



SOCIO-ECONOMIC ASPECTS OF DEVELOPMENT OF INLAND FISHERIES IN KERALA

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ABSTRACT

India is now looking to double income of the farmers by 2022. The only way to improve the marine fisheries income is to regulate and implement the code of conduct for responsible fisheries. Inland fishing has an important role on the socio-economic development of the developing countries. This economic activity will be a companion of agriculture in the populated countries like India. Fishing is not only a source of income, but also provider of necessary nutrients to our body. Moreover, fishing influences local and national economy, create scopes of engagement for the rural women and marginal farmers, alleviate poverty through employment generation, helps the development of ancillary industries and infrastructure, conserves the aquatic ecosystem and biodiversity etc. Overall it helps in the total development of a region. In the present chapter, the above mentioned facts have been highlighted by analysing the scope and prospect of inland fishing in Kerala. Here the main focus is given to how much the socio-economic development of this district have been done through inland fishing and what will be its possibilities in this regard to achieve the aforesaid goal with proper plan. Data were collected from handbook of fisheries statistics.

Key words: -Socio-economic issues, Livelihood, Inland Fisheries

INTRODUCTION

Aquaculture, also known as aqua farming is the farming of fish, crustaceans, mollusks, aquatic plants, algae, and other organisms. Aquaculture involves cultivating fresh water and saltwater populations under controlled conditions, and can be contrasted with commercial fishing, which is the harvesting of wild fish. Aquaculture includes fish, shrimp farming, oyster farming mariculture, algaculture, and the cultivation of ornamental fish. The Food and Agriculture Organization (FAO) describes aquaculture as one of the industry's most directly



affected by climate change and its impacts. Some forms of aquaculture, such as seaweed farming, have the opportunity to be part of climate change mitigation, while other forms of aquaculture have negative impacts on the environment, such as through nutrient pollution or disease transfer to wild population.

In India also aquaculture recorded rapid progress since 1980s. India has vast resource potential for the development of aquaculture. Substantial growth in aquaculture and the vast potential available give all inland fisheries development programmes an orientation towards aquaculture. Kerala too is endowed with abundant resources for the development of aquaculture.

STATEMENT OF A PROBLEM

Aquaculture interacts with environment. Unplanned and Unregulated growth in aquaculture has many implications that often lead to the degradation or depletion of environmental resources, jeopardizing the livelihood activities of many.

The present study is an attempt to examine the course of development of aqua farming in Kerala and the various socio-economic aspects of changes in culture practises. Though a lot of research work has been done about the biological aspects of fish/ shrimp farming, very little attention has been paid to its socio-economic aspects. The focus of the present study would therefore be to fill this lacuna, and to throw more light on socio-economic aspects of development of aquaculture in Kerala.

OBJECTIVES

1. To examine the course of development of aquaculture in Kerala. The emphasis is on the shift from capture fisheries to culture fisheries and the transition from traditional methods to modern practices.

2. To analyse the economics of fish production under aquaculture and its profitability.

3. To examine the social aspects of the development in aquaculture

SOURCE: Secondary Data

Data's were collected from Hand book of fisheries statistics and Environmental Information System (ENVIS).



LITERATURE REVIEW

Shanmugarajah Srikanthan analysed the impact of Climate Change on the Fishermen's Livelihood Development (2013) and classified the climate changes into two categories viz., predictable and unpredictable. The author suggested that the fishermen must be encouraged to save at least a minimum amount from their earnings, in the off season in fishing they can engage some form of self-employment, and the government should pay their attention to recover socio - economic condition of families affected by the unpredictable climate change, particularly the government should provide necessary support to fishing laborers' families.

A.K. Singh, Lakhan Singh and Sunil Kumar analysed the impact of COVID-19 on economy. India is the second largest fish producing country in the world, with 6.56percent of global production (GoI, 2019). Around 14.5 million people are engaged in fisheries and its allied activities (NFDB) in India, and it has been estimated that around 60percent of the total population consume fish (Shyam, 2016). Fisheries sector of the country contributes about 1.1percent to the overall GDP and 5.23percent to the Agricultural GVA (NFDB). So, in this precarious situation, an attempt was made to examine the potential impact of COVID-19 pandemic on the fisheries sector in India and various mitigation measures to ameliorate the coronavirus shock.

Soumyadip Purkait, Sutanu Karmakarm, Supratim Chowdhury, Prasenjit Mali and Surya Kanta Sau analyzed the COVID-19 outbreak and its impact on developing countries like India. The Economy of India has been ruinous because of prolonged lockdown and hence the authors suggested the government and policy makers need to be prepared to minimize the impact of this shock and V-shaped recovery of the economy in the post COVID period and took this challenge and combat with the pandemic. The authors opined that this sluggish farming sector and stagnant exports are going to put the fishery industry of the country in a severe crisis

FMSP Policy Brief 4 – The Fisheries Management Science Programme (FMSP) and Marine Resources Assessment Group (MRAG) Ltd. discussed about Fisheries and Livelihoods. The key issues are fisheries, especially in developing countries, contribute to livelihoods in a range of ways: directly as food, as a source of income and through other social benefits, such as reduced vulnerability to poverty. These are often complex, dynamic and adaptive. Fisheries can reduce economic and food vulnerability, but they are themselves vulnerable to external influences such as environmental degradation and climate change. To implement effective management, decision-makers have to recognize the roles and importance of fisheries to livelihoods and ensure fisheries are sustainable.

Fisheries sector

Fisheries play a very important role in the socio economic development of a country. The demand for fish and fishery products are increasing considerably in the country, both in domestic and exports fronts. The major share of 5.34 million tonnes is expected from inland aquaculture followed by 3.10 million tonnes from marine fisheries (Planning Commission 2007). The inland fisheries include rivers and canals (1.95 lakh km), reservoirs (3.15 million ha), food plain wetlands (0.30 million ha), estuaries (0.26 million ha), fresh waters (2.41 million ha) and brackish water bodies (1.24 million ha). These resources are one of the main sources of livelihood for the rural poor, particularly the fisher community. At present, an estimated 14 million people are engaged in fishing, aquaculture and ancillary activities in the country.



The estimated fisher folk population of Kerala is 11.114 lakh, which include 8.558 lakh in the marine sector and 2.556 lakh in the inland sector. There are 222 fishing villages in the marine and 113 fishery villages in the inland sector, where fishing and relative activities provide livelihood to a vast majority of the population. Alappuzha district is the first place in the number of fisher folk with a population of 1.86 lakh followed by Thiruvananthapuram (1.83 lakh). India has been a major contributor to the world marine fish production and second largest producer of inland fish.

Inland fish production had improved during the period 1999-2000 to 2015-16 and has been declining thereafter. A marginal increase was seen in 2017-18 when compared to 2016-17. According to the Annual Report of the Department of Animal Husbandry Dairying and Fisheries, Government of India (2017-18), inland water resources of Kerala constitute over 7 per cent of the same in the country. However, according to statistics from Indian Agricultural Statistics Research Institute (ICAR), the share of Kerala in total inland fish production (2014-15) is only about 2.4 per cent. Kerala has scope to improve the utilisation of its potential in Inland fishing.

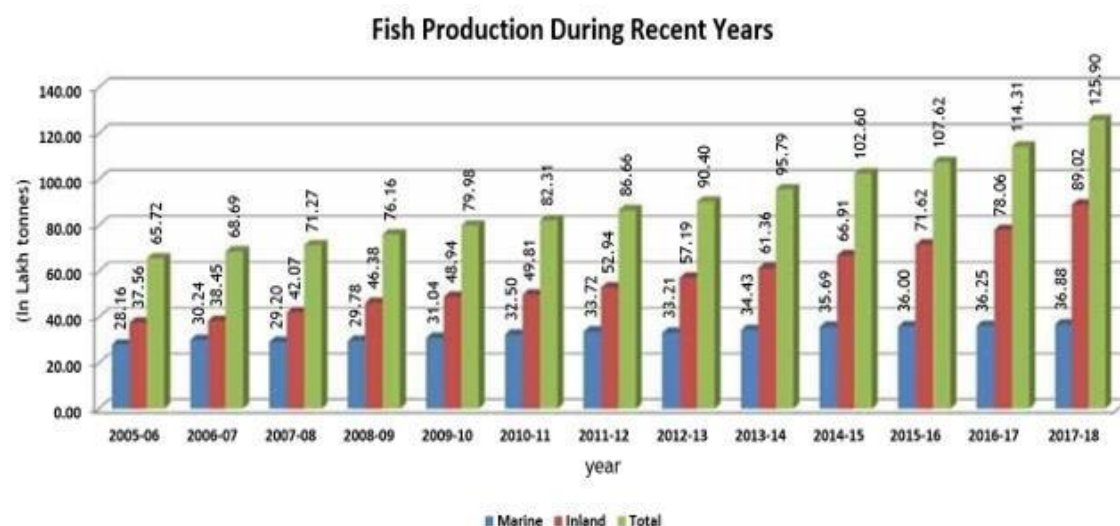
Fish production in Kerala, 2013-14 to 2017-18

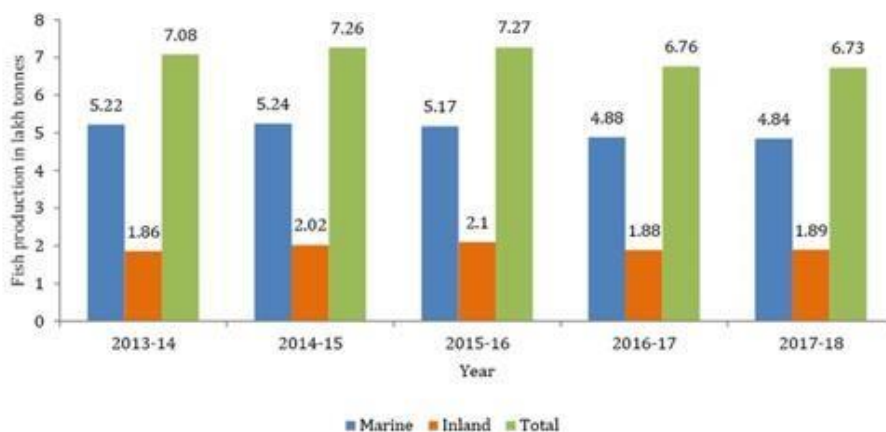
The total fish production in Kerala in 2017-18 was 6.73 lakh tonnes, of which Marine fish landings were 4.84 lakh tonnes and Inland fish production was 1.89 lakh tonnes. Details are provided below. Year-wise details of fish production in Kerala are provided in the figure below:

Fish Production in Kerala & India during the last Five years (<i>lakh tonnes</i>)						
Year	Kerala			All India		
	Marine	Inland	Total	Marine	Inland	Total
2013-14	5.22	1.86	7.08	34.43	61.36	95.79
2014-15	5.24	2.02	7.26	36.27	67.08	103.35
2015-16	5.17	2.10	7.27	36.3	71.65	107.95
2016-17	4.88	1.88	6.76	36.3 (P)	77.79 (P)	114.09(P)
2017-18	4.84	1.89	6.73	Not Available		

Source: Department of Fisheries, GoK; Department of Animal Husbandry, Dairying & Fisheries, GoI

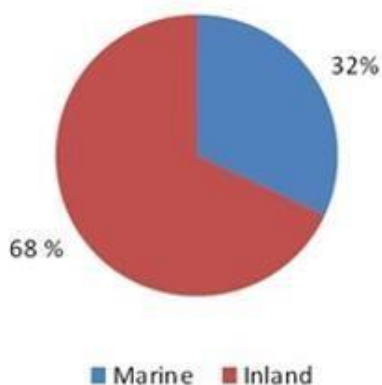
At national level about 68 per cent of the total fish production is contributed by the inland sector, however, at the State level, the share of the inland sector is only



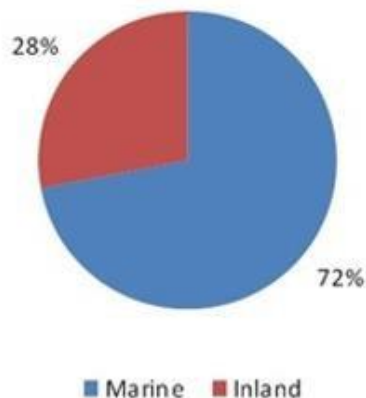


Source: Department of Fisheries, GoK (2018)

Fish Production in India 2016-17



Fish Production in India 2017-18



Source: Department of Animal Husbandry Dairying and Fisheries, GoI (2018) and Department of Fisheries, GoK (2018)

FINDINGS

1. The modified system is far more profitable than the traditional system, in terms of both profit per hectare and profit per unit of production.
2. Modified system is more productive than the traditional system in terms of value of yield per hectare.
3. Social status of inland fishermen in Kerala is low. The achievements of Kerala in various fields cannot be claimed in the case of fishermen folk: even though they contribute a lot to the economic output of the people of Kerala.
4. No political or social reform movements of the State are concerned about the miserable conditions of the inland fishermen community.



CONCLUSIONS:

Fishery Sector has become a vital sector enriched with a source of livelihood for fishermen and also generating employment to a large extent of the society as well as sharing for national food security and valuable foreign exchange earnings. It is imperative to modernize the sector with diversified method of fishing with various new components related to exploitation of deep sea oceanic fishery resources. In order to regulate the fishing efforts and to conserve the fishery resources, the Fisheries department is regularizing the fishing crafts operated in the Union Territory by adopting uniform online registration, colour coding and also ensuring thesea safety equipments and marine risk insurance for safety of fishermen and fishing crafts.

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