

Livelihood Constraints of Fishers of Puttalam Lagoon in Sri Lanka: A Case Study

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Abstract

Puttalam lagoon is one of the most economically important lagoons in the country. Fishing is the major economic activity of the people around the lagoon. Lagoon fishery has a number of constraints which are directly associated with the stability of its dependent's livelihood. This study was aimed to explore the livelihood related constraints encountered by the lagoon fishers in Puttalam lagoon. A pre tested semi structured questionnaire survey was conducted among the randomly drawn sample of 165 lagoon fishers covering 08 fisheries inspector divisions of the lagoon area. Majority of fishers had attained the secondary education. Greater portion of fishermen were below 40 years and had over 15 years fishing experience. The average monthly income of lagoon fisherman was found be Rs. 37, 083. High cost of making fishing gears, use of harmful fishing gears, inaccessibility of formal credit sources and reduction in fish catch were the main constraints. Inaccessibility to formal credit sources increased the indebtedness and bound labor situation. Study found that outboard motor, fibre reinforced plastic boats owners had statistically significantly higher indebtedness ($p=0.02$, t test). The underline causes of constraints of lagoon fishers were combined with ill managed lagoon fishery and lack of government intervention.

Keywords: Bound labor: Indebtedness, Lagoon fishery, Livelihood, Puttalam

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Introduction

Puttalam lagoon is one of the largest and economically important lagoons in Sri Lanka which has an area of over 32, 750 ha and provides livelihood for about 6000 fishers in North Western part of the country (IUCN, 2012). According to Jayasuriya (1985) total production of Puttalam lagoon has been estimated as 49kg/ha annually. In Puttalam lagoon fishing is done using Outboard Engine Fiber Reinforced Plastic Boats (OFRP), Motorized Traditional Boats (MTRB) and Non- Motorized Traditional Boats (NTRB) with variety of fishing gears. According to the IUCN (2012) fishing is the sole income of majority in the Puttalam lagoon area (67.4%) and the main income of 21% of poor households in the area.

As true for the other lagoons of the country, the lack of socioeconomic related information on lagoon fishery is also common for the Puttalam lagoon (Maheepala et al., 2016). Even though there are some research available on economics and production of lagoon fisheries very few sources which are addressing the constraints encountered with lagoon fishers in their livelihood. Exploring of constraints and problems in their fishing life is very much important before they become a marginalized fishing community in Sri Lanka. Therefore, this study was carried out with the objectives of identifying major issues incorporated with lagoon fishers and provides evidence base inputs for relevant policy makers for the betterment of the lagoon fisheries in Sri Lanka.

Materials and methods

The study was conducted from January to December 2015 by using a pre tested semi structured questionnaire with direct interview of randomly selected 165 lagoon fishers. Data were collected covering all fisheries inspector divisions around the lagoon and data collection was consisted with, demographic, socio economic and marketing related data. Data were analyzed by using SPSS ver.20 statistical package using appropriate statistical techniques.

Results and discussion

The sample (165) households consisted of 697 individuals of them 51% were females and the rest (49%) was males. The average monthly income of a household was Rs37,083 (+/- Rs. 15,750). Further, about 59% of households had monthly income less than the mean value. Majority of the respondents were belonged to 30-39 age group. The average household size was 4 and ranged between 2 to 9 individuals. The result showed that 60% of respondents had secondary education.

There were 42% of respondents used OFRP boats for fishing whereas 35% and 23% were fished using NTRB and MTRB, respectively. Sixty-five percent of the fishermen had over 15 years of experience in lagoon fishery. A fisherman travels average 7 Km distance for fishing in one fishing trip. Fishers used many types of fishing gears in lagoon including Crabs net, Cast net, Shrimp net, gill net, Ula net, Skate net, Bottom set net, Crabs pot, Shrimp traps and

Sea bass net. But the most common gears were crab and shrimp nets.

The study revealed a number of important issues that lagoon fishers faced in their day to day fishing carrier. Rapidly escalating input cost, use of harmful fishing gears and inaccessibility for the formal credit sources were the three main prioritized issues in their livelihood.

Use of harmful fishing gears (monofilament gill nets, stake nets, trawling) has become a severe problem and 20% respondent emphasized it as the major issue. Even though the use of monofilament gill nets and trawling has been banned for lagoon, usage of those illegal fishing gears continues in the lagoon. Fike (stake) nets ("Kudu del") were another matter which hampers the boat movements and handling of fishing gears.

Inaccessibility of the formal credit system reduced household economy. Fishers need credit in order to purchase fishing equipment, to meet repair and replacement costs, for consumption and to meet social obligations. In respect of formal credit, fishers are at a serious disadvantageous position. Hence, alternative money lenders have evolved, such as the craft owners or fish merchants and both of which lead to long term 'bondage' to the lender. To mitigate the financial shortfalls, fishermen have formed bondage agreements with particular fish vendor (most probably "wadi" owner) when they sell their daily harvest. According to the agreement fishermen do not pay an interest for the loan, as a compensation for that fishermen agreed to sell their fish at price offered by fish venders. Normally Bondage fishermen were received Rs.20 to Rs.100 lower price than prevailing market price for one kilogram of fish. This study found that OFRP boat owners had statistically significant higher indebtedness (Rs. 67,823 ± 10,120) compared to the amount of loan taken

by NTRB boats owners (Rs. 38,123 ± 8467), $p = 0.020$ (*t test*) for fishing gears making. Main reason for this could be that OFRP boat owners construct higher number of net pieces than NTRB boat owners at once.

The next critical issue of the lagoon was the reduction of fish catch per unit effort. Due to the open and over access of fishermen to the lagoon, competition among the fishermen has increased. This leads to decline individual fish catch. It was recorded that average catch (shrimp) is 5.5 Kg / fisherman in the peak season.

Fishermen highlighted the conflicts among fisher groups as an important issue for livelihood. The study revealed that there are many causal factors fueled conflicts including, matters with influx fishermen, use of problematic fishing gears, opaque and unfair distribution of government subsidies etc. Six percent of fishermen said that government paying lower attention to develop lagoon fishery compare to marine fishery. They expect subsidy schemes to purchase fishing nets, boats and engines. Further they expect government intervention to have less complicated, flexible and achievable formal credit sources.

The lagoon fishery is no more a smoothly functioning industry because lagoon fishermen continuously suffers from livelihood related issues. Net profit of the fisherman is continuously declining due to the increase of input cost and declining of production. This effect exaggerated by not receiving fair price for their fish. Due to open access nature of the lagoon, large numbers of fishermen enter to the lagoon through migration and kinship. It adversely affected to the individual fish production. Seasonal effects and fluctuation of fish prices and fish production created financial crisis in fishing household and mitigate those financial burdens fishermen seeking any resources to gain loans. All the other evoke options for loans were inaccessible, fishermen were lead to make themselves debt bondages and informal agreement with fish buyers. Government should pay special attention to introduce flexible formal credit systems for fishermen. Moreover, government intervention on illegal and harmful fishing gears should be strengthened with the support of the fishing community and the process should be transparent. If government could assist lagoon fishers by providing a subsidy scheme for purchasing fishing inputs (gears, boats, engine, etc) until proper management mechanism is

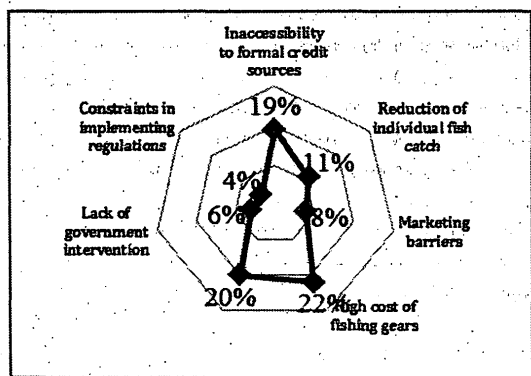


Figure 1: Major constraints faced by the lagoon fishers

introduced it will be a great relief for them to release from unbearable indebtedness.

Policy implications

Assessment of livelihood carrying capacity of the ecosystem is essential for the wellbeing of thousands of people who are directly and indirectly depend on lagoon resources. Hence, comprehensive resource assessment followed by feasible options for exit and entry barriers, safety nets, effective monitoring and surveillance mechanism for illegal, unreported and unregulated (IUU) fishing are mandatory for securing of both lagoon ecosystem and livelihoods.

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