



# Migratory Diadromous Fishes

[Source: DTE](#)

## Why in News?

A recent study has raised concerns about the effectiveness of [Marine Protected Areas \(MPAs\)](#) in safeguarding the habitats of **rare migratory fish species**.

- The study found that a significant portion of **these [protected areas](#) do not align with the core habitats of the target species**, raising questions about the efficacy of current conservation efforts.

## What are the Findings of the Study about Diadromous Fish Species?

- **About Study:**
  - The study examined 11 rare and data-poor **diadromous fish species**. These species **migrate between saltwater and freshwater environments**.
- **Findings:**
  - The researchers found that only **55% of the modelled core** habitats for these species overlapped with the designated MPAs.
    - And, of **these protected areas, only 50% had measures in place for the protection of the fish**.
  - Less than 30% of endangered species, such as the **Mediterranean twaite shad**, had their core habitats within the MPAs.
  - Species like **European eel** and **European smelt**, which had nearly 70% of their core habitats within MPAs.
- **Challenges faced by these fishes:**
  - **Diadromous fish are highly sensitive to a range of anthropogenic pressures** such as agricultural and pollutant runoffs, habitat destruction, barriers to migration, fishing, bycatch, and [climate change](#).
  - **Barriers to migration, such as dams, weirs, and locks**, can have a significant impact on these fish as they move between **freshwater and marine habitats throughout their life cycle**.
- **Impact of Climate Change:**
  - **Fish are Swimming Further North in the Ocean** because warmer waters are pushing them towards cooler areas.
  - **Southern Populations of these Fish are Declining Significantly** due to factors like habitat loss or changes in food availability.
  - **The Timing of their Migrations is also Changing**, which can harm the survival of their young and make it harder for them to find food.

## What are Diadromous fishes?

- **About:**
  - These are a group of fish that **migrate between freshwater and saltwater** environments throughout their lives.
  - This unique life cycle allows them to **take advantage of the different resources**

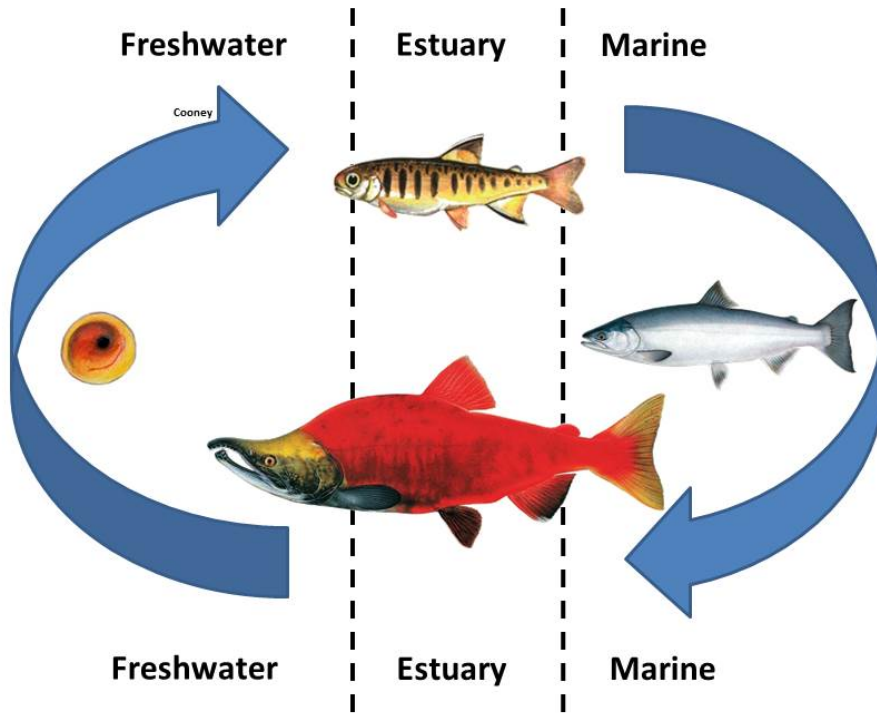
available in each habitat.

▪ **Types:**

- **Anadromous Fish:** These fish spend most of their lives in the **ocean but return to freshwater** rivers and streams to spawn (release or deposit eggs).
  - **Examples: salmon, trout, and shad.**

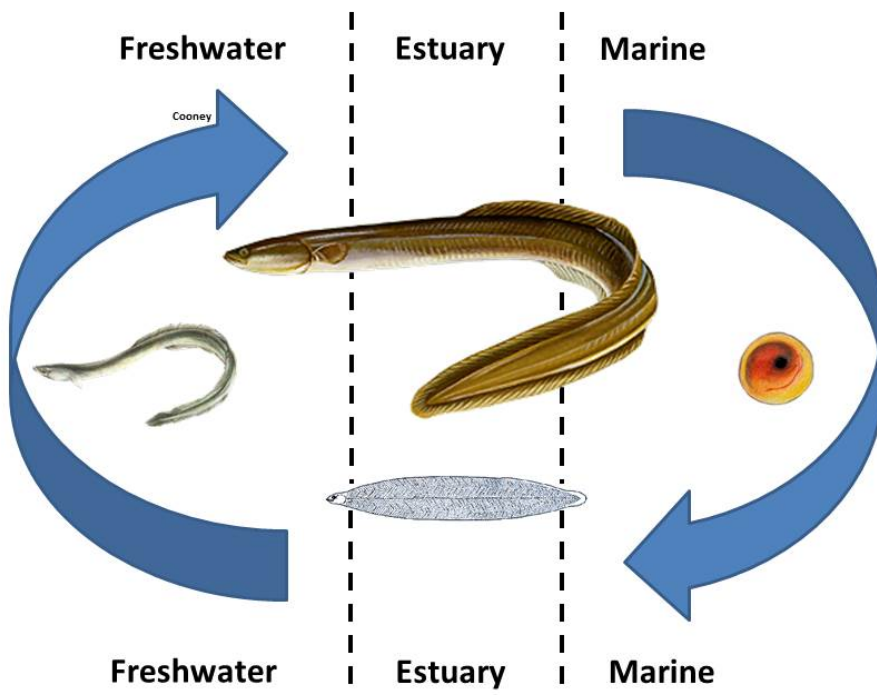
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### Anadromous Life Cycle



- **Catadromous Fish:** These fish spend most of their lives in **freshwater** but **migrate to the ocean** to spawn.
  - **Example: Eel**

## Catadromous Life Cycle



Read more: [Marine Protected Areas](#), [International Marine Protected Areas Congress](#)

### UPSC Civil Services Examination Previous Year Question (PYQ)

Q Recently, our scientists have discovered a new and distinct species of banana plant which attains a height of about 11 meters and has orange coloured fruit pulp. In which part of India

**has it been discovered? (2016)**

- (a)** Andaman Islands
- (b)** Anaimalai Forests
- (c)** Maikala Hills
- (d)** Tropical rain forests of northeast

**Ans: (a)**

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