



Invasive Species: Charru Mussel

 drishtiias.com/printpdf/invasive-species-charru-mussel

Why in News

An invasive species named **Charru mussel (*Mytella strigata*)**, native to the South and Central American coasts, is spreading quickly in the backwaters of Kerala.

Key Points

- **Reasons for the spread:**

- The Charru mussel may have reached the Indian shores attached to ship hulls or as larval forms in ballast water discharges.

Ballast is the seawater that ships carry to improve stability.

- Cyclone Ockhi which struck the region (South India, Sri Lanka, Maldives) in 2017, may have sped up their invasion.

- **Areas impacted:**

- The surveys conducted in Kerala has found **presence of Charru mussel in many estuaries/backwaters of Kerala**, which include Kadinamkulam, Paravur, Edava-Nadayara, Ashtamudi, Kayamkulam, Vembanad, Chettuva and Ponnani etc.

The backwaters of Kerala comprise stretches of lakes, canals and lagoons located parallel to the coast of the Arabian Sea.

- Ashtamudi Lake, a **Ramsar site** in Kollam district is the worst-hit due to Charu mussel. Here, **Charru mussel has replaced the Asian green mussel** (*Perna viridis*) and the **edible oyster *Magallana bilineata*** (known locally as muringa).

- **Concerns:**
 - The **proliferation of Charu mussel poses a serious threat to the endemic species diversity** of brackish water habitats of Kerala coast.
 - This invasive species is forcing out **other mussel** and **clam species** in the backwaters and threatening the livelihoods of fishermen engaged in molluscan fisheries.
 - In Ashtamudi lake, the **short-necked clam fisheries** has obtained an **eco label** from the **Marine Stewardship Council** and about 3,000 people are dependent on fisheries here.
 - "**Ecolabelling**" is a voluntary method of environmental performance certification and labelling that is practised around the world.
 - An ecolabel identifies products or services proven environmentally preferable overall, within a specific product or service category.
 - The Marine Stewardship Council is an independent **non-profit organization** which sets a standard for sustainable fishing. It is **headquartered in London**.
 - In such a scenario, the fast-breeding Charu mussel could be seen as a '**pest**' **attack** on clam fishery.

Invasive Species

- An invasive species is an organism **that is not indigenous, or native, to a particular area** and **causes harm**.
- They are capable of causing **extinctions of native plants and animals, reducing biodiversity, competing with native organisms for limited resources, and altering habitats**.
- They can be **introduced to an area by ship ballast water, accidental release, and most often, by people**.

Mussel

- Mussel is a common name for numerous **bivalve mollusks** belonging to the **marine family Mytilidae** and to the **freshwater family Unionidae**.
Mollusks are **soft-bodied invertebrates of the phylum Mollusca**, usually **wholly or partly enclosed in a calcium carbonate shell** secreted by a soft mantle covering the body.
- Worldwide, they are most **commonly found in cool seas**.
- In India, two species of marine mussels, **green mussel** (*Perna viridis*), and the **brown mussel**, (*P. indica*) are found in the coastal areas.
Farming of green mussels **is now established as a commercial practice** in India.

- The Charru mussel is native to the South and Central American coast.
 - Their colour varies from black to brown, purple or dark green.
 - They can survive in a range of salinity and temperature but cannot survive beyond 36 degree celcius.

Way Forward

- Completely eradicating the Charru mussel from Indian waters is going to be nearly impossible, so limiting its spread is crucial.
- There is also a need to promote studies on invasion biology and strengthen awareness on marine invasive species.

Source: TH