

SOCIO-ECONOMIC IMPORTANCE OF INLAND FISHERY: A CASE OF FISHERMEN OF UDAWALawe RESERVOIR, SRI LANKA

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Abstract

Inland fishery plays a significant role in improving the food security and livelihood of developing nations in the world. However, there is a lack of scientific studies conducted about the socio-economic importance of inland fishery in Sri Lanka. Thus, this study was conducted to identify the socio-economic importance of inland fishery in the Udawalawe reservoir. A sample of 45 fishermen was selected from the fishermen who practice fishing in the study area by simple random sampling technique. A questionnaire survey and focus group discussions were conducted as the primary data collection methods from January to March 2022. Descriptive statistics were used for the data analysis. As per the findings, job opportunities, affordability to expand the production of inland fish and its based products and ability to access and utilize of inland fish and its based products for fishermen households as a nutritive source of food consider the key dimensions that show economic important of the inland fishery. While the buildup of strong linkage between fishermen acts as the key dimension of the social importance of inland fishery.

Keywords: *Inland fishery, Socio-economic importance, Sri Lanka, Udawalawe reservoir.*

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Introduction

Inland fishery sector plays a major role in the socio-economic development of a country (Somashekar & Majagi, 2020). However, literature findings have noted evidence regarding the contribution of the inland fishery is fewer than marine fisheries in a wide variety of aspects: nutritive value and the economic contribution to the national economy under the global-level comparisons of fish production all over the world (Smith & Bennett, 2019).

In the Sri Lankan context, 0.9 percent of the share of contribution from inland fishery and 318 USD dollar million of the export value obtained from fish and fishery-based products and the production of 90,340 metric tons occurred in the inland fishery sector (Department of Fisheries, 2020). Thus, this situation emphasizes the significance of the identification of the socio-economic importance of fishermen in the inland fishery to expand the extent of inland fish production furthermore.

Udawalawe reservoir which is located in Udawalawe national park is a very important inland fishing place in Sri Lanka. It provides natural spawning grounds for the fishing species that are cultured in this reservoir. Moreover, this reservoir is considered a successful natural breeding and spawning ground for Indian carp varieties, Tilapia varieties and freshwater prawn species which are cultivated in Sri Lanka (Deepananda et al., 2014). Since there is a lack of scientific studies conducted about the socio-economic importance of inland fishery in the Udawalawe reservoir in Sri Lanka, this study will generate a considerable impact to fulfil that knowledge gap. Therefore, it is a timely important requirement to identify the socio-economic importance of the inland fishery to expand inland fish production furthermore for sustainable development in Sri Lanka. Thus, the aim of this research was to identify the socio-economic importance of inland fishery in this area.

Research Methodology

Udawalawe reservoir is situated in Ratnapura district in Sabaragamuwa province of Sri Lanka and the extent of this reservoir is 3,399 ha. Inland fish farming activities are a prominent feature of it. Also, this reservoir is considered the higher productive natural breeding and spawning ground for Indian carp varieties Catla, Rohu and Mrigal, Tilapia varieties (Gift Tilapia) and freshwater prawn species cultivated in Sri Lanka.

Based on the National Aquaculture Development Authority of Sri Lanka [NAQDA] (2022), 250 of the active fishermen's population occurred in Udawalawe reservoir. Among them, a sample of 45 fishermen was selected using a simple random sampling technique, from the fishermen who practice

fishing in Udawalawe reservoir. After a pilot study, primary data was collected using a questionnaire survey and focus group discussions conducted from January to March 2022. Descriptive statistics were used in data analysis. Descriptive analysis was used to identify the socio-economic profile of the respondents as well as to identify the socio-economic importance of inland fishery in the Udawalawe reservoir.

Age, marital status, level of education, fishing experience and monthly income were used as the selected variables to identify the socio-economic profile of the respondents in the study area. The socio-economic importance of inland fishery was considered in two aspects. Such as; economic importance and social importance. Economic importance elaborating dimensions are; job opportunities, affordability to expand the production of inland fish it's based products, ability to access and utilize inland fish and it's based products for fishermen households as a nutritive source of food, a good source of protein, possibility to do savings, the possibility of getting loan/credit and product development and value addition. Empowerment of fishermen's livelihoods, the buildup of strong linkage between fishermen, increase awareness regarding inland fishing practices between fishermen and upgrading the living standards of the fishermen were used as social importance representing dimensions of the study.

Results and Discussion

Socio-economic profile of the respondents

As per the results, 73.3% of respondents belonged to the age category of 40 - 59 years. 71.1% of respondents were married and 53.3% of them had received education up to Junior Secondary level (GCE Ordinary level). The family size of the majority of them was 4-5 and their average fishing experience was 7 years. While 82.2% of fishermen showed LKR 20,001 – 40,000 as their monthly income, 24.4% of them reported that it is below LKR 20,000.

Socio-economic importance of inland fishery in Udawalawe reservoir

Socio-economic importance of inland fishing has been presented in table 1.

Table 1:

Socio-economic importance

Economic importance	Frequency	Percentage (%)
Job opportunities	44	97.8

Affordability to expand the production of inland fish and it's based products	43	95.6
Ability to access and utilize of inland fish and it's based products for fishermen households as a nutritive source of food	42	93.3
Good source of protein	40	88.9
Possibility to do savings	36	80.0
Possibility of getting loan/credit	32	71.1
Product development and value addition	38	84.4
Social importance		
Empowerment of fishermen's livelihoods	33	73.3
Buildup strong linkage between fishermen	36	80.0
Increase awareness regarding inland fishing practices between fishermen	32	71.1
Upgrade the living standards of the fishermen	28	62.2

According to table 1, there were seven dimensions for the elaboration of economic importance of inland fishing as job opportunities (97.8%), affordability to expand the production of inland fish and it's based products (95.6%), ability to access and utilize of inland fish and it's based products for fishermen households as a nutritive source of food (93.3%), good source of protein (88.9%), possibility to do savings (80%), possibility of getting loan/credit (71.1%) and product development and value addition (84.4%). Thus, the majority of the respondents were shown job opportunities, affordability to expand the production of inland fish and its based products and the ability to access and utilize inland fish and its based products for fishermen households as a nutritive source of food considered as major dimensions of illustrating factor of economic important perspective. Therefore, it can create a valuable economic opportunity for the fishermen in this area.

With regard to social development, the inland fishery has been able to improve very important three social aspects. They are empowerment of fishermen's livelihoods (73.3%), the buildup of strong linkage between fishermen (80.0%), increasing awareness regarding inland fishing practices between fishermen (71.1%) and upgrading the living standards of the fishermen (62.2%). Based on the findings, the buildup of strong linkage between fishermen is reported as a highly important dimension that shows the social aspect of the inland fishery. This is a very important situation to enhance the social situation of the area. Hence, inland fishery is playing an important role in the socio-economic development of most developing countries. According to the literature as well, the inland fishery sector supports social and economic development in rural livelihoods (Paul-Sanon et al., 2021; Smith & Bennett, 2019; Paul & Chakraborty, 2016).

Conclusion and Recommendation

According to the findings, most of the respondents are married, studied up to junior secondary level and have a considerable level of farming experience. The socio-economic importance of inland fishing was noted as job opportunities, affordability to expand the production of inland fish and its based products and ability to access and utilize of inland fish and its based products for fishermen households as a nutritive source of food considered as the major dimensions of illustrating factors of economic important perspective of the inland fishery. Based on the findings, the buildup of strong linkage between fishermen is reported as a highly important dimension that shows the social importance aspect of the inland fishery.

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