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Status of fishery in the Panama lagoon, Ampara District, Sri Lanka

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Abstract

Panama Lagoon (6°45′-6°46′ N; 81°48′-81°49′ E) is one of the most productive lagoons in Ampara District in the East coast of Sri Lanka. It is shallow and covers an approximate surface area of 0.73 km² (73ha). The status of fishery in the Panama lagoon has not been assessed during the past as the area was not accessible due to the thirty year old civil war in the country. Fisheries is an important secondary activity in the lagoon. This study was conducted during June 2011 and April 2012 to assess the status of fishery in the Panama lagoon. Daily yield brought to the landing centers by fishermen were used as the primary source of data to assess the status of fishery in the Panama lagoon.

Fiber glass canoes with an outrigger (operated by single or two fishermen) are the main fishing craft used in the Panama lagoon. Fishing using motor boats is prohibited. Gill nets and cast nets are the main fishing gear used. Although the Panama fisher society has 106 members, only 27 members are involved in lagoon fishery on regular basis.

About 45 species of fin fish belonging to 31 families, four species of shrimps and the mangrove crab, *Scylla serrata* are harvested from the lagoon. However, only five species of fish namely *Siganas lineatus, Oreochromis niloticus, Mugil cephalus, Gerres argyreus* and *Mystus guilio* contribute to the bulk (63%) of the catch. These species occur regularly in the fishermen catch and the shrimp season occurs in the month of April. *Siganas lineatus* and Mugil *cephalus* are the most preferred food fishes in the Panama village community and thus sold for a comparatively higher price than all the other species. The total production of this lagoon was estimated as 7405.88 kg/km².yr. The productivity is high in the lagoon compared to the highly productive Negambo estuary which has an annual productivity of 72.9 kg/ha.yr. Furthermore the lagoon exhibits seasonal fluctuations in productivity due to environmental changes as well. Salinity has been identified as the major environmental factor that is affecting the distribution of ichthyofauna in the lagoon.

Use of illegal mesh sizes and unauthorized activities has caused certain environmental issues in the lagoon and political influences have also become a threat to the status of fishery in the lagoon. Hence, suitable management practices and land use practices should be introduced to ensure the sustainability of the lagoon ecosystem.

Keywords: Fisheries, productivity, sustainability