

An economic analysis of loss in fishing days due to fishermen strike: A case study in Rameswaram fish landing centre

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Introduction

Ramanathapuram district in Tamil Nadu has 237 km coastline and accounts for about 22% of the state fisher population. The district has 1,707 (29.2 % of total fishing unit) mechanised boats, 3,140 (53.7%) motorised and 1,002 (17.1%) non-mechanised fishing units (State Fisheries Department, Government of Tamil Nadu, 2014-15). During the fishing season two types of trawl nets are used namely shrimp nets and fish nets. Apart from this, gillnet, driftnet, hooks & lines are operated in country craft with inboard engine and plank built boats with outboard engine.

The fishing area available in Palk Bay is limited due to the close proximity of Sri Lanka. The Sri Lankan Navy confiscate vessels that trespass into their territory and capture the Indian fishers who can be kept in remand for many months/years and

such events occur frequently. As a consequence the fishers in India go on frequent strikes demanding the release of Indian fishermen. During the year 2014 and 2015, there were fishing strikes almost every month except during fishing ban period (15th April to 29th May). The present study documents the loss of fishing days in Rameswaram landing centre and estimates the loss in catch and revenue.

Methodology

Among the various landing centres in Ramanathapuram district, Rameswaram landing centre was purposely selected for the present study. The length of the mechanised boats in Rameswaram ranges from 30 to 60 feet with engine capacity of 70 to 170/193 bhp. The largest boats now constitute five per cent of the total fleet, offering greater speed, storage and stability. Boats from

Table 1 Total and actual fishing days at Rameswaram during the year 2014 and 2015

Month	Total fishing days		Actual fishing days		Loss in fishing days	
	2014	2015	2014	2015	2014	2015
January	13	13	08	10	05	03
February	12	12	07	12	05	00
March	13	14	10	11	03	03
April	06	06	06	04	00	02
May	00	00	00	00	00	00
June	13	13	10	08	03	05
July	13	13	10	09	03	04
August	13	13	00	12	13	01
September	13	13	09	09	04	04
October	13	13	10	11	03	02
November	13	13	06	09	07	04
December	13	14	06	09	07	05
Total	135	137	82	104	53	33

Rameswaram cannot go for fishing in Gulf of Mannar side, since it has to cross either through Pamban Bridge or Dhanuskodi which is very difficult, whereas boats from Mandapam and Pamban can fish in both Palk Bay and Gulf of Mannar Region.

The data on operating cost and returns from 20 mechanized fishing units in Rameswaram landing centre were collected every month for the years 2014 and 2015 using comprehensive and pre-tested interview schedule. During this process the actual fishing days and loss in fishing days were also documented. From the collected data, the economic indicators like operating cost per trip, gross revenue per trip, net operating income, capital and labour productivities were worked out for the respective years. Based on this information, the total loss in catch and revenue due to strike was worked out.

It was found that in Rameswaram landing centre during the year 2014, out of 135 total fishing days, there was only 82 days of fishing leading to a loss of 53 fishing days and in 2015, there was a loss of 33 fishing days (Table 1). In 2014, 30 % (41 days) were due to strikes demanding the release of Indian fishermen arrested by Sri Lankan Navy. In 2015, 21 days loss in fishing due to strike was recorded. In 2014, the loss in fishing days was more in August

(13 fishing days), whereas in 2015, it was less than five days in almost all the months. Apart from strike other reasons for loss of fishing days were cyclone warnings and festivals.

Estimation of economic loss due to strike

(a) Average cost and returns per trip in mechanised single-day trawl (fish) net fishing - SDF (fish)

The average operating cost per trip of mechanized single-day trawl (fish) net fishing for the year 2014 was worked out to be ₹ 26,744 per trip with a gross revenue of ₹ 44,139 per trip (Table 2). The net operating income worked out to ₹ 17,395 per trip. There was slight reduction in gross revenue (6.3%) in 2015, compared to 2014.

(b) Average cost and returns per trip in mechanised single-day trawl (shrimp) net fishing - SDF (shrimp)

The average operating cost per trip of mechanised single-day trawl (shrimp) net fishing for the year 2014 was worked out to ₹ 25,965 per trip with a gross revenue of ₹ 43,084 per trip (Table 2). The net operating income worked out to ₹ 17,119 per trip. In comparison to the year 2014, there was 12% reduction in gross revenue in 2015.

Table 2 Economic loss due to strike

Indicators	SDF (Fish)		SDF (Shrimp)	
	2014	2015	2014	2015
1. Avg. Catch (in kg)	979	830	433	387
2. Avg. Operating Costs (in ₹)	26,744	26,350	25,965	25,000
3. Avg. Gross Revenue (in ₹)	44,139	41,350	43,084	37,800
4. Avg. Net Operating Income (in ₹)	17,395	15,000	17,119	12,800
5. Loss in fishing days	41	21	41	21
6. Loss in catch (in tonnes) (1) × (5)	40.14	17.43	17.75	8.13
7. Loss in revenue (in lakhs) (3) × (5)	18.09	8.68	17.66	7.93
8. What could have been the catch if there was no strike (in tonnes)	120.42	103.75	53.26	48.38
9. What could have been the revenue if there was no strike (in lakhs)	54.29	51.69	52.99	47.25

Table 3 Macro level economic loss

Indicators	SDF (Fish)		SDF (Shrimp)	
	2014	2015	2014	2015
Loss in revenue per boat (in lakhs)	18.09	8.68	17.66	7.93
Total number of trawlers operated	380	330	380	440
Total loss in revenue (crores)	68.74	28.64	67.11	34.89

It was estimated that due to loss in 41 fishing days in the year 2014, nearly 40.14 tonnes of fish which could have landed in Rameswaram was not caught. Hence the estimated gross revenue loss was ₹ 18.09 lakhs. In the year 2015, around 17.43 tonnes of fish which could have landed in Rameswaram was not caught due to 21 fishing days cost. Hence there was a gross revenue loss of ₹ 8.68 lakhs.

It was estimated that due to loss in 41 fishing days in the year 2014, nearly 17.75 tonnes of shrimp and other resources which could have landed in Rameswaram was not caught. Hence there was a gross revenue loss of ₹ 17.66 lakhs. In the year 2015, around 8.13 tonnes of fish which could have landed in Rameswaram was not caught and a gross revenue loss was ₹ 7.93 lakhs.

If there was no strike, there would have been 123 and 125 fishing days in 2014 and 2015 respectively. Hence total revenue of ₹ 54.29 lakhs and 51.69 lakhs - SDF (fish) could have been obtained for 2014 and 2015 respectively. Similarly for shrimp resources, total revenue of ₹ 52.99 lakhs and 47.25 lakhs could have been obtained for 2014 and 2015

respectively. It is evident that the magnitude of revenue loss due to fishing strike is very high (Table 3).

Conclusion

It is evident from the study that loss in fishing days led to reduction in marine fish landings, which in turn resulted in revenue loss to fishermen. Most of the loss in fishing days was due to fishing strike organized by the fishermen associations/groups. Hence it is the responsibility of the fishers to avoid such strikes as far as possible for the betterment of fishermen livelihood. Further Government can evolve a mechanism to find a permanent solution to this perpetual problem and also facilitate the movement of fishers from Palk Bay to Gulf of Mannar region for fishing activity. This mechanism will reduce the fishing pressure at Palk Bay side and prevent the inadvertent crossing of International Maritime Boundary Line (IMBL) by our trawlers. Besides, to reduce the fishing pressure it is also suggested to promote economically viable alternate livelihood options like seaweed farming and cobia farming, which are gaining momentum in this region.