Productivity, Profitability and Income Distribution in Capture Fishery

A Study of the Orissa Coast

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In the literature on marine and inland fisheries very little attention has been focused on income generation by various craft-gear combinations, their productivity and the extent, nature and causes of fluctuations in their incomes. This study of the Orissa coast explores the consequences of mechanisation on income distribution between mechanised and non-mechanised fishing units.

HALF the world marine catch used for direct human consumption was produced by ten million small scale[1] or artisanal fishermen, even though their economic position remained unchanged (Thomson, 1980). It has been estimated that small scale fishery uses one-fifth as much capital and one-fourth to one-fifth as much fuel per tonne of fish landed and creates a hundred times more employments per rupee invested than large-scale fishing[2] (Thompson, 1980). Yet in many developing countries, artisanal fishermen live close to or below the subsistence level or, at any rate, are among the lowest socio-economic groups in the country (Smith, 1979; Panayotou, 1980).

Despite decades of fishery development programmes, small scale fishermen around the developing world still exist in absolute and relative poverty.[3]

A good volume of literature concerning marine and inland fisheries and broad managerial aspects of fish marketing (Gupta et al, 1979 ; Srivastava et al, 1979, 1980, 1982, and 1985) is available in India. Since these studies have set objectives relating to marketing and management, very little attention has been focused on income generated by various craft-gear combinations; their productivity; the extent to which their incomes fluctuate, causes and nature of fluctuation and so on.

It is necessary to examine whether the mechanisation programme has any impact on the incomes of various groups of fishermen. One of the commonly accepted notions about mechanisation is that it imparts an element of stability to returns in any process of production and hence influences the yield rates favourably. Most of the studies estimated the disparity in income distribution in terms of household and village level income (Subba Rao, 1980; Srivastava et al, 1985). But little attempt has been made to explore the possible consequences of mechanisation on income distribution between mechanised and non-mechanised fishing units.[4] Our intention was to study the inequalities in the distribution of income among the non-mechanised and mechanised fishing units in Orissa coast.

METHODOLOGY

The Central Marine Fisheries Research Institute conducted a socio-economic survey throughout the coastal area of Orissa during 1985-87. In Orissa, there are 13 districts of which four are characterised as coastal. They are Balasore, Cuttack, Puri and Ganjam, covering a coastline of 480 kms in length, which constitutes eight per cent of the Indian coastline. Balasore and Cuttack fall within north Orissa whereas Puri and Ganjam are in south Orissa. According to the census conducted by the department of fisheries (government of Orissa) and the Bay of Bengal programme in 1982-83 there are 30,050 artisanal marine fishermen in Orissa. At present there are about 673 mechanised crafts and 7,156 non-mechanised crafts in this state. About 56 per cent of the non-mechanised crafts are *katamarans*.

There is a diversification of craft-gear use pattern between south (Ganjam and Puri) and north (Balasore and Cuttack) Orissa, because of professional skills, cultural ethnic background of the fishermen as well as species availability. Mechanisation of craft-gear is faster in the northern coastal part as compared to the southern part—mainly because of harbour and other infrastructural facilities. Mechanised units consist mainly of motorised boats and trawlers. Maximum number of trawlers were observed at Paradeep in Cuttack distrit. During 1983 there were 395 trawlers in the state, of which 203 were in Cuttack district.[5] An increase in the number of motorised boats was also observed with a major concentration in Balasore district. During 1980, the number of motorised boats was 102 which increased to 278 in 1983.[6]

The availability of quality fishes like prawn, hilsa and pomfret is an incentive for

TABLE 1: ANNUAL GROSS INCOME OF DIFFERENT CRAFT-GEAR COMBINATIONS IN THE SELECTED CENTRES OF ORISSA, 1905-07

District	Centre	Craft-Gear Combinations	Annual Catch (in Kg)	Annual Income (in Rs)	Average Price Per Kg
Balasore	Bahabalpur	Mech-boat with gill nets	16291	68158	4.18
		Non-mech boat with gill nets	6860	24956	3.64
	Talsari	Mech-boat with gill nets	16612	59963	3.61
		Non-mech boat with gill nets	5184	15807	3.05
	Balaramguri	Trawler	40282	180401	4.48
Cuttack	Pardeep	Trawler	31311	173306	5.53
	Badapadia	Non-mech boat (*tappa*) with gill net	8748	31751	3.63
		Non-mech boat (*Nava*) with gill net	5821	13958	2.40
Puri	Pentakota	Non-mech boat (big-*katamaran*) with gill net	4599	20718	4.50
	Puri	Non-mech boat (small-*katamaran*) with gill net	1793	4731	2.64
Ganjam	Gopalpur	Non-mech boat (big-*katamaran*) with gill net	4685	14445	3.08
	Bandar	Non-mech boat (small-*katamaran*) with gill net	2432	4937	2.03