A Preliminary Study of the Effects of Oluvil Harbor Construction on Marine Beach Seine Fish Catch Diversity and Length Frequency Distribution (Ampara District)

Santhanam V[1*] and Sujarajini V[2]

ABSTRACT. This study assessed the impacts of Oluvil harbour construction on beach seine fish by comparing fish from disturbed (Palamunai 1) and undisturbed (Neelavani 1 to Maruthamunai 1) areas. Harbour development affects marine fin fish fishery. (Freitaset al, 2009; Tuya et al, 2002). 2256 fish belonging to 32 families were collected from 9 hauls. (6-15mm bag and 1,4,6,9, inches wings). Two of the 9 hauls were taken at Navalady, Batticaloa (60 km north of harbour site) Fish abundance, diversity, eveness and dominance indices of fin fish and length frequency distribution of pony fish Secutor ruconius were estimated from random samples. Munro (2000) was used in fish identification. Four species were common (50-90%,), 5 species occurred occasionally (21-50%), rest were sporadic (<0.2%). Shannon Diversity and Eveness Indices showed moderate diversity. (Maruthamunai,1.5 Neelavani, 1.7,1.3 ,1.1& Navalady,2.15, 1.6, Palamunai 2.2, 0.6, 1.8). Sorenson similarity indices, were low, indicating dissimilarity among all locations (0.25, 0.01,0.113,0.036, 0.229,0.045,0.33,0.47). ANOVA & Student T test showed insignificant differences for within boat and between boats at the same site(F 1,198 = 0.0008; P=0.91, P> 0.05; P=0.67,P > 0.05) and significant differences between undisturbed and disturbed sites. (F,1,198 = 841.3, P=0.0000,P<0.05). Pony fish may influence commercially exploited fish species by being their food item. In the tropics Pony fish are marketed either fresh or dried. The results reported should be subjected to further systematic investigations.

Key words: Marine Fish. Beach Seine Fishery, Shannon Diversity Index, Sorenson Similarity Index, Pony Fish.

* To whom correspondence should be addressed : oniv@seu.ac.lk
[1] Department of Biological Sciences, South Eastern University of Sri Lanka
[2] Department of Biological Sciences, South Eastern University of Sri Lanka