Title: An Economic Analysis of Low Value Species As An Alternative Nutritional Source In Strengthening Food Security In India

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Abstract: According to nutrition based indicators, 50% of Indias population is estimated to be below poverty line with inadequate nutritional intake. Though majority of Indian population derives its nutritional requirement from plant sources, there is a need to include animal proteins according to nutritionists. In India, animal protein costs much more than plant based nutrients. Income elasticity of demand is very high for high value food products like meat, milk and quality protein items. Hence, to enhance access to nutritional security, low cost avenues like fishery need to be explored. Fish provides high quality protein and a rich source of vitamins. Low value fish like myctophids can be exploited to augment nutritional access as conventional fish stocks are almost fully exploited. Most of these fishes are small, measuring 2-15 cm in length and living at depths between 655-3,280 ft (200-1,000 m). GLOBEC study (1993) has estimated a stock of 100 mn tons of Benthosema pterotum, the largest myctophid fish in the Arabian Sea.

At present though they are not used for direct consumption owing to their high lipid or wax ester content, they can be used for making value added products or diet supplements. An analysis of cost of different sources of animal proteins revealed that it costs only Rs 115 to supply 1 kg of protein from myctophids as against Rs 714/kg for mutton and Rs 275/Kg of chicken protein. Hence exploitation of myctophids should be considered inorder to provide quality proteins to under nourished and poor people. Thus the future for myctophid as a potential resource is open if judiciously exploited and utilized as a source of low cost protein supplement. However this endeavour calls for assessment of potential stock and consumers preferences and acceptance of myctophid species.

A study carried out in coastal Karnataka through conjoint analysis to assess consumers preferences and tastes towards myctophids revealed that consumers with low income preferred myctophid mainly on account of affordability while higher income consumers gave improtance to its low cholesterol level of oil contents.