

7.Dugong - Species / Environment

Human activities & coastal habitat degradation - Why India's sea cows are under threat. A new IUCN report warns of a decline in India's Dugong populations across the Gulf of Kutch, Palk Bay, Gulf of Mannar, and Andaman & Nicobar Islands due to seagrass destruction and pollution. These strictly marine herbivores, vital for "blue carbon" sequestration, are afforded the highest protection under Schedule I of the Wildlife (Protection) Act, 1972.

1. Context & Current Status

Report Launch - A new report commissioned by the International Union for Conservation of Nature (IUCN) was launched at the IUCN Conservation Congress in Abu Dhabi.

Key Findings - The report highlighted severe threats and a declining trend in India's Dugong population.

Affected Regions - Populations are specifically declining in -

- 1.Gulf of Kutch
- 2.Palk Bay
- 3.Gulf of Mannar
- 4.Andaman & Nicobar Islands

Primary Causes - Pollution, extensive habitat loss, and anthropogenic (human) activities.

2. About the Dugong (Indian Sea Cow)

Scientific Classification - They belong to the Order Sirenia (a group they share with manatees).

Physical Characteristics - Large, grey mammals with a plump appearance.

Tail Structure - They possess a dolphin fluke-like tail, which is a key distinguishing feature from manatees.

Habitat

Strictly Marine - unlike manatees which can inhabit freshwater areas, the Dugong spends its entire life in the sea.

Range - Found in shallow coastal waters of the Indian and Western Pacific Oceans.

Dietary Habits

Herbivorous - Commonly known as "Sea Cows" because they graze peacefully on seagrasses.

Dependency - They feed on seagrass growing on sandy sea floors in warm, shallow waters. They require large amounts of this vegetation to survive.

Life Cycle

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Birth - Female dugongs give birth underwater to a single calf.

Calving Interval - Reproduction is slow, occurring at intervals of three to seven years.

Maternal Care - The calf drinks milk from the mother's teats and stays close for one to two years.

Maturity - They reach adult size between 4 and 17 years of age.

3. Comparison - Dugong vs. Manatee

Feature	Dugong	Manatee
Habitat	Strictly Marine (Saltwater only).	Can inhabit Marine, Brackish, and Freshwater systems.
Tail Shape	Fluke-like tail (similar to a dolphin).	Paddle-shaped (rounded) tail.
Distribution	Indian and Western Pacific Oceans.	Atlantic Ocean, Amazon Basin, West Africa.

4. Ecological Importance

Dugongs act as "ecosystem engineers" and are crucial for marine health -

Blue Carbon Sinks - By grazing, they maintain seagrass meadows which act as major carbon sinks (sequestering carbon).

Water Quality - They contribute to improving coastal water quality.

Erosion Control - Healthy seagrass beds (maintained by Dugong grazing) prevent coastal erosion.

Biodiversity Support - Seagrass meadows provide essential nursery grounds for fish and other marine life.

5. Key Threats Identified

Habitat Degradation (Seagrass Destruction)

The destruction of seagrass meadows is the most critical threat, caused by - Coastal development and infrastructure projects.

1. Dredging of sea floors.
2. Expansion of Ports.
3. Unregulated Tourism activities.
4. Bottom Trawling (fishing method that scrapes the sea floor).

B. Pollution

Foraging Grounds - Coastal and marine pollution has degraded seagrass beds.

Contamination - Runoff containing plastics and chemical effluents impacts their feeding ability and health.

C. Fishing Activities

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Bycatch - Accidental entanglement in fishing nets (specifically gillnets) is a major cause of mortality.

Collisions - Physical strikes by fishing boats.

Acoustic Threat - Noise pollution from vessels disrupts their feeding and communication behaviour.

D. Food Scarcity (Seagrass Loss = Food Loss)

Since Dugongs are monophagous (eat only seagrass), any decline in meadows directly affects their survival rates.

E. Climate Change

Rising ocean temperatures and extreme weather events are reducing seagrass cover, indirectly threatening the species.

6. Conservation Status

IUCN Red List - Classified as **Vulnerable**.

Wildlife (Protection) Act, 1972 (India) - Listed under Schedule I.

Implication - This affords them the highest level of legal protection in India. Trade, hunting, or harming them attracts severe penalties.

7. Summary

Key Locations in India - Gulf of Kutch (Gujarat), Palk Bay & Gulf of Mannar (Tamil Nadu), Andaman & Nicobar Islands.

Diet - Herbivorous Marine Mammal (Exclusive Seagrass eater).

Order - Sirenia.

Legal Status - Schedule I of WPA, 1972.

Primary Threats - Seagrass loss, pollution, fishing nets (bycatch), and coastal development

Source - <https://indianexpress.com/article/explained/india-sea-cows-threat-10372190/>