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Trans-Boundary Incursions in the Palk Bay

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Controversies related to Indian trawlers crossing into Sri Lankan waters of the Palk Bay have repeatedly been the subject of newspaper headlines in both India and Sri Lanka since 1990. The first aim of this paper is to provide grass-roots insights into the post-war status of the north Sri Lankan fishing population and how their recent recovery has added a new dimension to the Palk Bay conflict. The second purpose is to create a better understanding of the nature of this conflict and to analyse the relevance of existing and proposed governance responses. Contrary to popular perception in India, this paper argues that since the end of the civil war in Sri Lanka the nature of the conflict in the Palk Bay has changed from one in which Indian trawler fishermen were faced with the Sri Lankan navy, to one which sets them primarily in opposition to the technologically less advanced Sri Lankan fishermen. It concludes that the governmental and fisher-based efforts to settle the conflict are ineffective as long as Indian parties do not acknowledge the nature of the conflict and the Sri Lankan authorities do not bring the fishermen and their government closer together.

We wish to express our sincere gratitude to the fishermen and cooperative society leaders, in particular Rajachandran and Thavaratnam, who were prepared to respond to a never-ending stream of questions. We also thank Nilam Hamead for his invaluable role as field translator. Finally, we are thankful to the Dutch COCOON programme (NWO/WOTRO project number W076830200) for funding this research.

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1 Introduction

On 16 February 2011, the fishermen of Point Pedro, a fishing town in northern Sri Lanka, gathered to take action against their counterpart Tamil Nadu whom they deemed, "robbers of our house". Making use of small-scale fishing craft, they captured 18 Indian trawlers and 112 crew members from Nagapattinam, who were fishing in inshore Sri Lankan waters. One day later, fishermen from the northern Sri Lankan village of Mathagal took a similar course of action, apprehending an additional seven boats and 24 crew members from Kottaipattinam, a trawler landing site in Pudukkottai district. Although all the Indian fishermen and their boats were sent home two days later following a diplomatic intervention at the highest political levels, the Sri Lankan fishermen had made their point clear. This spectacular event of the *tambi* (younger brother) standing up against the *annan* (elder brother) was not only a fruitful ingredient for weeks of energised discussions among fishermen and political moves and newspaper headlines, it also epitomises multiple dimensions of the fishing conflict in the region.

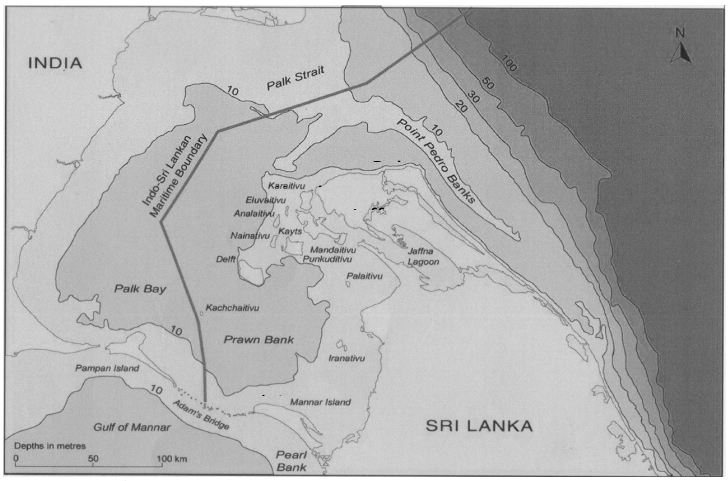
This is not the first time in south Asia that small-scale fishermen have stood up to the more technologically advanced trawler fleets (Bavinck 2001, 2011b; Kurien and Achari 1988). Such uprisings are typically instigated by a strong sense of injustice that results from the widespread destruction of small-scale fishing gear and frustrations with regard to the appropriation of a large proportion of the marine resource by trawlers. From this perspective, it is of little surprise that the post-war re-emergence of the small-scale Sri Lankan fishing fleet has led to a classical fisheries conflict with the sizeable Tamil Nadu trawler fleet. After all, both are dependent on the same fishing grounds in the Palk Bay. What makes this conflict unique and, in a sense, more difficult to grasp, however, is its setting in the trans-boundary waters of the Palk Bay.

With an average depth of nine metres and lack of turbulence, the Palk Bay is a relatively shallow and calm basin. On its northern edge, it is connected to the Bay of Bengal. In the south, a small chain of islands and reef shoals popularly known as Rama's (or Adam's) Bridge, separate it from the Gulf of Mannar. As a consequence of the seasonal inflow of nutrients, the Palk Bay is known for its exceptionally rich fishing grounds, particularly the Pedro Bank, the Prawn Bank and the Pearl Bank (Sivasubramaniam 1995).

This paper aims to provide an understanding of how the fisheries conflict in the Palk Bay is connected to the post-war

recovery of the northern Sri Lankan fisheries sector. The following two sections provide a conceptual approach on the basis of conflict literature as well as a historical overview of the emergence of the Palk Bay conflict. Section 4 then describes the research methodology. The subsequent section provides a contemporary review of north Sri Lankan fisheries, after which Section 6 assesses the impact of Indian trawler fishing on the recovery of north Sri Lankan fisheries. Section 7 analyses how fishermen, government agencies and non-governmental organisations (NGOs) in Sri Lanka have reacted to the crisis in the Palk Bay fisheries. Finally, Section 8 lists the responses of government and civil society.

Figure 1: Location of Palk Bay and Palk Strait in Trans-boundary Waters



Source: Adapted from Soosai and Stokke (2006).

2 Understanding Fisheries Conflicts

Conflicts in fisheries are a worldwide phenomenon and manifest themselves in numerous ways (Platteau 1989; Charles 1992; Bennett et al 2001). According to the Food and Agriculture Organisation (FAO) (1998) in Bennett et al (2001: 366), conflicts typically emerge when "the interests of two or more parties clash and at least one of the parties seeks to assert its interests at the expense of another party's interests". Such interests may result from competition over fish stocks, fishing space or market access (Bavinck 2005). In extension of this perspective, and following Hardin (1968), neo-Malthusianists suggest that a process of diminishing natural resource stocks generally constitutes an important source of strife (Homer-Dixon 1994).

Although an interest-based approach is a useful starting point for the analysis of conflicts over natural resources, it neglects the role of both institutions and law. North (1992) pays attention to the role of institutions in economic affairs, while legal anthropologists point out the relevance of legal plurality (Benda-Beckmann 2002). In line with the latter, Bavinck (2005) argues that conflicting parties in fisheries often refer to different socio-legal systems and that their differences relate to what the various involved parties view as being "fair". Johnson and Bavinck (2010) offer an analysis of the blue revolution that has transpired in India since the 1950s and the conflicts they associated with it from the perspective of legal pluralism. Building on such insights, a more comprehensive approach to understanding fisheries conflict suggests that attention must be paid to the socio-legal organisation and institutional arrangements.

Just as there are no blueprints that single-handedly manage fisheries effectively (Ostrom 2007), there is an absence of blueprints for the types of institutions needed to settle fisheries conflicts (Kooiman et al 2005). Rapoport's (1974) taxonomy of social conflict does, however, provide two useful entry points. First of all, Rapoport distinguishes between endogenous and exogenous conflicts. Second, he separates symmetrical from asymmetrical conflicts.

Endogenous conflicts are those wherein the conflicting units "are part of a larger system that has its own mechanisms for maintaining a steady state, which may include mechanisms for controlling or resolving conflict" between the respective units Rapoport (1974: 175). Exogenous conflicts, on the other hand, are between parties that do not belong to a larger institutional system, and there are therefore no joint mechanisms for control or resolution. Following this line of thought, Bavinck (2011b) discussing the fishing wars that occur between fishers from Tamil Nadu and Andhra Pradesh concludes that the latter type of conflict is potentially more explosive and of longer duration than battles that occur between fishers from one state. It is reasonable to assume that exogenous conflicts posit a governance challenge in the sense that it is difficult to bring the conflicting parties under one functioning governance mechanism and, hence transform them into an endogenous conflict.

Rapoport's second distinction classifies conflicts according to whether they are symmetrical and asymmetrical. Symmetrical conflicts include opponents of comparable weight, while asymmetrical conflicts juxtapose parties that "may be widely disparate or may perceive each other in different ways" (1974:176). This distinction introduces the issue of power and its effect on the societal dynamics of systems like fisheries (Jentoft 2007). Expanding on the topic, Rapoport argues that in the case of asymmetrical conflict it may be such that "[t]he system revolted against 'perceives' itself as defending order and legitimacy; the insurgents 'perceive' themselves as an instrument of social change". The governance challenge here could be to prevent one group from imposing its will on the other and instead, facilitating the brokering of an agreement that is judged fair (enough) by both parties.

3 Palk Bay Conflict: Drawing the Contours

In addition to thousands of newspaper articles, various scholars have been investigating the Palk Bay fishing conflicts from different angles for a number of years. This collection of studies includes specialised accounts on the transnational identity of the Palk Bay fishermen (Gupta 2009), the feasibility of a proposed buy-back programme for Indian trawlers (Sathyapalan et al 2007), the harsh effects of the civil war on Sri Lankan fishermen (Soosai and Stokke 2006 and Stokke et al 2008), as well as an investigation of governance problems affecting the

Palk Bay trawler fleet (Scholtens and Bavinck forthcoming). More macro analyses have also emerged. From the Sri Lankan perspective these include detailed policy perspectives on trawler incursions (Subramanyam and Keethaponcalan 2006; Hettiarachchi 2007; Amarasinghe 2011). On the Indian side, a number of recent publications offer detailed legal-political accounts of the contested nature of the International Maritime Boundary Line (IMBL) and Kachchativu (Suryanarayan 2004 and Suryanarayan and Swaminathan 2009). Vivekanandan (2004, 2010a, 2010b, 2011) also provides an applied perspective that highlights the multi-dimensionality of the conflict, drawing on detailed accounts of the remarkable fishermen dialogues that took place in 2004 and 2010 (see Section 7). Taken together, these publications provide a view of the multiplicity of underlying causes, the complexity of the conflict and the stakes of the parties involved.

3.1 The Emergence of the Indian Trawl Fleet

With the introduction of trawlers in the 1960s, the fisheries sector in India witnessed a so-called, blue revolution, an allusion to the comparable green revolution in the agricultural sector (Johnson and Bavinck 2010). The trawl boom in the Palk Bay was particularly intense. Between 1980 and 1996 alone, marine fish production in the area doubled (Figure 2), this in a state where the total production increase was merely 38% (Vivekanandan 2010a). Given the deployment of over 2,500 trawlers, concealed within the relatively small Palk Bay area, Sathyapalan et al (2007) conclude that the Palk Bay trawler fleet is overcapitalised. That is, the trawlers' catching capacity exceeds the carrying capacity of the available fishing grounds. Tamil Nadu fishermen, small-scale and large-scale alike, consistently report declining trends in available fish stocks (Johnson and Bavinck 2010; Scholtens and Bavinck forthcoming). In this context it is possible to understand Indian fishermen's compulsions to venture into Sri Lankan waters, which were vacated by the Sri Lankans during the wartime. Tamil Nadu hosts a trawl fleet of 5,300 boats (CMFRI 2005), of which approximately 2,500 are fully or seasonally dependent on the Sri Lankan waters to secure a profitable catch (Sathyapalan et al 2007; Vivekanandan 2010a, b).

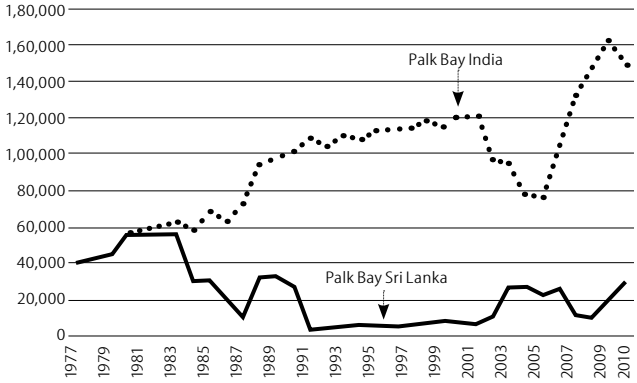
Indian trawler fishermen claim that the IMBL – which was drawn in 1974 in a bilateral agreement (Suryanarayan 2004) and formally separates the Palk Bay into two sovereign areas – is an illegitimate line that cuts right through their traditional fishing grounds. Their desperation is evident from the fact that even the painful collisions with the Sri Lankan navy and, more recently, Sri Lankan fishermen, have not deterred them from targeting Sri Lankan fishing grounds. Especially during the Sri Lankan civil war, with a tense and suspicious Sri Lankan navy, the number of firings, injuries and deaths have been numerous. Although people disagree about the precise figures,[1] estimates suggest that at least 100 Indian fishermen have been killed, while an additional 350 Indian fishermen have been seriously injured (Suryanarayan and Swaminathan 2009). Nevertheless, as Vivekanandan (2011: 11) observes, "It was an irony that the Indian fishermen had a free run of Sri Lankan waters right throughout the war period while their Sri Lankan brothers were severely curbed from pursuing their livelihood". In other words, the civil war may have created a military threat to Indian fishermen, but it also provided a vacuum of fishing activity on the Sri Lankan side to be filled by Indian activity.

3.2 North Sri Lankan Fisheries and the Civil War

On the Sri Lankan side of the Palk Bay, fishermen from the Northern Province are just recovering from a protracted civil war. Over the course of 30 years of armed conflict between the Liberation Tigers of Tamil Eelam (LTTE) and the Sri Lankan armed forces, many fishermen were displaced from their villages and fishing activity was heavily restricted for security reasons. Since 2009, when the war ended, fishermen have gradually begun resettling in the area, restrictions are being lifted, and the sector has witnessed a slow recovery. It is in the context of this recovery that fishing communities encounter the much larger Indian vessels that trawl their waters. The incursions of Indian trawlers result in the continuous destruction of the nets and constitute a major hindrance to the livelihoods of Sri Lankan fisher households.

Figure 2 demonstrates that the fisheries sector in Sri Lanka's Northern Province was flourishing prior to the start of the civil war. The production of Jaffna district alone (48,000 tonnes) contributed to 25% of the total Sri Lankan catch in 1982 (Soosai and Stokke 2006). During the war, regional production

Figure 2: Comparison of Marine Fish Production from the Palk Bay between India and Sri Lanka[2] (in tonnes)



Sources: India: 1980-2001 data from Government of Tamil Nadu (1993 and 2004); (2002-10) data from CMFRI. Sri Lanka: 1977-82 data from Government of Sri Lanka (2000) in FAO (2003), after 1983 from Ministry of Fisheries and Aquatic Resources Development (2011) and Soosai (2004).

plummeted to almost zero, with only two brief intermissions: the first during the presence of the Indian Peace Keeping Force (IPKF) and the second during the 2002-06 ceasefire period. The reasons for the collapse of fish production during the war include the massive displacement of coastal communities, fishing restrictions and the destruction of gear (Soosai and Stokke 2006). In the year and a half since the end of the war, with most equipment being gradually replaced, production levels have grown to only 42% of pre-war levels, contributing a mere 6% of all contemporary Sri Lankan catch (MFARD 2011). On the Indian side, on the contrary, fisheries production almost tripled during the 30 years of civil war.

The war inflicted heavy damage on the north Sri Lankan fishing population. Ten per cent of the surveyed fishermen

recall having lost one or more household members, and 89% of them have been displaced at least once. Many fishing households were continuously on the move for prolonged periods of time (Stokke et al 2008). In addition, most coastal areas were designated as high security zones, implying restrictions that bound fishermen to only a few hours of fishing per day, within one kilometre of the shore and with only non-motorised equipment.

It cannot be denied that the resumption of Sri Lankan fisheries after the war has added a significant dimension to the issue of trans-boundary fishing. Whereas prior to 2009 the conflict was primarily an issue between the Indian trawlers and the Sri Lankan navy, the present-day conflict has become a struggle between small-scale and large-scale fishermen. Furthermore, despite the deaths of several Indian fishermen under unclear circumstances in the Palk Bay since the end of the war, Indian pressure on Sri Lanka has resulted in strict instructions from Colombo that the navy should leave "bona fide fishermen" alone. Sri Lankan fishermen argue that when they beg their navy to curb the encroachment of Indian trawlers, they consistently receive the message: "we're sorry, but our hands are tied (by our Ministry)". Our research demonstrates that Sri Lankan fishermen are desperate about this state of affairs. They point out that while politicians in Tamil Nadu shed crocodile tears over "their" trawler fishermen, the Sri Lankan government turns a blind eye to their plight to prevent the deterioration of the relationship with a powerful neighbour.

4 Methodology

This study is part of a research project entitled REINCORPFISH. The project, which is funded by the Netherlands Organisation for Scientific Research (NWO/WOTRO), aims to understand and contribute to the resolution of fisheries conflicts in the Palk Bay. It builds on a complementary combination of quantitative and qualitative research, and was conducted during eight months of fieldwork in north Sri Lanka in 2011. The quantitative component consists of a sizeable household survey (N=1120) of sea-going fishermen in the districts of Jaffna, Kilinochchi and Mannar (Table 1). A representative sample of fishing households was taken as part of a two-stage process, also referred to as multistage cluster sampling (Bryman 2004). First, 36 out of 120 fishing villages were randomly sampled, bigger villages given a proportionally greater chance to be selected. In the second stage, within the selected villages, a random sample of 28 fishing households was taken from the local administrative officer (GN)'s household book. The survey was carried out by 25 students from the University of Jaffna over a four-week period and ensured a response rate of 84%.

Table 1: Household Survey Overview

Coastal Area	Number of Fishing HH	Number of GNs	Sampled GNs	Valid Interviews	Percentage Interviewed
Jaffna North	5,332	31	10	239	4,5
Jaffna Islands	4,608	45	11	242	5,3
Jaffna Town	2,711	4	4	150	5,5
Coastal Vanni	2,452	17	5	150	6,1
Mannar Island	2,398	23	6	144	6,0
Total	17,501	120	36	925	5,3

In addition, the first author conducted extensive qualitative research in the form of semi-structured and open interviews with fisheries leaders from different villages in the three districts. The landing centres of Karainagar and Mathagal were selected as case study villages, in which the first author spent two months of regular participant observation. During 2006 and 2007, the first author also conducted six months of fieldwork among the trawler communities at the Indian side of the Palk Bay. The second author has been an observer of south Asian fisheries since 1990, while the third author has been studying the fisheries in northern Sri Lanka for many years.

5 North Sri Lankan Fishermen: Status Quo

On the Sri Lankan side, the Palk Bay (and Palk Strait) fishing communities are dispersed over a 420 km coastline (FAO 2003), stretching westwards from Point Pedro by way of the Jaffna Islands conglomeration at the western side of the Jaffna peninsula, down to Jaffna town. After crossing the Jaffna lagoon, it expands towards the scarcely populated coastal Kilinochchi continuing further southwards through northern Mannar before reaching Talaimannar, the western tip of Mannar Island.

Table 2: Fishing Population by District During and After the War

District	Category	1999	2011	Total Population 2011*	Percentage Fishermen 2010
Jaffna	Fishing households	10,698	17,579		
	Fishing population	48,653	76,820	5,67,229	14
Kilinochchi	Fishing households	na	3,220		
	Fishing population	na	12,000	1,03,717	12
Mannar	Fishing households	4,165	7,840		
	Fishing population	20,637	30,181	95,430	32
Total	Fishing households	na	28,639		
	Fishing population	na	19,001	7,66,376	16

Source: * MFARD (2011) and Department of Census and Statistics 2012.

Fully surrounded by seas and lagoons, and with marginal industrial or service sectors, it is no surprise that fisheries quickly regained a prominent status in the Northern Province after the war. In 2011, the total number of households involved in fishing in the three districts totalled 28,639 (MFARD 2011).[3] This figure equates to a total fishing population of approximately 1,19,000 people (Table 2). Considering that the area's total population is 8,71,000, such figures point towards a substantial regional dependency on the fisheries sector.

In Jaffna, most fishermen belong to the Karaiyar caste, with the exception of a small Mukkiyar and Thimilar community in the western parts of the district. In Mannar, the dominant caste is Paravar, just like the predominant fishing caste of their Indian colleagues 30 kms across the Palk Bay. An overwhelming majority of fishermen in the region are Tamil and either Christian (52%) or Hindu (40%). The remaining 8% are Muslim families that have settled on Mannar Island.

Fisheries in the Northern Province are highly diverse, employing a wide range of boat-gear combinations. Motorised, fibreglass reinforced plastic (FRP) boats of 18 to 23 feet in length are the most commonly used boat type. These vessels provide

fishermen with an operational radius of about 40 kms. Traditional craft, which include wooden *vallams* and *kattumarans*, are popular for operations closer to the coast and in the lagoons. The blue revolution in Sri Lanka has also brought about a second, smaller category of so-called three to five tonne (28-32 ft) boats that are equipped with an inboard engine (<50 hp). These include gillnetters and also a small fleet of about 200 aged trawlers, berthed in Jaffna town, Peesalai and Valvittiturai. Finally, it is worth noting that out of the 444 boat-owning respondents, 83% own one boat, 15% two craft, while only 2% reported owning three or more craft. The figures indicate a low level of ownership clustering and capitalisation.

Table 3: Overview of Boat Types Present in the Northern Province (2010)

District	One Day Boats (incl trawlers)	FRP OBM Boats	Motorised Trad Craft	Non-motorised Trad Craft
Jaffna	148	2,040	720	2,910
Kilinochchi	0	170	90	100
Mannar	286	2,410	380	590
Total	434	4,620	1,190	3,600
Destroyed boats during war and tsunami, Jaffna*	658	2,928	1,691	6,290

*FAO (2003) and Stokke et al (2008).
Source: MFARD (2011).

Fishermen use a wide variety of nets, each of which is suitable for particular species of fish that prevail seasonally at specified locations. The predominant fishing method is gillnetting. This is often labelled a passive fishing style, with nets being laid out on the sea bottom or at the surface for sometime during the night before being hauled in. Fishermen use gillnets with a 1-5" mesh size to target pelagic species, such as sardines and silver bellies. Small-mesh monofilament nets (which have recently been banned) are used in Mannar and Kilinochchi to catch crabs. Large size gillnets (6-18") are used to catch shark, skate, barracuda, trevally, seer and ray fish. The trammel net (locally called *disco valai*) is usually employed in coastal operations close to rocks and corals. For deep-sea operations, fishermen also equip themselves with long lines and purse seines. Finally, fishermen use a range of traditional gears, among others stake nets, prawn nets and traps, beach seines and cast nets. Generally speaking, scholars argue that, given the seasonality of the occupation, it is crucial for fishermen to possess or have access to a diversity of fishing nets (Bavinck 2001). A successful fisherman in Mathagal or Karainagar, for example, makes sure that he has access to at least a trammel, a sardine (1"), an *arrakottian* (2-3") and a seven-inch net.

We mentioned earlier that most fishing restrictions have now been removed and many high security zones have been progressively lifted from 2009 to 2011. This is not to say that the situation has completely normalised. Several coastal areas are still not open to civilians, and Mannar and Kilinochchi fishermen still require a navy-approved pass for fishing. Important fishing harbours remain monopolised by the navy, while army and navy personnel are present in the landing sites of the Northern Province. In an effort to understand the relative importance of different post-war obstacles faced by fishermen, our survey respondents were asked in an open question to reveal the single-most important problem faced in their current life as a fisherman. The answers, which were recoded in 10 categories, show that while poverty and lack of fishing equipment are dominating concerns, 26% (item 2 plus 5) of the fishermen consider Indian trawler intrusion and the related poor fish resources the primary obstacle in their livelihood. We will argue in the next section that the first item, i e, poverty, is also strongly related to the incursions of Indian trawlers.

Table 4: Self-Reported Most Important Problem Currently Faced by North Sri Lankan Fishermen

Rank	Issue	Frequency	Percentage
1	Poor income/poverty	203	22
2	Indian trawler intrusion	180	19
3	Lack of own boat and/or gear	140	15
4	Banned nets (trawl and monofilament)	83	9
5	Poor fish resources	67	7
6	Weather, uncertainty and seasonality	54	6
7	Security issues (pass system, navy presence, HSZ)	45	5
8	Lack of job opportunities	12	1
–	Miscellaneous	113	12
–	No answer	28	3
–	Total	925	100

6 Trans-Boundary Fishing: Local Impact

Although scholars have made some estimates to assess the damage inflicted by the Indian trawlers on the Sri Lankan economy at large,[4] our aim is to detail the impact of the trawlers on fishermen's livelihoods at the local level. Of the respondents in the household survey, 62% (N=569) indicate having been affected by the Indian trawlers, with the remaining 38% consisting mostly of people operating traditional crafts. In an open question, those respondents who indicated that they had been affected were asked to describe the nature of the impact (Table 5), each of which will be shortly described in this section.

Table 5: Response to Question 'How Are You Affected by Indian Trawlers'? (N=569 – More Answers Possible)

	Loss/Damage of Nets	Loss of Income	Loss of Fishing Days	Loss of Fish Resources
Frequency	314	322	407	383
Percentage	55.2	56.6	71.5	67.3

Most tangible is the loss or damage of fishing nets, which tends to occur at night, when (moving) trawl boats easily run through the long but invisible gillnets employed by the Sri Lankans. Of the total, 314 respondents indicate that they have lost nets since the end of the war. Table 6 provides a quantitative account of the extent of these losses for two villages.

Table 6: Financial Losses of Two Cooperative Societies Resulting from Gear Destruction

	Karainagar Fishermen Cooperative Society	Mathagal Fishermen Cooperative Society
Reporting period	1 February 2010 to 1 April 2011	2 July 2009 to 16 October 2011
Reporting duration	14 months	26.5 months
Total number of boats in the coop society	43	83
Number of incidents with trawlers	76	124
Affected net owners	52	110
Total pieces of net lost	476.5	769.5
Total financial loss (LKR)	28,98,000	64,59,100
Average losses per boat (LKR)	67,395	77,820

Source: Account books of the respective fisheries cooperative societies.

Given the considerable risk of losing a net at sea, fishermen are extremely wary of venturing out to the sea during those nights that they expect visiting Indian colleagues. Trawler incursions are rather predictable, as trawlers berthed in Indian Palk Bay villages are subjected to a rule that allows them to venture out to sea only on Saturday, Monday and Wednesday nights.[5] During these days, Sri Lankan fishermen either take the considerable risk to venture out to sea, opt for marginal fishing close to the coast or stay home all together. This explains why 71.5% of the fishermen report "loss of fishing days" (Table 5).

Table 7 reveals the considerable differences of catch values between a "trawler night" and a "trawler free night" in Karainagar. The catch data, which represent approximately 75% of all landings (auction plus one out of the two private traders), show an annual missed income of approximately six million LKR (Sri Lankan Rupees), or 40,000 LKR per fisherman, which constitutes about 20% of the fishermen's annual revenue. The reasons for the significantly higher difference for the private trader (right column) in comparison to the auction is due to the fact that the former buys the high value catches, which are typically caught in the inaccessible deep seas, whereas the auctioned fish for the local market is caught closer to the shore. These values are still an undervaluation of actual income loss, as it is reasonable to assume that Sri Lankan catches would also increase on "trawler free nights" in case of a more durable absence of trawlers.

Table 7: Catch Value Difference between Trawl-Nights and Trawler-Free Nights in Karainagar[6] (values in LKR)

Data Origin:	Auction	Private Trader
Period:	1 June 2010 to 31 May 2011	September 2011
Fishing Night:	Total Catch Value:	Total Catch Value:
Friday-Saturdays (trawler-free)	35,97,940	83,762
Saturday-Sundays (trawl)	31,89,420	25,349
Sunday-Mondays (trawler-free)	39,81,780	1,97,486
Monday-Tuesdays (trawl)	22,99,740	48,270
Tuesdays-Wednesdays (trawler-free)	35,22,560	95,160
Wednesdays-Thursdays (trawl)	24,18,360	67,686
Total trawler-free nights	1,11,02,280 (58%)	3,76,408 (73%)
Total trawler nights	79,07,520 (42%)	1,41,305 (27%)
Missed income (difference)	31,94,760	28,21,242

Source: Ambal Fisheries Cooperative Society, Karainagar and Anai Seafoods.

These losses have significant implications for the local economy. Crew members find that they are unable to cover their living costs by fishing for only three days per week. They move to find coolie work in town which makes them unavailable for those days when their labour is much needed. Hindu fishermen confess that they have increasingly taken to fishing on trawl-free religious days. "If the catches are good, we have to go on the trawler-free nights, even if there is a festival" says the leader of the cooperative society in Karainagar. Some fishermen have stopped fishing all together, deeming it no longer profitable. This explains the large number of idle boats that are found in the region's coastal villages.

Notwithstanding these significant and direct effects, fishermen complain vehemently about a less visible aspect. That is, the destructive nature of the trawl nets employed by the Indian fishermen. As one fisherman notes: "These trawlers scoop up any fish; if this continues, what will be left for our children?" The harmful nature of the bottom-trawl net, which typically sweeps the sea's surface and is indiscriminate in its catch, is widely recognised (e g, Pauly et al 2002). As mentioned earlier, there are indications that the trawlers berthed in the Palk Bay have overexploited the Indian waters to such an extent that they have had to migrate to more distant waters to secure a profitable catch, a phenomena aptly described by Berkes et al (2006) as a process of sequential overexploitation caused by "roving bandits". The free movement of Indian trawlers in Sri Lankan waters is felt to be particularly intolerable, as a full ban on trawling was ordered in Sri Lanka on 4 August 2010.[7] In this light, it is telling that 65% of our survey respondents agree with the statement "I don't care that Indian fishermen are crossing the boundary, their trawl net is the problem".

7 Fisher Responses to Trawler Intrusion

Given the challenge posed by the trawlers to the northern Sri Lankan fishermen, it is of considerable interest that we investigate if and how the latter are reacting collectively. In this regard, it is worthwhile to consider the activities of fisheries cooperative societies (FCS), which function as the primary representative bodies of fishermen. The FCS, which are present in every landing centre in the Northern Province, are collectively organised in unions, and the Jaffna District Cooperative Society Union's Federation forms a third hierarchical layer. Whereas the cooperative movement in other parts of Sri Lanka has lost its significance over the past decade (Amarasinghe and Bavinck 2011), the FCS in the north continue to play a significant role in fisheries affairs (Shanmurugan 2003).

Apart from the apprehension of trawlers in February 2011, which generated ample media attention, it is the insignificance of the FCS' actions that stand out. About 100 fishermen from the Mathagal FCS held a demonstration in front of the Indian High Commission, holding up their broken nets and with black scarves tied around their mouths. The FCS Federation also wrote a number of letters to Sri Lankan ministers and Members of Parliament (MPs), as well as to Jayalalithaa (chief minister of Tamil Nadu) and former Indian President Abdul Kalam, begging them to take up their plight. In addition, FCS leaders sought, and sometimes found, media attention. Perhaps the most promising effort was the formation of the Northern Fishermen People Alliance in March 2011, which was supposed to become a collective platform of all the FCS of the Northern Province. The poor functioning of this body during the past year due to internal competition between the leaders and political interference is illustrative of the situation. In fact, fisher leaders are rather lost when it comes to giving shape to their struggle. We argue that this is the result of three interlinked factors: In the post-LTTE context, the political climate restricts Tamil fishermen's ability to mobilise and take their struggles in their own hands. At least two initiatives to come together for a demonstration were cancelled before they could materialise as a result of the fishermen leaders' fear of possible repercussions. The fact that the Sri Lankan navy arrested Jaffna fishermen who tried to chase the trawlers provides further illustration of this.

Second, the fishermen's stance towards the trawlers and Tamil Nadu is ambivalent. Although their livelihood is severely affected by the Tamil Nadu trawlers, "(t)he warmth and hospitality shown by the Indian fishermen to the refugees (during the civil war) had also created a deep sense of obligation" (Vivekanandan 2011: 12). The fact that 67% of the respondents agree with the statement that "Indian fishermen are my brothers as we are all tied by the same sea", while 55% subscribe to the statement that now they have become enemies, is illustrative of the ambivalence of the relationship. So too is a quote from a letter written by the Jaffna Fisheries Federation to Chief Minister Jayalalithaa, after her recent electoral victory. It reads,

> Honoured Chief Minister, … Our relatives of Tamil Nadu, who are related to us through our umbilical cords and blood, encroach our sea area with their trawlers and scoop up our marine resources destroying our equipment which we acquired in indebtedness (Jaffna Fisheries Cooperative Society Union's Federation, 2011).

In other words, the fact that Tamil Nadu has been a strong ally for Sri Lankan Tamils during and after the civil war, while now being the source of misery, creates a mental and political stalemate. This factor also causes the Sri Lankan Tamil political representation not to take up the issue.

Third, over the course of the past year, fishermen have become increasingly divided along regional and political lines. The recent inauguration of a completely new fisheries organisation, the Rural Fisheries Organisation, which was set up by the Ministry of Fisheries and Aquatic Resources Development and which appointed a new set of fishermen leaders in Jaffna district, created a further confusion, inhibiting effective fishermen leadership.

The net result of these factors is a fishing population eager to take collective action, but trapped by a strong sense of powerlessness. Ordinary fishermen are also starting to lose faith in the capacity of the FCS to take any measures in their interest, resulting in a further erosion of the legitimacy and functioning of this important body of fishermen representation.

8 Civil Society and Government Responses

The inability of fishermen representative bodies to give voice to their struggle questions the extent to which more structural efforts to settle this conflict have materialised. Two types of the structured efforts are worth mentioning in this regard: (1) at the bilateral level, the two governments held a number of meetings between (representatives of) the relevant ministries to address the controversies, and (2) NGOs[8] have attempted to find a solution by initiating and facilitating dialogues between fishermen from both sides.

The first bilateral meeting regarding the fisheries problems between the two countries was held in New Delhi on 21 April 2005, in response to agitations of Tamil Nadu fishers and their political leaders (Amarasinghe 2011). Here, a MOU was drawn up between the respective ministries, which made a provision for the establishment of a bilateral Joint Working Group (JWG) of fisheries. The MOU sought for "enhanced surveillance to minimise the problem of incursions of fishing vessels from both sides in each other's waters" as well as for providing modalities for dealing with fishermen "straying inadvertently into each others' waters".

Although the MOU has not been officially approved, three JWG meetings were subsequently held: one in 2008, one in March 2011, and most recently in January 2012. In 2008, with the war still going on, the resultant joint statement suggested that "Indian fishing vessels will not venture into these identified sensitive areas" (joint statement in Suryanarayan and Swaminathan 2009: 16). This indirectly implied that Indian fishermen were allowed to fish in the rest of Sri Lankan waters. The 2011 and 2012 JWG meetings avoided the tough questions, with the Indian government reiterating that any violence against bona fide fishermen is unjustifiable and the Sri Lankan authorities stressing that the International Boundary Line has to be respected.

Termed "a silver lining in an otherwise bleak horizon" by Suryanarayan and Swaminathan (2009: 12), there have been two occasions where NGOs facilitated a dialogue between the contestants by bringing a group of fishermen from Tamil Nadu to north Sri Lanka (May 2004) and from north Sri Lanka to Tamil Nadu (August 2010). Vivekanandan (2004) aptly summarises the results of the 2004 meeting from the viewpoint of the Indian trawl fishermen as: "Fishing for a Favour, Netting a Lesson". While Indian fishermen came to seek permission from the Sri Lankan fishermen to fish in Sri Lankan waters under certain conditions, Sri Lankan fishermen were so resolute in their refusal of the trawl technique that eventually the Indian fishermen agreed that trawling should eventually be stopped bearing in mind that such a change would require time and government assistance. In the "return visit" of 2010, a group of 23 Sri Lankan fishermen toured the Indian coast from Rameshwaram to Nagapattinam and were given a spirited welcome. The tour ended in two days of negotiations in Chennai and resulted in a detailed agreement stating that trawling in Sri Lankan waters was only permitted under strict temporal and spatial restrictions (e g, 70 specified days per year). These restrictions would expire within a year, after which trawling should be stopped altogether (Vivekanandan 2010b).

The agreement was submitted to both governments for approval, but dismissed with the following statement:

> ...I wish to inform you that the Government of Sri Lanka nor the Government of India have appraised of the proposals that have been agreed upon by two fishing communities from Jaffna and Tamil Nadu during the Chennai meeting.[9]

Although these exchanges were indeed promising in terms of creating a mutual understanding between the fishermen contestants, the lack of full support from the governments despite formal statements in which authorities from both sides tended to support them, was a clear weakness. Just as the bilateral JWG meetings were devoid of considerations of fishermen's perception of the problem, the fishermen to fishermen agreements had come about in the absence of foreign affairs and defence considerations. Indeed, from a foreign affairs or defence perspective, it was probably too awkward to have fishermen deciding upon the conditions of the IMBL, even if it would solve some of the problems. In this context it is telling that the JWG participants and fishermen leaders have never had a single joint meeting. The most important lesson of these interactions is that to reach any viable solution, fishermen and the governments need to work together rather than act in isolation in search for a solution.

9 Conclusions

We posited that fisheries conflicts typically revolve around the allocation of fishing rights, i e, who is allowed to fish when, where, and how. Using endogenous versus exogenous conflicts as an important distinction, we also put forth the notion that the presence of appropriate institutions is a core factor in settling such disputes. The nature and intractability of the Palk Bay conflict is well explained by this framework.

It has become clear that the contestants' livelihood interests are considerable. A large group of Sri Lankan fishermen have resumed their occupation and are encountering a large group of Indian fishermen in pursuit of the same fish resources using incompatible fishing methods. These interests primarily revolve around the allocation of fishing rights, the contestations of which have clear spatial and technological dimensions. The Sri Lankan civil war, which resulted in the securitisation of the Palk Bay, the unequal technological developments in the fishery sectors of both sides and the politicisation of the Tamil versus Sinhala dichotomy, further exacerbated the tensions.

The conflict has generated a multiplicity of governance efforts, carried out by the fishermen at the lowest level and the state governments at the highest level which have missed their targets due to fragmentation. Given the absence of a larger institution that provides an umbrella mechanism for control or resolution, the Palk Bay conflict is thus an archetypal example of an exogenous conflict. In addition, the power balance of the conflict weighs heavily on the Indian side, both in terms of fishing technology and at the level of geopolitics. This points to a conflict that is highly asymmetrical in nature. Accordingly, as foreseen by Rapoport (1974), the paternalistic stance adopted by the dominant party is another obstacle towards brokering an agreement that is acceptable to both parties.

We have demonstrated that the asymmetrical and exogenous nature of the conflict has caused great difficulties in channelling these conflicting interests in a constructive manner. The net result is poor well-being of both Indian and north Sri Lankan fisher communities, while the diplomats responsible for Indo-Sri Lankan ties are continuously confronted with relatively minor, albeit complex, issues stemming from the conflict.

Our analysis suggests that many of the currently circulating proposals are inappropriate; not a single one of them responds to the core characteristics of the conflict. These include fishing on alternative days by Indian and Sri Lankan fishermen (this is de facto the present status quo); providing trawlers with GPS or advanced warning systems (Indian fishermen know the location of the boundary perfectly well); making the Palk Bay a common fishing ground for all (misses the point of unequal technological capacities); pursuing stock enhancements (misses the point of allocation); and finally, India leasing or acquiring Kachchativu (misses the fact that the lion share of the trawler activity is undertaken in waters far beyond Katchchativu).

Although we cannot prescribe a solution for the conflict, our analysis does provide several necessary ingredients for working towards a settlement.

- First, it needs to be recognised that with the post-war resumption of the Sri Lankan fishermen, this is primarily a conflict between two groups of technological dissimilar fishermen, rather than one between poachers and armed forces.
- Second, we need to recognise that the major driver of the conflict is the overcapitalised trawler fleet in Tamil Nadu, which is primarily a fisheries management issue. As Indian authorities are increasingly admitting,[10] this fleet needs fundamental restructuring. Guided by a proper understanding of the limitations of the easily overvalued deep sea resources, some parts may be decommissioned, while other parts may be converted to deep sea vessels.
- Third, governments need to realise that however many meetings the JWG and experts may have, even if they touch upon the tough questions, the conflict is doomed to muddle through without the genuine involvement of the fishermen. Fishermen know the conflict from the ground, they know what is practically feasible, as well as what would be acceptable to them. Enforcing an agreement that does not have their support is therefore not only undesirable, but unfeasible as well, requiring a prohibitively expensive enforcement infrastructure.
- Fourth, finding a long-term solution is not only a matter of getting the modalities right, but engaging in an institution-building process. Recalling Rapoport's (1974) terminology, the Palk Bay conflict is an archetypical example of an exogenous conflict due to the fact that there is clearly no available umbrella institution that provides a platform of interaction for all relevant parties. The major challenge, therefore, is the transformation of the conflict into an endogenous one, in turn implying the creation of a platform and a vision that integrates all relevant stakeholders.

NOTES

1 The website http://www.savetnfisherman.org/ for example, claims that "over 500 Indian-Tamil fishermen have been killed at mid-seas by the Sri Lankan navy/coast guard".

2 The relatively sudden dive in Indian production is related to a change in the source of data in 2001. Indian Palk Bay production is taken as the sum of Thanjavur, Puddukotai and 70% of Ramnad district landings (remaining 30% Gulf of Mannar). Sri Lankan production taken as Jaffna and Mannar production combined.

3 Of the 28,639 households, 17,501 were included in the household survey. This difference is attributed to the exclusion of fishermen fishing in the lagoon and in the Gulf of Mannar, south of Mannar Island.

4 Amarasinghe (2011) estimates that Sri Lanka loses between $33 million and $77 million per year.

5 This rule, known as the three-four day rule, or alternate night rule, was implemented in the late 1970s to separate small scale and trawler fishing activity (Bavinck 2003). The rule does not apply to boats based in Nagapattinam, the fleet of which thus operates any day a week around the north-eastern parts of Jaffna district.

6 Fridays are excluded as fishermen often do not go to the seas on Thursday nights for religious reasons. Including such data would therefore distort comparability. As September constitutes an average fishing month according to the fishermen, the value for private traders is extrapolated to a one-year period.

7 Gazette No 1665/16 Article 4. "No person shall engage in any dredging at the sea bed or undertake trawling operations within Sri Lanka Waters in relation to any activities specified in this regulation for which a fishing operation license has been issued".

8 These include South Indian Federation of Fisheries Societies (SIFFS), Alliance for the release of innocent fishermen (ARIF) and FishMarc on the Indian side and CARITAS and NAFSO (National Alliance for Fisheries Solidarity Movement) on the Sri Lankan side.

9 Quote from letter sent by Sri Lankan Ministry of Fisheries to NAFSO, one of the conveners of the dialogues. Dated 30 September 2010.

10 See, for example, http://www.thehindu.com/news/cities/chennai/article2747704.ece, "Chief Minister Seeks Special Financial Package for State" or the Fisheries Section of the Eleventh Five-Year Plan (2007-12) of the Government of India.

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