

No Clamming Up

The certification by the Marine Stewardship Council of the fishery for short-necked clams from the Ashtamudi estuary is a first for India

The Ashtamudi estuary is the second-largest estuarine system in the south Indian State of Kerala. It is a Ramsar site designated as a “wetland of importance”. The commercially exploited bivalve species from the estuary are represented by short-neck clam (*Paphia malabarica*), yellow clam (*Meritrix meritrix*), black clam (*Villorita cyprinoides*) and blood clam (*Anadara granosa*).

It is estimated that around 20,000 tonnes of clams are exploited regularly for commercial purposes of which short-neck clams contribute 12,000 to 15,000 tonnes. The meat of the clams fetches Rs 100 million (US\$ 1.6 mn) as foreign exchange for India. The landed value of the short-neck clam is Rs80-100 per kg (US\$1.3 - 1.6), while its export value is around US\$3.

Short-neck clams are harvested from an area of 60 – 80 ha in the Ashtamudi estuary by approximately 1,000 fishers—all male—while another 3,000 are involved in cleaning, processing and trading of the clams.

Before the MSC certification, there were six companies based in Kollam and Kochi that exported the clams, but this number is expected to increase post-certification. Before certification, the markets for the clams were Malaysia, Indonesia and Vietnam. Post-certification, exporters expect to see an expansion of the markets to Europe and Japan.

Fishers in the Ashtamudi estuary paddle dug-out canoes from nearby villages to the shellfish beds. Divers dislodge the clams from the seabed with their hands and feet; sometimes a team of two or three fishermen

will employ a hand-dredge from the canoe.

On a good day, a fisherman can gather as much as 200 kg over a period of four to five hours. There is no mechanized gear involved in collecting the clams.

The short-neck clam fishery contributes a share of 90 per cent of clam exports from India. The clams grow in size to 30 mm in one year and 42 mm in three years. The peak spawning period is during December to February.

In terms of weight and calorific value, the clams are best during the

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pre monsoon months, between March and November.

During the late 1980s and early 1990s there was an unexpected depletion in the clam resources, mainly due to overexploitation by indiscriminate fishing for the clam shells, which had a niche market.

Fishery band

A combined effort by the Central Marine Fisheries Research Institute (CMFRI), the district administration and clam pickers of the region put in place a management measure to regulate the fishery by using nets with mesh size of 30 mm and more and imposing a fishery ban from December to February, which is the peak breeding season of clams. Since then, for the past 20 years or so, the

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stocks of short-necked clams have revived.

The introduction of a closed season and mesh-size restrictions for nets, along with the stipulation of a minimum size of clams for export and a prohibition on mechanized fishing methods led to immediate gains, and the Ashtamudi estuary clam fishery has sustained landings of around 10,000 tonnes a year for the past decade.

The MSC pre-assessment for the short-neck clam fishery began in 2011, and was facilitated by the World Wide Fund for Nature (WWF). The certification addresses issues related to the sustainability of the resource, the environmental impacts of the fishery, and the laws and regulations governing the fishery.

The pre-assessment results indicated a need to monitor the environmental impact of the fishery, periodical stock assessment for subscribing harvest-control rules and a governing council for managing the resources sustainably.

Any resource assessment study would strengthen the scope of the fishery to move towards full certification. The costs for the pre-certification and certification were borne by WWF-US and Sustainable Legacy Fund, an organization

District Collector as Chairman and the Deputy Director of Fisheries as Convenor, with 10 clam fishers as members. The council has 20 members who meet once in every quarter of the year. While reviewing the clam fishery, the council will also address issues faced by the clam fishers and take decision in their meetings, including those related to the implementation of the mesh-size regulation and the minimum size of the clams that can be harvested. The council is responsible for fixing a minimum price for the meat of the clams. It also issues identity cards for fishers, and restricts new entrants into the fishery.

In order to monitor the impact of the fishery on the ecosystem, CMFRI has included in its annual research programme a project on management and monitoring of possible effects of the Ashtamudi short-clam fishery on habitats and ecosystems.

The project will be undertaken by the Molluscan Fisheries Department (MFD) and the Fishery Environment Management Division (FEMD) of CMFRI. Regular monitoring of the clam resources and stock assessments would be carried out before and after the fishery season, taking into account the self-imposed fishing holiday during the spawning period from December to February.

The project is also expected to prescribe a total allowable catch (TAC) for the fishery. The statistics of stock assessment and the maximum sustainable yield (MSY) determined by CMFRI are also presented to the council on a yearly basis, and are used to control entry into the fishery.

MSC's scoring system puts the Ashtamudi short-clam fishery in the best-practice category on 29 of the 31 performance indicators, with scores of greater than 80 out of 100. The fishery has conditions for improvements to maintain certification on two performance indicators related to recording information on bycatch.

Insufficient data

The Risk-based Framework (RBF) was used to assess some performance indicators where there was insufficient data to allow the

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dedicated to fisheries moving towards MSC certification.

The MSC assessment team considered the low-impact method of fishing in the Ashtamudi estuary and the extent of the seabed that is fished. Due to the fishing methods employed, clams in the deeper parts of the entrance to the estuary cannot be fished because the water is too deep or the tidal currents are too strong to allow diving or raking of clams.

The Ashtamudi Clam Governing council was constituted with the



Short-neck clams are harvested from an area of 60 – 80 ha in the Ashtamudi estuary of Kerala, India, by approximately 1,000 fishers. This is the first fishery in India to be accorded certification by the Marine Stewardship Council

conventional assessment process to be used. The RBF was developed by the MSC to improve access to fisheries that are data-limited, and is often used for small-scale artisanal fisheries in the developing world.

The Ashtamudi short-clam fishery underwent MSC's full assessment in September 2014 and was certified in November 2014 as the first MSC-certified fishery in India and the second in South and Southeast Asia.

Over the years, there has been an increase in demand for clams in the local market, and prices have ruled high. The MSC label is now expected to increase purchase by buyers from Europe and Japan.

The Ashtamudi Clam Governing Council will bear the cost for re-certification, which will be minimal compared to the price realized by fishers for the certified clams.

It is planned to have qualified third-party auditors in India by the time of re-certification in 2019, which will considerably reduce audit costs.

Among the key management structures that helped the Ashtamudi short-neck clam fishery obtain MSC certification was the three-tier system of village, district and state councils, which helped in the implementation of the fishery-management regulations.

The MSC certification of the Ashtamudi short-neck clam fishery can prove to be an example for other similar small-scale fisheries around the world to get certified to ensure better prices and a more sustainable exploitation of the resource. ♣

For more



www.msc.org/newsroom/news/indian-clam-fishery-pioneers-sustainability?fromsearch=1&isnewssearch=1&set_language=en&categories=fisheries-in-the-program

MSC

www.icsf.net/en/samudra/article/EN/58-3565-Get-Out-of-the-.html

**Get Out of the Spotlight,
SAMUDRA Report No. 58,
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