



Food and Agriculture
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United Nations



Cefas

VIRTUAL REGIONAL WORKSHOP ON BIVALVE MOLLUSCS SANITATION

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Bivalve utilization in India

Dr Vasant Kripa

Approximate production volumes and species produced

- **Farmed Species** : In India two species of bivalves are farmed along the south west coast; the Indian Backwater oyster *Crassostrea madrasensis* and the green mussel *Perna viridis*. In some areas *Saccostrea cucculata*, the rock oyster is also farmed. The approximate annual production of these would be **15000 tonnes** (shell-on)
- **Wild Caught (Fishery)** : Bivalve production in 2018 in the country was estimated at **1,32,531 tonnes**. The fishery was dominated by clams, consisting of 76.3%, followed by mussels, 15.3% and oysters, 8.4%.
- The major species contributing the fishery was constituted by **clams**, like *Villorita cyprinoides*, *Paphia malabarica*, *Meretrix meretrix*, *M. casta*, *Marcia opima*, *Anadara granosa* **mussels-** *Perna viridis* and *P.indica* and **oysters**, *C.madrasensis*, *S.cucculata*, *C gryphoides*, *C rivuularis*



Clam fishery India –MSC Certified



Fishery managed by a Village Council. No overexploitation; No incidence of HAB



Bivalve fishery : A main source of income to thousands of fishers in coastal area mainly estuarine



Market domestic and/or export markets

- More than 95% of the bivalves are sold in the **domestic market** either as fresh shell-on or as heat shucked fresh meat.
- The yellow-foot clam, *Paphia malabarica* is the first international **certified fishery** in India by the Marine Stewardship Council (MSC) making it a valuable product in EU.
- There is also a growing market for fresh live depurated farmed oyster in high-end restaurants in Central Kerala.
- Export of oysters and clams is also present on a small scale.
- Domestic market for value added products has also developed in coastal villages

Official Control laboratories

- The bivalve growing areas are monitored basically for bacterial load and heavy metal. Farmed bivalves are depurated and tested in Government labs.
- There are no regular control systems in place.
- The ICAR-Central Marine Fisheries Research Institute promotes bivalve farming and monitors the bivalve fishing areas.
- Bio-toxins are tested as and when required (if a HAB is reported) by ICAR-Central Institute of Fisheries Technology
- Occurrence of Harmful Algal Blooms is very rare and most of the fishery is the estuarine regions which are comparatively free from shellfish toxins.

Awareness on human health risks associated with the consumption of bivalve molluscs,

- The risks associated with shellfish poisoning is known to the scientific fraternity and considerable efforts have been made in **educating the bivalve farmers** on the significance of depuration.
- There is one **Common village depuration** unit which is utilized by the farmers and the fresh live oysters from this are very popular.
- **High microbial load** is observed especially during monsoon and during this period, live oyster trade for fresh consumption is **not promoted**.
- Few instances of shellfish poisoning has been reported from India. But has not necessitated closure of fishery for long periods.



Depurated farm fresh high quality oysters



Members of Self Help Group -Oyster farmers –who can efficiently depurate oysters, heat shuck hygienically and pack these for marketing



A chef from Belgium tasting depurated farm fresh oyster in Kerala



Plans for large scale development of bivalve farming in India

- The country is planning to develop bivalve mariculture in a large way.
- There will be good infrastructure development especially **bivalve hatcheries, depuration units and hygienic value added production units,**
- The facilities developed will also be used for improving the quality of wild caught bivalve (**farmed and fished bivalves**).
- Large scale testing for quality and provisions for HAB alters through satellite observations being planned.
- Bivalve market promotion through mass media is also planned since building **consumer confidence** is required for more utilization of this highly nutritious seafood

Thank you



Bivalve utilization -India