castriota, L., Cillari, T., Vivona, P., Finoia, M.G., Andaloro, F., 2018. Characterization of artisanal fishery in a coastal area of the Strait of Sicily (Mediterranean Sea): Evaluation of legal and IUU fishing. *Ocean Coast. Manag.* 151, 77–91. <https://doi.org/10.1016/j.ocecoaman.2017.10.022>
- FAO. 2004. "Report of the Twentieth Session of the Codex Committee on General Principles." Joint FAO/WHO Food Standards Programme, Codex Alimentarius Commission. ALINORM 04/27/33A.Paris, France. 3-7 May
- FAO. 2016 The State of World Fisheries and Aquaculture 2016, Food and Agriculture Organization of the United Nations, Rome,p. 200
- Information Note; EC Regulation 1005/2008. To Prevent, Deter And Eliminate Illegal, Unreported And Unregulated (IUU) Fishing;
https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/information_note_01_en.pdf
- Lobach, T., 2006. Port measures to combat IUU fishing: The FAO model scheme on port state measures (No. FAO/FFA regional workshop to promote the full and effective implementation of port state measures to combat IUU fishing). FAO, Nadi, Fiji.
- Pedroza, C., 2013. Middlemen, informal trading and its linkages with IUU fishing activities in the port of Progreso, Mexico. *Mar. Policy* 39, 135–143.
<https://doi.org/10.1016/j.marpol.2012.10.011>
- Pomeroy, R., Parks, J., Pollnac, R., Campson, T., Genio, E., Marlessy, C., Holle, E., Pido, M., Nissapa, A., Boromthanasarat, S., Thu Hue, N., 2007. Fish wars: Conflict and collaboration in fisheries management in Southeast Asia. *Mar. Policy* 31, 645–656. <https://doi.org/10.1016/j.marpol.2007.03.012>
- Riskas, K.A., Tobin, R.C., Fuentes, M.M.P.B., Hamann, M., 2018. Evaluating the threat of IUU fishing to sea turtles in the Indian Ocean and Southeast Asia using expert elicitation. *Biol. Conserv.* 217, 232–239.
<https://doi.org/10.1016/j.biocon.2017.10.011>
- Stokke, O.S., 2009. Trade measures and the combat of IUU fishing: Institutional interplay and effective governance in the Northeast Atlantic. *Mar. Policy* 33, 339–349. <https://doi.org/10.1016/j.marpol.2008.08.002>
- Sumaila, U.R., Alder, J., Keith, H., 2006. Global scope and economics of illegal fishing. *Mar. Policy* 30, 696–703.
<https://doi.org/10.1016/j.marpol.2005.11.001>
- Sobo, F. (2012) Community Participation in Fisheries Management in Tanzania. IIFET, Dar es Salaam,
- Young, M.A., 2016. International trade law compatibility of market-related measures to combat illegal, unreported and unregulated (IUU) fishing. *Mar. Policy* 69, 209–219. <https://doi.org/10.1016/j.marpol.2016.01.025>