

1. Red-Crowned Roofed Turtle: Recently, the return of the critically endangered Red-Crowned Roofed Turtle to the Ganga after three decades marked a major milestone in ecological restoration under the Namami Gange Mission.

• **About Red Crowned Roofed Turtle:** One of the 24 species endemic to India, is characterized by bright colors such as red, yellow, white, and blue on the faces and necks of the males.



- **Common Names:** Bengal roof turtle, Red-crowned roofed turtle.
- **Distribution:** A freshwater turtle species found in deep-flowing rivers with terrestrial nesting sites. It also occurs in the Brahmaputra basin.
- **Habitat:** Native to India, Bangladesh, and Nepal.
- **IUCN Red List:** Critically Endangered
- **Wildlife Protection Act, 1972 (India):** Schedule I – Absolute protection; hunting prohibited except under specific conditions.
- **CITES:** Appendix II – International trade regulated to prevent threats to survival.

2. Digha Jagannath Temple: The Digha Jagannath temple, a replica of the 12th-century shrine in Puri, Odisha, is set to be inaugurated on the auspicious occasion of 'Akshaya Trithiya' in Purba Medinipur, West Bengal.

• **About Jagannath Temple in Puri** is a Vaishnavite temple dedicated to Jagannath, an incarnation of Lord Krishna.

- The **current temple** was rebuilt starting from the 10th century on the site of an earlier structure, with reconstruction initiated by **Anantavarman Chodaganga Deva**, the first king of the Eastern Ganga dynasty.
- The temple is renowned for its **Kalinga architectural style**.
- The temple is famous for the **annual Ratha Yatra**, where the three principal deities—**Jagannath, Subhadra, and Balabhadra**—are pulled on large, intricately decorated chariots.
- The **Bhil Sawar tribal priest** performs the worship in the temple.
- Unlike most Hindu temples, the idol of **Jagannath** is made of **wood**.

3. Green Hydrogen Certification Scheme of India (GHCI): Recently, the Ministry of New and Renewable Energy (MNRE) hosted a workshop on "Opportunities for MSMEs in the Green Hydrogen Supply Chain" and launched the **Green Hydrogen Certification Scheme of India (GHCI)**.

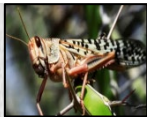
- **About GHCI:** Aims to establish a strong framework for certifying green hydrogen production.
 - Ensures transparency in the production process.
 - Guarantees traceability of green hydrogen from production to end-use.
 - Enhances market credibility for green hydrogen as a clean energy source.
- **India's Vision for Green Hydrogen:** To become a global hub for green hydrogen production, usage, and export by 2030. Under the National Green Hydrogen Mission, India aims to achieve:
 - A green hydrogen production capacity of at least 5 MMT per annum, coupled with 125 GW of renewable energy capacity.
 - Over ₹8 lakh crore in investments.
 - Creation of 6 lakh jobs.
 - A reduction in fossil fuel imports worth over ₹1 lakh crore.
 - A 50 MMT reduction in annual greenhouse gas emissions.

4. Axiom-4 (Ax-4) : Indian astronaut Group Captain Shubhanshu Shukla is set to pilot the **Axiom-4 (Ax-4) mission to the International Space Station (ISS)**, as announced by NASA.

- He will become the first Indian to travel to space in 40 years, following Rakesh Sharma's historic flight in 1984.
- **About Ax-4: A private spaceflight** to the International Space Station, operated by **Axiom Space**.
 - **Objectives:** The mission will support commercial activities like research, technology, and space tourism, showcasing the potential of space stations for business and innovation.
 - **Spacecraft and Crew Composition:** The mission utilizes a SpaceX Dragon spacecraft, launched by a Falcon 9 rocket, and includes both professional astronauts and private individuals.
 - **Mission Duration and Activities:** Axiom-4 is expected to last about 14 days, during which the crew will conduct scientific experiments, technology demonstrations, and educational outreach.
 - **Long-Term Vision:** Plans to build the world's first commercial space station, with Axiom-4 being a step towards transitioning from the ISS to an independent orbital outpost.

5. Desert Locusts : Recently, scientists at the Locust Warning Organisation (LWO) observed groups of desert locusts in Rajasthan's Sri Ganganagar and Jaisalmer districts.

- This situation is concerning, particularly as desert locusts are currently causing widespread damage in East Africa, destroying crucial crops such as maize, sorghum, and wheat.
- **About Desert Locusts:** *Schistocerca gregaria* (Scientific Name), a type of short-horned grasshopper found in Africa, the Middle East, and Asia. During quiet periods, it inhabits around six million square miles across 30 countries.
 - **Behavioral Phases:** Harmless when solitary, but when population density increases, they shift to a gregarious phase, forming massive swarms that can travel up to 150 km per day, consuming large amounts of vegetation.
 - **Destructive Potential:** Known for their polyphagous diet, they feed on a wide range of crops, including wheat, barley, maize, and vegetables, posing a major threat to food security.
 - **Reproductive Capacity:** A single female can lay 60–80 eggs up to three times in a 90-day lifespan, enabling rapid population growth. One square kilometer can host 40–80 million locusts.
 - **Spread and Impact:** Their fast multiplication is often likened to the spread of a virus. India sees limited damage due to a single breeding season, while regions like Pakistan, Iran, and East Africa face multiple breeding cycles, resulting in more frequent and severe outbreaks.



6. Project Kuiper : Recently, Amazon launched 27 satellites as part of its plan to provide global internet access through low-Earth orbit (LEO) satellites.

- The mission was conducted from Cape Canaveral Space Force Station aboard an Atlas V rocket.
- **Major Highlights:**
 - **Global Satellite Network:** 3,232 satellites in low orbit (630 km) delivering fast, low-latency internet worldwide.
 - **Speed Options for All Needs:** 100 Mbps for homes, 400 Mbps for schools and hospitals, and 1 Gbps for governments and large organizations.

- **Transformative Connectivity:** Empowering e-learning, telemedicine, businesses, and emergency services in remote and underserved regions.

7. Climate change and its impacts on Bay of Bengal: Recently, a multinational study revealed that both unusually strong and weak Indian Summer Monsoons over the past 22,000 years have significantly reduced marine productivity in the Bay of Bengal.

- **Why Bay of Bengal matters:** A crucial region for global fisheries and local food security.
 - Though it **covers less than 1% of the world's ocean area**, it **contributes nearly 8% to global fishery production**.
 - Millions living along its coasts depend on its nutrient-rich waters for protein and livelihoods.
 - The productivity of these waters, driven by plankton growth, forms the foundation of the marine food web.
- **Study Methodology:** Researchers analyzed fossilized shells of foraminifera, microscopic marine organisms that store environmental data.
 - Fossils were extracted from seafloor sediments aboard the JOIDES Resolution ship, part of the International Ocean Discovery Program (IODP).
 - By examining chemical and biological indicators, past monsoon patterns, ocean temperatures, and productivity were reconstructed.
- **Major Findings:** Strong monsoons block nutrient mixing, starving plankton, while weak monsoons limit nutrient upwelling, both reducing plankton-based food supply by up to 50%.
 - Historical periods like Heinrich Stadial 1 and Early Holocene saw sharp declines in productivity due to these extremes.

8. Global Wind Report : Recently, the Global Wind Report by the Global Wind Energy Council (GWEC) warned that the wind energy sector is failing to meet the global demand for clean energy.

- **About Global Wind Report:** Despite 117 GW of new capacity in 2024, the wind energy sector is falling short of meeting global clean energy demand, achieving only 77% of the required capacity to meet the Paris Agreement's 1.5°C target.
 - Total global wind power capacity stands at 1,136 GW, with a significant gap in growth needed to meet climate goals.

- China leads the market, contributing 70% of new installations, with strong growth from the US, Brazil, India, Germany, and emerging economies like Uzbekistan, Egypt, and Saudi Arabia.
 - Africa and the Middle East saw onshore wind capacity double, while the offshore sector added only 8 GW, a 26% decline from 2023.
 - **About GWEC:** A member-based trade association founded in **2005** to promote wind power as a sustainable, cost-effective energy source, representing the global wind energy sector.
 - Members: Over 1,500 companies and organizations from 80+ countries, including manufacturers, developers, suppliers, research institutions, and financial entities.
 - Headquarters: Brussels, Belgium.
- 9. Golconda Blue :** Recently, the Golconda Blue, a rare 23.24-carat Fancy Vivid Blue Diamond once owned by Maharaja Yeshwant Rao Holkar of Indore, was withdrawn from a Christie's auction.
- **About Golconda Blue:** Known for their unmatched clarity, size, and color, mined from the Deccan region (modern-day Telangana).
 - For centuries, India was the sole global source of diamonds, with Golconda at the center of trade.
 - Legendary diamonds from Golconda include the **Koh-i-Noor** and **Darya-i-Nur**.
 - As early as 327 BCE, Alexander the Great's army brought Indian diamonds to Europe.
 - Marco Polo (1292) famously stated: "No country but India produces diamonds."
 - Jean-Baptiste Tavernier recorded 60,000 workers laboring in Kollur mines in the 17th century.
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- 10. Kuldiha Wildlife Sanctuary:** Forest staff of Kuldiha wildlife sanctuary arrested a man with a country-made gun and hunting equipment during patrolling.
- **Location:** Balasore District of **Odisha** within the **Eastern Ghats**. It is spread in the **Chota Nagpur Plateau region** and **part of the larger Similipal-Kuldiha-Hadgarh Elephant Reserve**, making it a crucial habitat for the conservation of elephants in the region.
 - It is **connected with Similipal Tiger Reserve** via Nato and Sukhupada Hill ranges.
 - It features a network of streams, including the **Kuldiha stream and its tributaries**.
 - **Vegetation:** A mixture of **peninsular (coastal) Sal forest** and **moist mixed deciduous forest**.
 - **Flora:** sal, jamun, piyasal, bahera, mango and simul (*Bombax ceiba*).
 - **Fauna:** Asiatic Elephant, Leopard, Gaur, Mouse deer, Pangolin, Ratel, Giant squirrel, etc.