

Bottom Trawling in Palk Bay Area: Human and Environmental Implications

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Abstract- Sri Lanka is an island positioned in a geo strategically decisive point in the Indian Ocean. Palk bay is a shallow and narrow strip of water between Sri Lanka and Tamil Nadu, Palk Bay has a rich ecosystem which is being progressive environmental attenuation due to bottom trawling. Elimination of bottom trawling in fishing is needed to save that rich ecosystem in Palk bay. It is important to suggest environmental healthy fishing practices and to inspire the dependent families of bottom trawling to enter into substitute job opportunities. Bottom trawling leads to many problems in whole ecological structure and life below water. Since a large number of people in Sri Lanka are committed in this fishing practice, this directly affects moreover the whole Sri Lankan Northern livelihood. This research will debate on seriousness of banning bottom trawling and explore lasting solutions that would aid environment as well as livelihood of people in Sri Lanka. The research design to be carried out by analysing existing literature subjective to qualitative analysis. Empirical studies carried out by the statistics and data published by recognized institutions. Qualitative data would be collected from individuals such as academics and policy makers. Data collection would be semi-structured interviews done informally.

Keywords-Geo-Strategy, Bottom Trawling, Ecosystem, Marine life, Environment

I. INTRODUCTION

India and Sri Lanka are parted by the Palk bay and the Gulf of Mannar. According to the statistics nearly 2000 plus trawlers fish illegally in Sri Lankan waters daily (Sunday observer, 2017). Those fishermen practice illegal methods which are regarded to be unhealthy and it constitutes extensive aquatic species. The series of problems arise from this unhealthy fishing process which makes it hard to achieve true sustainable development goals, such as eliminate poverty and sustainable managing and conserve the life below water.

There are three different areas in the Maritime border between the two countries which is about 400 kilometers widening. They are, the Bay of Bengal in the north, the Palk

Bay and the Gulf of Mannar in the center and the Indian Ocean in the south. The distance in Palk Bay region varies

between 16 and 45 kms between the coasts of the two countries. This means territorial waters of each country in some areas departs into the others if 12 nautical mile criteria is rigorously applied. Mechanized bottom trawling is dragging weighted nets along the ocean floor. It is designed to catch large quantities of marine life. Bottom trawling irreversibly wipe out marine habitats. The Marine Conservation institute has attended that bottom trawling is reckless because trawlers customarily throw overboard up to 90 per cent of the catch. Statistics states that over a thousand Indian boats enlist in mechanized bottom trawling every week in Sri Lankan waters. Due to that Sri Lankan fishermen are being interrupted from accessing these waters and engaging in their livelihood. The Indian trawlers drain a large sum of fishing resources leaving a very limited extent for Sri Lankan fishermen to catch. Trespassing Indian trawlers were seized by the Sri Lankan government but it has affected the goodwill between Sri Lankan and Indian diplomatic relationships. Limited bans on bottom trawling bans has been imposed by some countries like Chile, Indonesia, New Zealand and United States. Similarly Indian states, Tamil Nadu and Kerala impose annual fishing bans to blunt the devastating effects of the practice. Therefore it is clear that bottom trawling practice is a careless form of fishing which shatters the environment and livelihoods of Sri Lankan fishermen. The United Nations Development Summit in September 2015, endorse the UN Resolution 70/1, "Transforming our world: The 2030 Agenda for Sustainable Development". The objective of this was the compassionate that global resources in the oceans should be delicately handled for a sustainable future, as the oceans are key in accomplishing the earth habitable for humankind. The main objective of Goal 14 of this agenda, 'Life below Water' is to "conserve and sustainably use oceans, seas and marine resources for sustainable development" (UN, 2015).

The spirit of this resolution is clearly applicable to the Indo-Sri Lanka fishery conflict. The UN has set a target year, 2020, to end Illegal, Unreported and Unregulated (IUU) fishing. The UN resolution also talks about conservation and sustainable use of oceans as per international law as reflected in UNCLOS, and encouraging sustainable artisan fishing. India and Sri Lanka being member states of the UN should abide by this resolution.

II. INDIA –SRI LANKA BANNED BOTTOM TRAWLING

The expanding conflict in distribution of the fishing grounds and fishery resources of Palk Bay by the Indian and Sri Lankan fishers is a continual dilemma for both the governments of these two countries. The stocks of fishery resources in Palk Bay has been shrink by unhealthy fishing practices, which also causes a progressive degradation of the eco system (*Daily News, 2017*)

For long period of time both these Indian and Sri Lankan fishermen have been fishing into Palk Bay area. The complications looms only after a maritime agreement was signed by India and Sri Lanka in 1974. In 1974, a maritime agreement between India and Sri Lanka was demarcated. The jurisdiction over Kachchatheevu Islands was handed over to Sri Lanka. These rich resource full islands are located on the eastern side of India's maritime boundary with Sri Lanka.

The maritime boundary agreements of 1974 and 1976—which delimited international border in the name of good neighborly relations in the Palk Bay and the Gulf of Mannar and Bay of Bengal, respectively achieved by the two governments, but they did not call in with fishermen so this agreement found to be hard to follow realities on the ground. The foundation of national sovereignty underpinned both agreements. The foreign minister, Sawaran Singh, once said, though the island was ceded to Sri Lanka, the Indian fishermen continued to enjoy their traditional rights of fishing in and around Kachchatheevu and also participated in the Saint Anthony's festival (held annually at the end of March) without obtaining visas. This allegation aside, those opposing the decision later states that the traditional rights of fishing were hampered by the 1976 boundary agreement.

Tamil fishermen from Tamil Nadu consider that Kachchatheevu is routinely their terrain. They believe that they have a right to fish there. That threaten the livelihood of Sri Lankan fishermen. The direction seems to have cut worse after the Fourth Eelam War in 2009. The ongoing dispute has escalated tensions between those fishermen using traditional methods and those using mechanized methods, as well as increased the infringement of territorial boundaries. Fueling the dispute over Kachchatheevu are the overuse of mechanized trawlers in the Palk Bay, the damaging environmental and economic effects of trawling, and the detention of fishermen. To increase productivity and boost exports, the government of India embarked on a radical transformation of fishing techniques. The result was the introduction of trawlers. A severe side effect has been the untold damage to marine ecology and, specifically, fish stocks.

In a latest incident, the Sri Lankan Navy allegedly fired at a group of Indian fishermen who had allegedly crossed over into Sri Lankan waters on the lookout for

fresh catch. One fisherman was killed in the incident and three others were injured. The Sri Lankans opened fire on the fishermen who were apparently fishing off the coast of Tamil Nadu between Dhanushkodi and Katchatheevu.



Figure 1
Coastal Area between Katchchatheevu and North Sri Lanka

The bilateral agreements between Sri Lanka and India agreed as soon as possible to banned bottom trawling by south Indian fishermen in the Sri Lankan's territorial waters. Currently between 1500 – 2000 trawlers are known to be poaching in Sri Lanka's territorial waters using bottom trawling method. Bottom trawling is banned in India and Sri Lanka urged the Indian officials to ban South Indian Fishermen from poaching in our territorial waters using the illegal method of bottom trawling. Sri Lanka emphasized the fact that it needs to be sustainable solution for this long term issue which time to time strained the relationship between Sri Lanka and India. Sri Lanka has not yet banned bottom trawling in coastal waters, although the practice is banned in inland waters. India knows that the use of trawlers by its fishermen is fueling the conflict. It agreed with Sri Lanka on "expediting the transition towards ending the practice of bottom trawling at the earliest". But in the absence of an early time frame within which this would be achieved, its commitment to finding a solution to the conflict appears weak.



Figure 2

Environmental Implications

Bottom Trawling fishing methods have both direct and indirect impacts on the marine ecosystem as well as on biodiversity, as this methods of fishing collect and kill huge amount of non-targeted species and premature ones of commercially valuable species which, mechanically interrupts the bottom of the sea and oppresses a wide variety of marine benthic creatures. The major problems recognized are the environmental impact by the bottom trawling to the whole ecological structure living below water and the political issues generating from this fishing practice in the Palk Bay which is prone to cross-fire regarding the geopolitics and strategic relations between the two states. These trawlers are not only engaged in fishing but also in other activities which threaten the security of the region and this issue has a considerable impact on the security of the regional waters. The method of bottom trawling practiced in Northern waters is “benthic trawling” which is dragging a net at the very bottom of the ocean. This huge net captures everything in their path including corral unwanted fish which is called “by catch” that is thrown back to the sea dead or dying after the net is taken out. It destroys centuries old coral reefs habitats that are important to the ecosystem. Sources depicted that in bottom trawling, a fishing net known as a trawl is towed along the sea bed at the bottom of the ocean targeting bottom living fish especially the prawns, destroying even the sea weeds and corals in the process. As trawling removes colossal amounts of high biomass organisms in the sea bed, represent mainly by emergent organisms, productivity of the seabed will be affected considerably. Further, sea-bed organisms help in increasing the seabed complexity, which offers shelter for young organisms and thus reduces their vulnerability to predation. Benthic communities play an important role in remineralizing and release of nutrients in marine eco systems. The practice removes most species from its path, homogenizes habitat and reduces complexity. It has been shown to reduce species diversity and create disturbances that

can lead to dominance by detrimental predatory scavenger species. Deep sea corals and other species tend to be long-lived and slow-growing, with some having been dated at 5,000–8,000 years old. A single pass of heavy trawling equipment can destroy such benthic structures. Under the United Nations’ Law of the Sea (UNCLOS), responsibility for the management of marine living resources differs according to its location. Coastal states have the responsibility to explore, exploit, conserve and manage the living resources found in the water column within their exclusive economic zones (EEZs), out to 200 nm from their coastal baselines. They also have sovereign rights to explore and exploit resources, including sedentary living species, on and within their continental shelves past 200 nm, out to 350nm. Under UNCLOS, all states have the right to fish on the high seas – the 64% of the oceans outside of EEZs, although this ‘freedom’ is constrained by equivalent obligations to cooperate to ensure the conservation and management of living marine resources and to protect and preserve the marine environment. More recent agreements have further elaborated fishers’ opportunities and obligations, the most notable being the 1995 UN Fish Stocks Agreement. Regional fisheries management organizations (RFMOs) have been established to allow interested states to collaboratively manage highly migratory and straddling fish stocks. Recently taken Radar pictures prove large scale Indian fishing operations very close to Sri Lanka’s coast line and islands using destructive ‘bottom trawling’ which is illegal in Sri Lanka as well as in India, causing immense damage to the sea bed.

A. Human Livelihood Implications

Sri Lankan fishermen are often forced to stay ashore for fear that these trawlers will damage their nets, their primary assets for livelihood. There have even been incidents of fishermen suffering physical injuries while attempting to save their nets from being damaged by Indian trawlers. Nearly 200,000 people in the Northern Province are dependent from the fisheries sector. Moreover a large number on the tourism sector have undergone many sufferings due to the civil war, most importantly they have lost their employment opportunities. Most of these individuals do not possess special skills to find employments in other fields bottom trawling have a direct impact on their economic livelihood. Most of the people are engaged in this fishing practice therefore effects to bottom trawling will affect the livelihood of them and their families. Furthermore the impact of this to the whole Sri Lankan Northern livelihood and economy of Sri Lanka also enormous. There are hundreds of ships and boats laying on the sea bed on Northern Sea since 70’s and 80’s centuries and these are homes for millions of marine species. Moreover it is a destination for tourists from developed countries who are interested in adventures activities and also who are studying about those species

and their history. Bottom trawling completely destroys all these to a point where it become irrecoverable. However, it is clear that almost all who are engaged in bottom trawling, are contracted employees. It is alleged, the trawlers are owned by large-scale businessmen, often close to the political elite of the state, .Prawns have become a multimillion-dollar industry; mainly for exporting to the USA, Japan and Western Europe. However, when the Sri Lankan authorities arrest these Indian trawlers for poaching in its territorial waters, and subject offenders to judicial processes, there are huge protests in Tamil Nadu and letters written to the central government demanding intervention.

It is clear that, almost all persons, who are engaged in bottom trawling, are contracted employees. It is noted that the trawlers are actually owned by large-scale businessmen, who are often close to the political elite of the state. As a result of that numerous fishermen became daily wage labourers. This will lead to increase number of trawlers in the three South Indian districts of the Palk Bay. All these trawlers are engage in bottom trawling in Sri Lanka Waters.

III Recommendations

We suggested to educate Indian people who are engaged in this unhealthy environmental destroying bottom trawling practices about the environmental healthy fishing practices and introduce them new environmental healthy fishing practices with means and methods of fishing at a low cost using easy techniques. Most importantly the two states shall encounter with negotiations in order to eliminate illegal poaching which is a threat to the economy of Sri Lanka. There are so many people who are self-employed in handy craft industry and other related sectors providing services for the tourists (specially) women headed families. Provide alternative livelihood for fishermen engaged in trawling and to construct tuna long liners. Through incentives and persuasion, affected fishermen could be encouraged to switch over to deep sea fishing or engage in other vocations. Banning the practice of bottom trawling will also greatly reduce the incentive to trespass into Sri Lankan waters.

Many an academic and political point is that this bottom trawling problem cannot be solved. It is clear that this problem concerning the Indo – Lanka maritime issues be given far more concern and focus than it is now by the government of Sri Lanka as well as researchers to come up with a research studies to identify solutions so that there may be areas untouched which might bring about a lasting solution. To have more and more academics and policy makers to think about this problem with a view for a solution.

The government of Sri Lanka to focus on negotiated settlement with the Central Government of India through diplomacy and international relations, so that a settlement could be solved taking into consideration

the UNCLOS III – a legal framework and to come upon an agreement or a bill where both states will work towards banning bottom trawling. Sri Lanka's concern is whether the precious marine ecosystem in the Palk Bay would survive until these measures are implemented. There is a need for scientific research on the subject, to ascertain the real damage caused by bottom trawling and the impact on the fisheries in the Palk Bay, gather data from primary and secondary sources, make an assessment of the cost of annual losses due to poaching, and be ready to present an incontrovertible case to India.

The Sri Lankan government also focused on the license that are given to trawlers who are engaging in fishing in Sri Lankan waters. The law should be strict and strict remedies should be established with regard to healthy fishing practices.

A research station in the island of Kachchativu manned by National Aquatic Resources Research and Development Agency (NARA) where it investigate of alleged offences and consider merits and demerits of both countries. If all efforts fail in finding an amicable solution, the government of Sri Lanka should be ready to refer the dispute settlement with the help of appropriate international authorities on the strength of UN Resolution 70/1, Goal 14: 'to conserve and sustainably use oceans and marine resources for sustainable development'.

IV Conclusion

This is the high time to take necessary actions to ban bottom trawling in Sri Lankan waters by both state parties India and Sri Lanka which creates massive destruction to ecosystem and threat to human life. Moreover to promote healthy fishing practices within this region in order to conserve the environment. At the same time both India and Sri Lanka should ready to stick with the Sustainable Development goal no 14 to conserve and sustainably use the marine resources and ocean.

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