

PURSE-SEINE FISHING IN GOA: A COST BENEFIT ANALYSIS

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Abstract: This study explores the economic performance of the mechanized fishing vessels (purse-seiners) as these contribute to the fishing industry of Goa. The costs and profit analysis of mechanized fishing vessels (purse-seines) help the fishers to understand whether they can attain profits despite high operating costs. The primary data was collected from 73 respondents owning purse-seine through pre-tested interview schedule using random sampling method on three jetties in Goa from August 2016-17. The present study was carried out to analyze the inputs of factors of production used which will give maximum output. The Cobb Douglas production function approach was used to find out the most influential variables influencing the earnings from fish catch. The production function analysis using Cobb-Douglas model indicated that there was ample scope for the respondents to enhance the net profit from purse-seine business at all jetties in Goa by increasing the number of fishing hours, increasing the input variables such as enhancing fuel utilization and increasing number of skilled labourers. The findings of the study suggest that the medium and large sized vessels in Goa are economically and financially viable and generate reasonable revenue to cover fixed and variable costs. Purse-seine fishing business has improved the socio-economic status of the fishermen in Goa. The purse-seine fishing activity is capable of creating additional employment, through Government support, through Fisheries department in augmenting income and improving the standard of living of the purse-seine owners in Goa.

Index Terms : Purse-seiners, Fishing business, Mechanized fishing vessels in Goa

I. INTRODUCTION

Purse-seine, an important bulk catching method was first evolved in the Atlantic Coast during the last quarter of the 19th century and in India it was initiated by the Indo-Norwegian Project in 1954 and the operations on commercial lines were taken up from 1976 onwards (Hameed & Mukundan, 1991). Purse-seining was started in Goa on an experimental basis in 1957 when the union territory of Goa was under the Portuguese rule (Desai, Sharangdhar, & Mohite, 2016). However, it was successfully commercialized in Goa in 1964, with only two purse-seiners under operation. Purse-seining is a method to capture large shoals of demersal fish such as prawns and pelagic fish close to the surface such as sardines, mackerals, tuna, anchovies, herring, salmon by encircling them with a large purse-seine net (Kamble, Chaudhari, Shirdhankar, & Markad, 2013). The purse-seine vessels are equipped with purse-seine nets as well as dingy boats and hence they are called as purse-seiners. During 1991-1992, there were 225 purse-seiners in Goa and the total marine fish landings of Goa was estimated at about 96,000 tonnes, of which the purse-seine contribution was about 75% of the marine fish landings (Panikkar, Sehara, & Kanakkan, 1994). The mechanized sector in Goa contributes to 76% of the marine production. In 2016-17 there were 301 purse-seine vessels operating on Goa's coast. In Goa, Purse-seining is carried out on three jetties viz. Cutbona, Malim and Mormugao (Vasco). Purse-seining is carried in Goa throughout the fishing season, from August to May. However, 1st June to 31st July is observed as fishing ban of 61 days, as per Government rules in Goa. The activities are intense during August to November when oil sardines and Indian mackerels are available in large shoals.

Objectives: The specific objectives of the study are:

1. To estimate the costs and profitability among medium and large size purse-seine vessels from purse-seine fishing activities in Goa.
 2. To study the impact of input of factors of production on the earnings from fish catch.
- The costs and profit analysis of mechanized fishing vessels (purse-seines) help the fishers to understand whether they can attain profits despite high operating costs. Another research question involved was that whether there is a variation in costs and profits among different levels (means different size vessels, medium and large) of mechanized vessels in Goa. The variations in profits of purse-seine vessels is due to differences in the input combinations and earnings was the third query involved in this study. There is a need to investigate whether the purse-seine vessels are economically feasible for the fishers in Goa. It is