

Illegal Unreported Unregulated Fishing by Sri Lankan Fishermen: Law Implementation Mechanism and Fishers' Attitudes on Compliance

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Abstract –This paper discusses the mechanism of the national legal framework for combatting IUU fishing and suggests strategic improvements based on fishers' attitudes on compliance. A questionnaire was prepared and forwarded to the legal department of the Department of Fisheries and Aquatic Resources (DFAR) to get an insight on the current law implementation mechanism to combat IUU fishing at national level. A separate questionnaire was forwarded to groups of fishermen in Kudawella, Dondra, Kalpitiya and Cod-Bay fishing harbors to observe the level of their attitudes on compliance. Fisheries and Aquatic Resource Act No 2 of 1996 is the main legal instrument that regulates fishing operations in the Sri Lankan EEZ. No 35 of 2013 amendment and certain extraordinary gazettes assert the rules for fishing operations in the high seas. Push net, moxy net, monofilament net, gill net and trammel net on coral reefs have been pronounced as illegal fishing methods in Sri Lanka. High seas fishing operations are monitored by Vessel Monitoring Systems (VMS) and log books. (VMS), catch data regulations, and high seas fishing operation regulations are among the major regularity measures. There are awareness programs organized by the DFAR to enhance the level of awareness of fishermen on compliance. Poaching of Sri Lankan fishermen in other countries EEZs could be limited, due to the availability of new technological and navigational equipment to identify the position of the boats. However, the number of cases of violations has been increased within the last three years. In 2015, Sri Lankan export fisheries were banned by the EU, due to the records of IUU fishing by Sri Lankan fishermen. Miscommunication and unawareness of fishermen, unavailability of sufficient VMS systems, lack of proper mechanism for making complains and technicality of the compliance procedure may hinder the expectations of effort to combat IUU fishing. Increased number of VMS boats, onboard inspectors, enhancing the communication between fishermen and the DFAR are viable solutions to increase the level of compliance. Poaching of Indian fishermen in Sri Lankan EEZ is a major threat to the sustainability of fish stocks in the areas under national jurisdictions, which needs proper monitoring and surveillance to control.

Keywords: IUU fishing, law implementation, compliance

INTRODUCTION

Fishing industry is a growing business that is very important to supply animal protein to world's growing population. It provides numerous direct and indirect occupations while enhancing the opportunities of trade related income generation. With the increasing demand for fish products, there is a huge pressure put on wild catches, questioning the sustainability of the future fish stocks. IUU fishing has been identified as a major threat for marine ecosystems, food security and sustainable fisheries around the world (NOAA Fisheries, 2012). Due to this reason, combating IUU Fishing has become a high priority in international fisheries management protocols (De Gallic & Cox, 2006). Fishing activities that dissident national, regional, or international conventions or management measures are defined as Illegal Unreported and Unregulated fishing (IUU). It can be further elaborated as follows.

(Department of Fisheries and Aquatic Resources, 2013; International Plan of Action to prevent, Deter and Eliminate IUU Fishing (IPOA-IUU) 2001)

Illegal fishing: fishing activities that contravene the national and international laws that applicable to the fishing areas (especially in high seas). It includes fishing without license, under-reporting catches, keeping undersized fish, using prohibited fishing gear types, illegally transshipping fish etc.

Unreported fishing: fishing activities that has not been reported or properly reported. It is associated with poor data collection or weak fisheries management and lack of reporting.

Unregulated fishing; fishing activities in areas where there are no applicable national, regional or international conservation or management measures. It is associated with unmanaged fishery activities within a country's Exclusive Economic Zone (EEZ) or in the high sea, and fishing done by vessels that are un-flagged or flag of convenience.

Most South Asian and Southeast Asian countries are regular poachers in unmonitored fishing grounds (Vasan, 2017) and the case of IUU fishing by Sri Lankan fishermen drew the world's attention when the European Union imposed a ban on Sri Lankan fishery products in 2015 for over one and half years as Sri Lankan fishermen were accused of engaging with IUU fishing in the high seas. Sri Lanka is the second largest fish exporter to the European Union with major export products of fresh tuna and chilled swordfish. Lack of declared legislations to combat IUU fishing in the high seas made the EU not to purchase fish products for one and half years. This drastically decreased profits of fish exporters and many fishermen even lost their jobs. Lost profits were especially recorded for multiday boats, which use long lines and other gear that target skipjack tuna and yellow fin tuna. The ban was lifted after implementation of the high seas fishing operation regulations as an amendment of the Act No 35 of 2013, which enforced the rules and regulations in the international and fascicular contracts signed by the Sri Lankan government. Department of Fisheries and Aquatic Resources (DFAR) is the responsible authority to prepare the rules and regulations for fisheries management at national level. Other than that, they organize programs to improve the awareness of the fishing community on the need of sustainable and responsible exploitation of fisheries resources. In natural resources management, acquiring the grassroots support and the knowledge of local people shall not be underestimated and shall be integrated and balanced with the top-down regulatory measures in order to achieve better management (Nevil, 2004). Therefore attitudes and awareness of fisher communities on rules and regulations for preventing IUU fishing shall be clearly understood for implementing effective fisheries management measures. The objective of this paper is to look in to the national law implementation mechanism to combat IUU fishing and suggest better strategies to improve it based on the fishers' attitude on compliance

2. METHODOLOGY

A questionnaire was prepared and forwarded to the legal department of the Department of Fisheries and Aquatic Resources (DFAR) to get an insight on the current law implementation mechanism to combat IUU fishing at national level

A separate questionnaire was forwarded to fisher communities in Kudawella, Dondra, Kalpitiya and Cod-Bay fishery harbours (Trincomalee) to observe the level of their attitudes and awareness on compliance. The questionnaire forwarded to the DFAR was answered by its legal officer. Sixteen (16) fishermen were randomly selected at each harbour location to carry out the survey. Data was interpreted using Microsoft Excel software

3. RESULTS

Law implementation structure with regards to combating IUU fishing at national level

As a signatory to the United Nations convention of the Law of the Sea (UNCLOS, 1982), Sri Lanka is obligatory to ensure proper conservation and management measures of the living resources in the EEZ and the high seas, taking the best scientific evidences. Implementation of the rules and regulations for preventing IUU fishing is under the authority of the Department of Fisheries and Aquatic Resources (DFAR) of The Ministry of Fisheries and Aquatic Resources Development, and National Aquatic Resources Research and Development Agency (NARA) supports the DFAR with scientific facts and evidences regarding fish stocks. Fisheries and Aquatic Resource Act No 2 of 1996 is the main legal instrument that asserts the rules and regulations for all fishing operations in the Sri Lankan Exclusive Economic Zone (EEZ). No 35 of 2013 amendment of the Act and the gazette of the Democratic Socialist Republic of Sri Lanka (extraordinary) dated 2014.9.01, 2015.03.03, 2015.03.26, 2015.10.26, 2015.12.14, specially assert the rules for fishing operations in the high seas. As some additional instruments, Chank regulations and lobster regulations assert the rules for coastal chank and lobster fisheries.

Fishing methods of push net, moxy net, monofilament net, gill net and trammel net on coral reefs have been pronounced as Illegal fishing methods in Sri Lanka. Fishing operations in the EEZ and high seas are regulated and controlled by Vessel Monitoring Systems (VMS), and catch data regulations (use of logbooks). VMS and logbooks in multiday boats are supposed to facilitate monitoring and proper reporting of fish landings. VMS system uses satellite-based communications from on-board transceiver units, which certain vessels are required to carry. The transceiver units send position reports that include vessel identification, time, date, and location, and are mapped and displayed on the end user's computer screen. Each vessel sends its position once in every four hours. When it moves out from the EEZ of the country, vessel-monitoring center in the Ministry of Fisheries and Aquatic Resources warns that boat to return. VMS also helps fishermen when they are in distress. Catch data regulations require fishermen to maintain a logbook during fishing operations and feed the information with daily catch data of a fishing trip. It includes the date of net setting, setting position (latitude & longitude) size of gear, number and weight of fish caught. (Pink color sheet for purse seine net, green color for gill net, white color for long line). Under high seas fishing regulations, the vessels fishing in the high seas require licenses for the boat and for the skipper. This was

imposed after the EU ban of Sri Lankan export fisheries in January 2015, which drastically decreased profits and many fishermen lost their jobs. Monthly meetings and training programs are conducted by the DFAR to build awareness among fishermen on responsible fishing. The Navy, the Air Force, and the Coast Guard play a major role in monitoring and surveillance of vessels operated in Sri Lankan waters.

Poaching of Indian fishermen in Sri Lankan EEZ is another major threat to the sustainability of national fisheries resources. Indian poachers use dynamite fishing, bottom trawling and other illegal fishing gears and according to the Immigration Act, the government commute the fishermen without serious sanctions. .

However, regardless of these efforts, number of offences with regards to IUU fishing has been increased within last three years. Offences of using illegal fishing methods such as purse seine, and monofilament nets are significant during 2016.

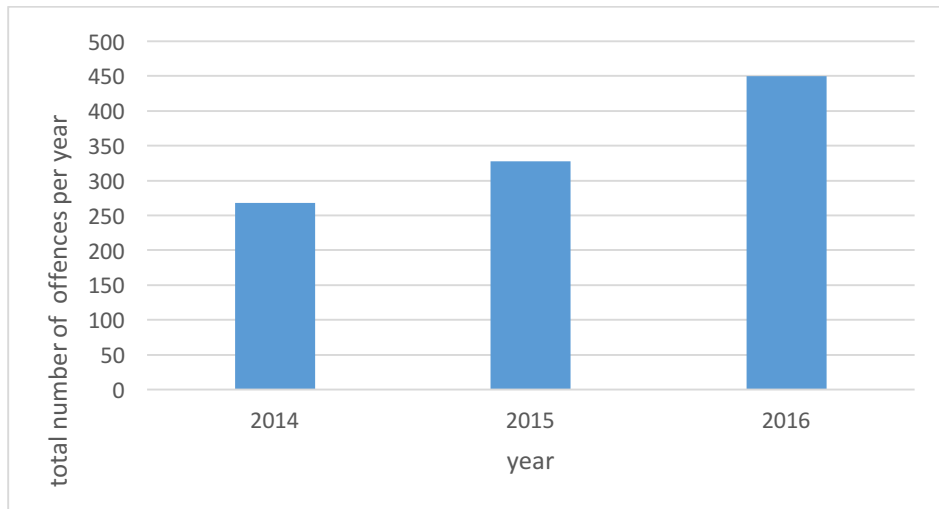


Figure 1; violation of Fisheries and Aquatic Resource Act no 2 in 1996

The role of fisheries inspectors is very significant, as they are the responsible officers to check the fish catches to ensure whether they meet the approved standards.

Attitudes and Awareness of fisher communities on regulations to combat IUU fishing

Out of all the fishermen, who were interviewed, 63% had at least once been to other countries EEZ for fishing before regulations being introduced and 6% have been arrested. "Diego Garcia" is a popular area where they used to fish regularly. All multiday boats have new technological navigational equipment such as VMS, GPS and radio, which makes it easy to identify the position of the vessels. 44% of the visited boats in the survey had VMS installed. In multiday boats, logbooks are maintained to record catch data.

DFAR organizes training and awareness programs for fisher communities on sustainable exploitation of fishery resources. The 60% responded that they are willing to participate in those programs, but do not regularly get a free time. That is mainly because they are fishing in the high seas at the time that the programs are being held. Fishermen face many problems because of the miscommunication between them and fishing inspectors. Fishermen have to spend lot of time to fill

their documents, which they see as a trouble for their job. 75% of the interviewed fishermen have problems with recording the catch data. Some of them are illiterate and their knowledge is insufficient to fill logbooks, while operating new equipment such as VMS can be too technical for them.

82% of the interviewed fishermen responded that there is a reduction of fish catches compared to previous times. As for them, increased number of fishing boats, trawling by Indian fishermen and usage of course nets are among the major suspected reasons for that.

Poaching of foreign fishermen in Sri Lankan Waters

73% of the interviewed fishermen claimed that they have seen foreign fishermen (48% very often) in Sri Lankan waters. According to them, these foreigners catch mostly shrimps, cuttlefish, and all sizes and type of fish using trawlers. 67% claimed that they see them as a threat for their job. Because they catch all sizes and type of fish and it decreases local fishers' target fish catch and profit. It was revealed that foreign fishermen damage the gear and boats, which belong to Sri Lankan fishermen.

Fishermen in Trincomalee and Kudawella and Dondra fishing harbors responded that they have no proper procedure to complain poaching incidents. 63% of them are not satisfied with the attention paid by the DFAR, the Navy or the fisheries inspectors on this matter. 13% responded that they do not attempt to make complains anymore even though they witness foreign vessels fishing in Sri Lankan waters. But the situation in Kalpitiya was different. 100% responded that whenever they make a complain, the Navy takes proper actions to check and arrest the vessels.

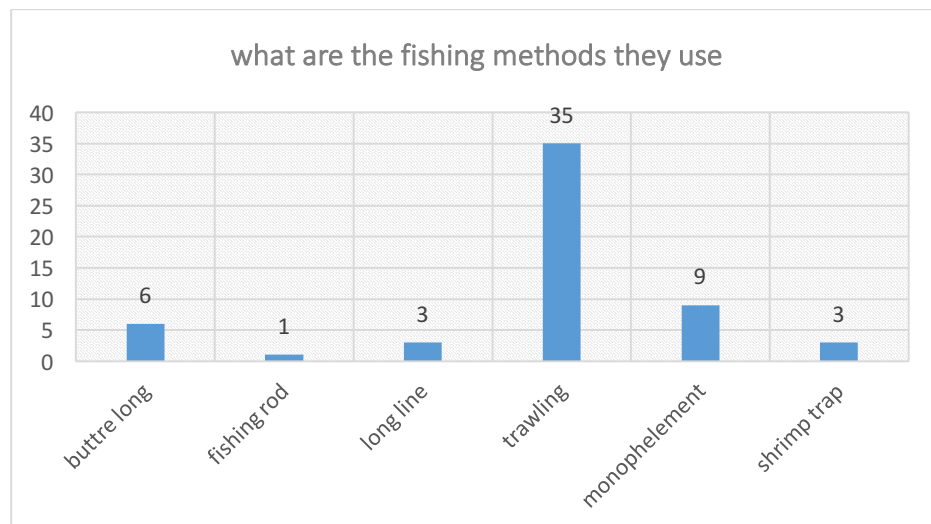


Figure 2. Fishing gear that Indian fishermen use

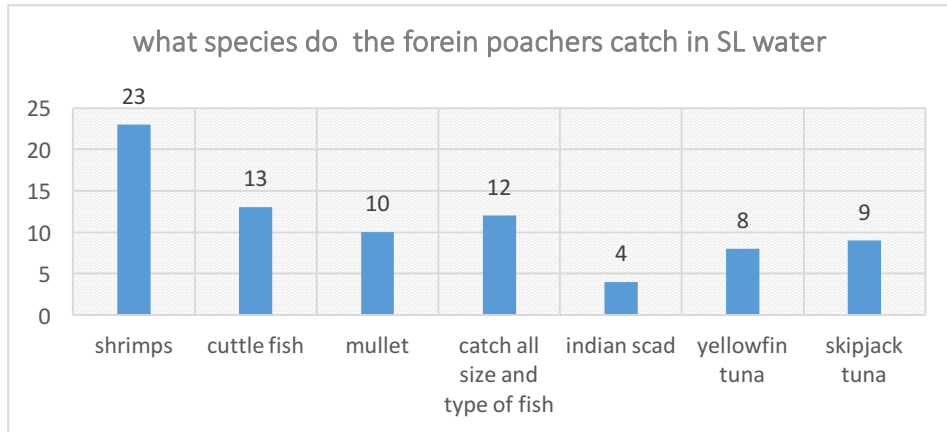


Figure 3. Fish species that Indian fishermen catch.

3. Discussions and Conclusion and Recommendations

Top down management might not show successful results all the time. The most effective management strategies may surface from the community, the true resource owners. In this bottom up management approach, it is very necessary to understand the level of understanding of the community on the resources and incorporate their suggestions to make it more adaptive. The most effective management approach shall reach the correct balance between both top down and bottom up strategies.

Miscommunication and unawareness of fishermen are the main challenges, which hinder the effective compliance on the law implemented by the DFAR. Some simple techniques such as SMS alerts can be used to notify the date of awareness programs in advance and permitting the fishermen to adjust their working schedules at a prior time can be very effective.

There shall be a better reporting system for all fishermen, which is easy to understand and use. New technologies shall be introduced, which is capable of automatically calculating the catch data and transfer the information at the fishing harbour, where fishermen come with the catch.

Decreasing fish stock is a threat for fishing industry. To increase the abundance of fish stocks, identification of the grounds suitable for growth of fish and stock enhancement activities are important. Innovative gear technologies, which allow undersized fish to escape and chasing away non-targeted species are vital to preserve depleting fish stocks.

It was revealed that there are 4800 multiday boats in Sri Lanka, but only 1536 have been installed with VMS. Measures shall be taken to provide VMS to all multiday fishing boats to facilitate effective reporting mechanism.

Proper mechanism for taking complains on IUU fishing shall be established and fishermen shall be informed how to make a complain immediately after witnessing an IUU incident. Navy and Coastguard patrol officers shall be well aware of their duties with clear understanding on how IUU fishing adversely impact on marine ecosystems. Introducing on-board fisheries inspectors to enhance the monitoring capacity is another way of combatting IUU fishing in the high seas.

Poaching of Indian fishermen is a main threat for national sustainable fishery approaches. Government must understand the situation and take actions to follow

proper procedure to prosecute the guilt and order sufficient penalties to discourage any future IUU attempt. .

All these regulatory efforts are only applicable in the EEZ and in the high seas. Fishing operations in the coastal waters are not being considered under this regime. There is no mechanism to monitor fisheries activities in coastal waters, which needs immediate actions taken.

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