Proceedings of the Fifth Annual Sessions : Sri Lanka Association for Fisheries and Aquatic Resources, 23 – 24 June 1999, SLAAS Auditorium, Colombo (Abstract)

EFFECT OF LUNAR RHYTHMS ON FISH YIELDS IN THREE RESERVOIRS OF SRI LANKA

R.P.P.K. Jayasinghe and U.S. Amarasinghe.

Department of Zoology, University of Kelaniya, Kelaniya, Sri Lanka.

The daily fish catch data of individual boats which were collected by employing field assistants in three Sri Lankan reservoirs namely Minneriya, Udawalawa, and Victoria were analyzed to examine whether there is an effect of lunar cycle on fish yield. Catch per unit effort (CPUE in kg boat^{-1} day^{-1}) were grouped into four lunar phases viz. new moon, first quarter, full moon and last quarter. The CPUE values of the four phases were compared using non parametric ANOVA (Kruskal-Wallis test). The results indicated that CPUE was significantly lower in full moon phase in Minneriya and Victoria reservoirs than in other lunar phases ($H = 9.52$ and 20.9 in Minneriya and Victoria respectively; $p < 0.05$). In Udawalawe reservoir where indigenous and exotic cyprinids are caught in significant numbers, a similar trend was observed in new moon phase ($H = 10.61$; $p < 0.05$). In effective reservoir fishery management strategies, effect of lunar rhythms on fish yield should also be considered because it brings about significant fluctuations in the daily catches of individual fishers.

This study was carried out as part of the research project (Project Number: IC18-CT97-0190) funded by the European Union INCO-DC Programme.