

B-73: The technology and performance of shrimp farming industry around the coastal areas of Chilaw

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Rapidly expanding shrimp culture industry is increasingly constrained by problems related to water quality and soil quality, which in turn is created by bad management and operational procedures. The annual shrimp exports during the year 1994 was 2300 mt and earned Rs. 1650m in foreign exchange.

Although the number of farms have been increasing during the last few years, it was observed that the production figures did not increase proportionately. The present survey was conducted in the coastal areas of the Chilaw lagoon to study the technology and performance of the shrimp farming industry with a view to promote sustainable development.

The study reports the results on hatchery performance and farm operation & management procedures together with major constraints for targeted production.

All farms and hatcheries in the Chilaw area were visited as a part of an indepth study on aquaculture sustainability and environment. Information was collected on site description, farming systems, pond management and soil and water quality. The survey also included investigations on larval requirements and hatchery performance.

It was observed that 75% of the hatcheries in Sri Lanka are situated along the coastal stretch from Thuduwawa to Chilaw. Most of the new hatcheries would also be situated in this area. Eight hatcheries are operational and 12 new hatcheries are under construction. Production capacities of operational hatcheries ranged from 5 to 10 m postlarvae per annum. However 90% of the

hatcheries operated at levels below capacity, producing less than 50% of the targeted production. The major constraint reported in hatcheries was the unavailability of water of correct salinity.

One hundred and twenty five shrimp farms were identified around the Chilaw lagoon of which approximately 90% of the shrimp farms are situated in potential acid sulphate soils, 10% of the farms are on soils with predominant sand component. Serious problems relating to adverse soil conditions are recorded in the western coast of the lagoon towards Chilaw.

Seventy seven percent of farms in the area were below 2 ha in extent. Total farm area in the region was estimated at 336 ha and the total pond area was estimated at 210.8 ha. All the farms in this area operate at semi-intensive level with a stocking density of 10 - 20 pl/m² using artificial aeration. Recorded annual production per ha varied between 4000-7000 kg.

Increase in post larval production and measures to minimise adverse impacts of problem soils are suggested for future sustainability of the shrimp culture industry in the coastal areas around Chilaw.