3rd UN Ocean Conference

For Prelims: **UN Ocean Conference**, **Sustainable Development Goals (SDG)**, **Oil Spills**, **Coral Bleaching**, **Biodiversity of Areas Beyond National Jurisdiction**, **Convention on Biological Diversity**, **Kunming-Montreal Global Biodiversity Framework**, **Coral Reefs**, **Dead Zones**, **Vadhavan Port**, **Mangrove**, **Ocean Currents**, **Marine Protected Areas (MPAs)**, **Microbeads**, **Paris Agreement**, **Seagrasses**.

For Mains: Key outcomes of the third UN Ocean Conference, challenges being faced by oceans and needs to safeguard them, Actions needed to promote ocean sustainability.

Source: DTE

Why in News?

The **2025 UN Ocean Conference (UNOC3)**, held in **Nice, France**, adopted the declaration **"Our Ocean, Our Future: United for Urgent Action"**, reinforcing global commitments to **Sustainable Development Goals (SDG) 14 (Life Below Water)**.

- Indigenous leaders called for a **binding plastics treaty** ensuring **justice for vulnerable communities**, with **95 countries** supporting regulation of plastics **from production to disposal.**
- The declaration aims to tackle the **triple planetary crisis** of **climate change**, **biodiversity loss**, and **pollution** that threatens the world's **oceans.**

Triple Planetary Crisis

- The **Triple Planetary Crisis** refers to the three interconnected global environmental threats i.e., **climate change**, **biodiversity loss**, and **pollution & waste**.
  - **Climate change** is driven by **greenhouse gas emissions**, causing **global warming**, **extreme weather**, rising seas, and threats to food security and ecosystems.
  - **Biodiversity loss** results from **deforestation**, **pollution**, **habitat destruction**, and **overexploitation**, leading to mass species extinction and weakened ecosystems.
  - **Pollution and waste** — from **plastics**, **chemicals**, and **air/water contamination** — harm human health, marine life, and ecosystems, and contribute to climate and biodiversity crises.
- These crises are **deeply linked** — **climate change accelerates species loss, pollution worsens climate impacts**, and degraded ecosystems **reduce carbon absorption** — requiring **urgent, integrated global action.**

What is the United Nations Ocean Conference?

- **About: UNOC** is a **high-level global summit** convened by the **UN** to **accelerate**

action toward **SDG 14** (**Life Below Water)**, which aims to **conserve** and **sustainably use oceans, seas, and marine resources**.

- **Theme:** Accelerating action and mobilizing all actors to conserve and sustainably use the ocean.
- **Purpose:** It aims to address **critical ocean challenges** like **climate change (ocean warming, acidification**, **sea-level rise**), **marine pollution** (plastics, **oil spills**, chemical waste), **overfishing** and IUU **(Illegal, Unreported, Unregulated) fishing**, and **biodiversity loss** (**coral bleaching**, habitat destruction).
    - The objectives of UNOC3 was to establish the **"Nice Ocean Agreements"** as an international pact aligned with the **UN's 2015 SDGs**, and to advance the **Agreement on Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ Agreement)** by securing **ratification from 60 countries** to regulate the **high seas.**
- **Major Outcomes in Past:**
    - **2017 (New York)**: **"Call for Action" declaration**; focus on **marine pollution** and **overfishing**.
    - **2022 (Lisbon)**: **Renewed pledges** for **30% marine protection by 2030 (30x30 target)**.

What are the Key Outcomes of the Third UN Ocean Conference?

- **Strengthening Global Ocean Governance:** The declaration urged the **full implementation** of key agreements, including the **Convention on Biological Diversity**, the **Kunming-Montreal Global Biodiversity Framework**, and the **Agreement on Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ)**.
- **Addressing Climate Change and Ocean Acidification:** The declaration called for **enhanced global action** to **minimize climate change impacts**, including **ocean acidification**, and stressed the need to **adapt to unavoidable climate effects** while **protecting marine ecosystems.**
    - The conference expressed **concern over plastic pollution** and its environmental harm, while reaffirming the **commitment to prevent and reduce marine pollution of all kinds**.
- **Sustainable Ocean-Based Economies:** The declaration recognized the **economic potential of sustainable ocean activities**, particularly for **small island developing states (SIDS)** and **least developed countries (LDCs)**, and highlighted tools like **sustainable ocean plans** for the **effective management of ocean resources.**
- **Indigenous Knowledge, and Ocean Mapping**: The declaration emphasized that **ocean action** should be guided by **scientific research**, **traditional knowledge**, and the expertise of **Indigenous Peoples**.
    - It also highlighted the importance of **national ocean accounting** and **mapping marine ecosystems** to support **better policy making.**

Key Ocean Conservation Initiatives Announced at UNOC3

- **European Commission**: Announced a **1 billion Euro investment** to promote **ocean conservation**, advance **marine science**, and support **sustainable fishing practices**.
- **French Polynesia**: Pledged to create the **world's largest marine protected area** — covering its entire **exclusive economic zone (5 million sq km)** to safeguard marine biodiversity.
- **Spain**: Announced the creation of **five new marine protected areas**, enhancing its network of safeguarded marine zones.
- **Indonesia & World Bank**: Introduced a **'Coral Bond'** — an innovative financial tool to **fund reef conservation** and restoration efforts in Indonesia.
- **High Ambition Coalition for a Quiet Ocean**: A **37-country coalition** led by **Panama and Canada**, focused on tackling **underwater noise pollution** to protect marine life.

How the Triple Planetary Crisis is Harming Oceans and Marine

Ecosystems?

- **Climate Change Impacts: Oceans absorb 90% of excess heat** from global warming, causing **thermal expansion**, **increased salinity**, and disruption of **marine ecosystems**.
    - They also absorb **23% of anthropogenic CO_2 emissions**, making oceans **30% more acidic** since pre-industrial times and harming **shell-forming organisms** and **coral reefs** .
    - **Warmer waters** hold less oxygen, creating **dead zones**, while **melting polar ice** and **glacier calving** are rising **sea levels**, threatening **coastal cities** like **Mumbai**, **Chennai**, and **Kolkata.**
- **Coral Reef Destruction: Rising temperatures** trigger **coral bleaching**, as corals expel **symbiotic algae (zooxanthellae)**, turning white and often leading to mass die-offs.
    - The **4th Global Mass Bleaching Event (2023–2025)** affected **84% of the world's coral reefs** across **82 countries**, causing severe damage to **marine biodiversity hotspots.**
- **Overexploitation of Marine Resources: Overfishing** has caused **significant decline** in key species e.g., a **75% drop in oil sardine catch** along the **Kerala coast** in 2021, while projects like **Vadhavan Port** face criticism for displacing **fishing communities** and harming the **marine ecosystem**.
    - **Bottom trawling** and plans to **mine the ocean floor** for metals threaten to destroy **coral**, **sponge habitats**, and **undiscovered species**, creating **underwater dust clouds** that could suffocate marine life over vast areas.
- **Plastic & Chemical Pollution: Millions of tons of plastic** enter oceans each year, causing harm to **marine life** through **ingestion** and **entanglement**.
    - **Oil spills**, **ship accidents**, and **industrial runoff** introduce toxic chemicals, as seen in the **recent sinking of a Liberian-flagged vessel near the Kochi coast**, threatening the region's rich **biodiversity** and nearby communities, prompting the **Kerala government** to declare it a **state disaster.**
- **Habitat Destruction: Mangrove forests**, vital coastal nurseries for fish, are being cleared for **shrimp farms** and **resorts**, while **coastal development** builds over **turtle nesting beaches** for hotels.

What is the Need of Safeguarding Oceans?

- **Ecological & Biodiversity Significance: Phytoplankton**, producing over **50% of Earth's oxygen**, and **plankton** form the foundation of marine food webs that sustain **fish**, **marine mammals**, and **seabirds**.
    - **Oceans**, the largest ecosystem, support **94% of all life** and nearly a **million known species**, with **coral reefs** and **mangroves** serving as vital biodiversity hotspots. E.g., **Ocean currents** create **fertile fishing grounds** (e.g., **Newfoundland's Grand Banks**) by bringing nutrient-rich waters to the surface.
- **Climate Regulation: Oceans regulate global temperatures** and play a key role in **climate balance** by absorbing and redistributing heat through **currents** like the **Gulf Stream**.
    - They drive the **hydrological cycle**, influencing **rainfall**, **monsoons**, **weather systems**, and ensuring **freshwater availability**. Oceans also act as the world's largest **carbon sink** , absorbing vast amounts of **CO_2** to help **mitigate climate change**.
- **Economic & Livelihood Support:** Over **3 billion people** rely on **seafood** as a primary protein source, with **fisheries** and **aquaculture** supporting millions of jobs, while **continental shelves** hold vast reserves of **oil** and **natural gas** (e.g., **Gulf of Mexico**, **Persian Gulf**, **Bombay High**).
    - **Oceans** are vital to the **global economy**, enabling **90% of trade** through shipping routes and supporting **multi-billion-dollar coastal tourism** in regions like the **Caribbean** and **Mediterranean**.
- **Scientific & Medicinal Value: Marine organisms** have contributed to **medical breakthroughs**, including **anticancer compounds** from **coral** and **algae**.
    - **Deep-sea exploration** enhances understanding of **Earth's geology**, **climate history**, and the potential for **new resources.**

What Actions are Needed to Promote Ocean Sustainability?

- **For Governments & Policymakers:**
  - **Expand Marine Protected Areas (MPAs):** Expand **MPAs** to protect **30% of oceans by 2030 (30x30 target)**, as seen in the **Galápagos Marine Reserve**, where **industrial fishing is banned** to let **wildlife thrive.**
  - **Reduce Plastic Pollution:** Finalize the **draft Global Plastic Treaty** to phase out **single-use plastics**, support ban on **microbeads** and **non-recyclable plastics** to stop plastic leakage into oceans.
  - **Fight Climate Change:** Meet **Paris Agreement goals** to cut **CO_2 emissions** and promote **blue carbon ecosystems** like **mangroves** and **seagrasses** to limit **ocean acidification.**
- **For Businesses & Industries:**
  - **Sustainable Fishing:** Use **selective fishing gear** (e.g., turtle-safe nets), avoid **overfished species** like **bluefin tuna** and **shark**, and promote **plant-based seafood alternatives** (e.g., algae-based fish).
  - **Green Shipping & Tourism:** Switch to **low-sulfur fuels** and **electric port systems**, along with adopting **coral-safe sunscreen policies** (e.g., banning **oxybenzone).**
  - **Circular Economy: Redesign packaging** with innovations like **edible seaweed wrappers** and **recycling fishing nets** into clothing.
- **For Individuals:** Choose **sustainable seafood** (e.g., Marine Stewardship Council labels), ditch **single-use plastics** (carry reusable bottles, bags, utensils), and join **beach cleanups** to stop trash from entering the ocean.
- **Indigenous & Local Knowledge:** Learn from **coastal communities** by adopting **traditional fishing methods** like Palau's *bul system* and Hawaii's *kapu system* that protect fish stocks.

Conclusion

The **2025 UN Ocean Conference** reinforced global commitment to protect **oceans** from **climate change**, **pollution**, and **overexploitation**. While policies like the **BBNJ Agreement** and **30x30 target** offer hope, urgent, **inclusive**, and **science-based action**—from ending plastics to empowering **Indigenous stewardship**—is vital to safeguard **marine ecosystems**, ensuring **biodiversity**, **climate stability**, and **livelihoods** for present and future generations.

Drishti Mains Question:

What are the major threats facing the world's oceans today? Suggest measures to ensure ocean sustainability.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Mains

Q. What is oil pollution? What are its impacts on the marine ecosystem? In what way is oil pollution particularly harmful for a country like India? (2023)

Q. What are the consequences of spreading 'Dead Zones' on marine ecosystems? (2018).

Reforming Civil Liability for Nuclear Damage Act, 2010

For Prelims: **Civil Liability for Nuclear Damage Act, 2010 (CLNDA 2010)**, **Convention on**

Supplementary Compensation (CSC, 1997), **International Atomic Energy Agency (IAEA)**, **Small Modular Reactors (SMRs)**, **Atomic Energy Regulatory Board (AERB)**.

For Mains: Provisions, challenges and need to reform India's Civil Liability for Nuclear Damage Act, 2010, Steps needed to reform CLNDA 2010.

Source: TH

Why in News?

India is considering **easing Civil Liability for Nuclear Damage Act, 2010 (CLNDA 2010)** to reduce **accident-related penalties on suppliers,** addressing foreign firms' concerns over **unlimited liability.** The step aims to **revive stalled nuclear projects** and advance **India's clean energy targets.**

What is Civil Liability for Nuclear Damage Act, 2010?

- **About:** The **Civil Liability for Nuclear Damage Act (CLNDA), 2010** is India's nuclear liability law ensuring **compensation for victims** and defining **responsibility for nuclear accidents.**
  - It aligns with the **Convention on Supplementary Compensation (CSC, 1997)**, adopted post-**Chernobyl** to set global minimum compensation standards; **India ratified CSC in 2016.**
    - It follows the nuclear liability principles of the **Vienna Convention 1963**, **Paris Convention 1960**, and **Brussels Supplementary Convention 1963**.
  - The Act imposes **strict, no-fault liability** on operators, caps operator liability at **Rs 1,500 crore**.
    - If damage claims **exceed Rs 1,500 crore,** the CLNDA expects the government to intervene.
    - The **government's liability is capped** at the rupee equivalent of **300 million Special Drawing Rights (SDRs)**, roughly Rs 2,100 to Rs 2,300 crore.
  - The Act also establishes a **Nuclear Damage Claims Commission** to ensure fair compensation and **resolve conflicts.**
- **Supplier Liability:** India's **CLNDA is unique** as it introduces **supplier liability** under **Section 17(b)**, enabling operators to seek recourse against suppliers—unlike global frameworks like the **CSC**, which place liability solely on the operator.
  - Unlike **CSC**, which allows recourse only for **contractual breaches** or **intentional acts**, **CLNDA** broadens supplier accountability to cases where a **nuclear incident results from a supplier's or their employee's act**, including the **supply of defective equipment, materials**, or **sub-standard services.**

What is the Convention on Supplementary Compensation for Nuclear Damage (CSC), 1997?

- **About:** The **Convention on Supplementary Compensation for Nuclear Damage (CSC)** is an **international treaty** established in **1997** under the **International Atomic Energy Agency (IAEA)** to create a **global liability regime** for **nuclear damage**.
  - It **supplements existing national and international compensation mechanisms** by providing **additional funds** in case of a **major nuclear accident.**
- **Eligibility for Membership:**
  - **Primary Eligibility Criteria:** The **CSC** is open to all **IAEA member states** and to countries that are parties to either the **Vienna Convention on Civil Liability for Nuclear Damage (1963)** or the **Paris Convention on Third Party Liability in the Field of Nuclear Energy (1960)**.
  - **Special Case (Non-Party States):** A country not party to the **Vienna** or **Paris Conventions** (e.g., **India**) can join the **CSC** if its **national nuclear liability laws align**

with CSC principles and it **declares compliance at the time of ratification.**

- **India's Participation in the CSC:** India signed the **CSC** in 2010 based on its **Civil Liability for Nuclear Damage (CLND) Act, 2010**, and ratified it in **2016**, becoming a **State Party** despite not being part of the **Vienna** or **Paris Conventions.**

What are the Key Concerns Regarding the Civil Liability for Nuclear Damage Act, 2010?

- **Supplier Liability Concerns:** Foreign and domestic suppliers fear **unlimited liability** due to **unclear insurance rules**, **ambiguous "nuclear damage" definition**, and the risk of **civil suits under Section 46 of CLNDA**.
    - While the government claims alignment with **CSC**, experts note that **Section 17(b)** still exposes suppliers to lawsuits for **defective equipment** or **intentional acts**, deepening liability concerns.
- **Deterring Foreign Investment in India's Nuclear Sector:** India's nuclear liability laws were initially seen as an **obstacle to the implementation of nuclear deals** with countries like the United States.
    - Critics argue that the **liability clauses and restrictions** may hinder foreign investments and collaborations in the nuclear energy sector, especially when compared to **international frameworks** like the Convention on Supplementary Compensation for Nuclear Damage (CSC), which has **broader provisions.**
- **Challenges to India's Clean Energy Goals:** The **CLNDA 2010 liability clause** has hurt **investor confidence**, created **uncertainty**, and slowed **nuclear energy growth** in India, crucial for the **500 GW non-fossil fuel target by 2030**.
    - With nuclear power contributing just **3% of total power**, delays in projects like **Jaitapur (9.6 GW)** are hindering **decarbonization efforts**.

What Measures can be Adopted to Revamp Civil Liability for Nuclear Damage (CLND) Act, 2010?

- **Legislative Reforms:** Amend **Section 17(b)** to **limit supplier liability** to cases of **intentional wrongdoing or gross negligence**, aligning it more closely with international norms. This would help **alleviate concerns** over unlimited liability and **encourage foreign suppliers** to participate in the nuclear sector.
    - Also, amend the **Atomic Energy Act** to enable **private sector participation**, especially in **Small Modular Reactors (SMRs)**.
- **Financial Safeguards:**, and create an **international insurance consortium** to address supplier liability concerns.
    - Additionally, explore **alternative funding models** like **nuclear risk-sharing funds** to reduce the burden on taxpayers.
- **Diplomatic & Bilateral Solutions:** India could **sign intergovernmental agreements (IGAs) with key partners (US, France, Japan)** to clarify liability terms and set up a **dispute resolution mechanism** for cross-border claims, while using **diplomatic assurances** to revive stalled projects like **Jaitapur** and **Kovvada.**
- **Strengthening Regulatory & Safety Framework:** Strengthen the role of independent regulatory bodies like the **Atomic Energy Regulatory Board (AERB)** to ensure rigorous oversight of **nuclear safety, operations, and adherence to standards** and mandate **third-party safety audits** for all nuclear plants to ensure stringent safety standards.
    - Fast-track **nuclear disaster response protocols** to strengthen **public confidence** in nuclear energy.
- **Offer Financial Incentives to Encourage Investment:** Provide **tax incentives** and **subsidies** for nuclear energy investments with **risk mitigation measures** to boost **private participation** and accelerate **nuclear power growth** in India.
    - Consider introducing **low-interest loans or grants** for nuclear power projects to ensure

that the **costs of insurance and risk management** don't deter investments.

Status of India's Nuclear Energy Sector:

- As of May 2023, nuclear energy contributes **1.6% to India's energy generation**, with plans to grow from **7.5 GW to 100 GW by 2047**, aiming to supply **25% of electricity by 2050**.
- Key developments like the **Fast Breeder Reactor** at Kalpakkam highlight India's growing nuclear capabilities. The **2025-26 Budget** allocates **Rs 20,000 crore for Small Modular Reactors (SMRs),** with five indigenously designed SMRs planned by 2033.
    - India has **22 operational nuclear reactors**, all run by **NPCIL**, with over a dozen new projects planned, but key ventures like **Jaitapur (France's EDF)** and **Kovvada (US firms)** remain stalled due to liability concerns.

Conclusion

It is high time that India must reform the **Civil Liability for Nuclear Damage (CLND) Act, 2010** to align with **global nuclear liability norms**, easing **supplier concerns** while ensuring **victim compensation**. By expanding **insurance pools**, and strengthening **bilateral agreements**, India can revive **stalled projects**, attract **foreign investment**, and advance its **clean energy goals** without compromising **safety** or **accountability**.

Drishti Mains Question:

Examine the need to reform India's Civil Liability for Nuclear Damage Act, 2010. How can India balance supplier liability concerns with its nuclear energy expansion goals?

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. Consider the following statements: (2017)

1. The Nuclear Security Summits are periodically held under the aegis of the United Nations.
2. The International Panel on Fissile Materials is an organ of the International Atomic Energy Agency.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans: (d)

Q. In India, why are some nuclear reactors kept under "IAEA safeguards" while others are not? (2020)

(a) Some use uranium and others use thorium

(b) Some use imported uranium and others use domestic supplies

(c) Some are operated by foreign enterprises and others are operated by domestic enterprises

(d) Some are State-owned and others are privately owned

Ans: (b)

Mains

Q. With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy. (2018)

Q. Give an account of the growth and development of nuclear science and technology in India. What is the advantage of the fast breeder reactor programme in India? (2017)

India's PM Historic Visit to Cyprus

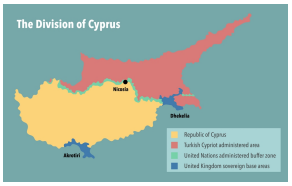
Source: TH

India's Prime Minister's visit to Cyprus — the **first by an Indian Prime Minister in 23 years** — marks a significant step in **bolstering bilateral relations**, with a focus on **energy security**, **counterterrorism cooperation**, and **India-EU strategic alignment**.

- India's Prime Minister was awarded the **Grand Cross of the Order of Makarios III**, **Cyprus's highest civilian honour**, named after its first President, **Archbishop Makarios III.**

- **About Cyprus:**

    - **Location:** Cyprus is a **Eurasian island country** located in the northeast **Mediterranean Sea** at the **crossroads of Europe, Asia, and Africa**.
    - It is the **3rd largest Mediterranean island** after Sicily and Sardinia.



    - **Historical Background:** Cyprus gained **independence from Britain in 1960**, but the **1974 Turkish invasion** led to its partition into the **Turkish-controlled north** (recognized only by Turkey) and the **Republic of Cyprus in the south**.
        - The **UN patrols the Green Line**, maintaining peace between the divided regions.
    - **Political Division:** It is politically divided between the **Republic of Cyprus** (internationally recognized and an **European Union (EU) member**) and the **Turkish Republic of Northern Cyprus**.
    - **Geography:** It has a **Mediterranean climate** with **hot, dry summers and wet winters** and rainfall critical for agriculture.
- **India-Cyprus Relation: India and Cyprus** established **diplomatic ties in 1962**. India supports a **bi-zonal, bi-communal federation** for the **Cyprus issue**, in line with **UNSC resolutions**, and **international law**.
    - **Archbishop Makarios (Cyprus's first President)** and **Pandit Nehru** were pioneers of the **Non-Aligned Movement (NAM).**
    - Cyprus's consistent support for **India's UNSC bid, NSG membership, and stance on Kashmir and terrorism** makes India's engagement with Cyprus a **strategic counterbalance** to growing **Turkey-Pakistan military ties.**

Read More: Cyprus as a Tax Haven

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50 Years of Crocodile Conservation Project and World Crocodile Day

Source: TH

On **World Crocodile Day (17th June)**, India commemorates 50 years of its **Crocodile Conservation Project (CCP) (1975–2025),** with Odisha emerging as the epicentre of this pioneering ecological effort.

- **Odisha** is the **only Indian state to host wild populations** of all three native crocodilian species **(Gharial** (*Gavialis gangeticus*), **Mugger crocodile** (*Crocodylus palustris*) **and Saltwater crocodile** (*Crocodylus porosus*)).
- **Crocodile Conservation Project:** India launched its CCP at Odisha's **Bhitarkanika National Park** with support from **United Nations Development Programme and the Food and Agriculture Organisation.**
    - It adopted the **"rear and release"** method, created protected habitats like Bhitarkanika and **Satkosia Tiger Reserve,** and promoted captive breeding and community awareness, making it a national model for crocodilian conservation.
- **Crocodiles**: They are the **largest surviving reptiles**, primarily inhabit freshwater swamps, lakes, and rivers, with one saltwater species.
    - They are **nocturnal** and **poikilothermic** (also known as **ectotherms** or cold-blooded animals, are characterized by their body temperature fluctuating with the surrounding environment).
    - Their survival is threatened by habitat destruction, egg predation, poaching, dam construction, and sand mining.
- **Population:** India hosts nearly 80% of the global wild gharial population, with around 3,000 individuals across sites like **National Chambal Sanctuary, Katarnia Ghat, and Son Gharial Sanctuary.**

- The saltwater crocodile population has recovered to about 2,500, mainly in **Bhitarkanika, Andaman & Nicobar Islands, and the Sundarbans.**

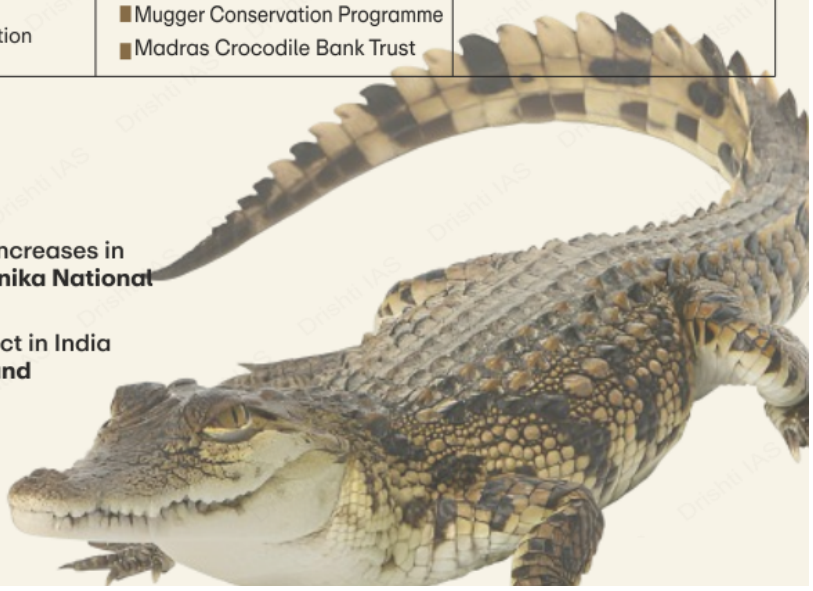
CROCODILE SPECIES IN INDIA

India harbours three diverse crocodile species—Mugger, Saltwater, and Gharial-found in distinct habitats nationwide.

Aspects	Gharial	Mugger/Indian Crocodile	Saltwater Crocodile
Scientific Name	*Gavialis Gangeticus* 	*Crocodylus Palustris* 	*Crocodylus Porosus* 
Distribution: India	**Viable Population:** National Chambal Sanctuary (U.P, Raj, M.P) **Small Non-Breeding Population:** Son, Gandak, Hooghly, Ghagra & Satkosia WLS (Odisha)	Throughout India	East Coast (Odisha's Bhitarkarnika WLS, Andaman & Nicobar Islands coast & Sundarbans)
Distribution: Neigh bourhood	Brahmaputra of Bhutan & Bangladesh& Irrawaddy River	Extinct in Bhutan and Myanmar	Across Southeast Asia
Special Feature	Longest of all Crocodile, Long and thin Snout	Egg-laying, Hole-nesting, Wide & U-shaped Snout	Largest living reptile, Pointed & V-shaped Snout
Habitat	Freshwater	Freshwater	Saltwater, Brackish & Wetlands
IUCN Status	CR	VU	LC
CITES Status	Appendix I	Appendix I	Appendix I
CMS Status	Appendix I	-	Appendix II
WPA,1972 Status	Schedule I	Schedule I	Schedule I
Threats	Dams, Pollution, Sand mining	Habitat Destruction	Hunted for its skin and Habitat loss
Government Initiatives	▪ Odisha: Rs. 1000 award to conserve Gharial in Mahanadi River Basin ▪ Indian Crocodile Conservation Project,1975	▪ Indian Crocodile Conservation Project,1975 ▪ Mugger Conservation Programme ▪ Madras Crocodile Bank Trust	Indian Crocodile Conservation Project,1975

MISCELLANEOUS FACTS

- **17th June:** World Crocodile Day
- **Annual Reptile Census, 2023:** Marginal Increases in number of saltwater crocodiles **(Bhitarkanika National Park and its nearby areas)**
- **Odisha's Kendrapara District:** Only district in India where **all three species of crocodiles found**



Drishti IAS

Read more: [World Crocodile Day]

Shipki La Pass

Source: TH

Shipki La Pass (3,930m) in Himachal's Kinnaur district, along the **India-China border** has been **opened to domestic tourists** to **boost borderland economies,** enhance strategic connectivity, and promote cultural tourism.

Shipki La Pass

- **Shipki La** is a **motorable mountain pass** which marks a **boundary post** on the **Line of Actual Control (LAC)** and is among **India's highest motorable passes.**
- The **Sutlej River (Langqen Zangbo** in Tibet) enters India through this pass, which historically served as a **key Indo-Tibetan trade route**.
- The pass was earlier known as **Pema La** or **Shared Gate** and was renamed **Shipki La** by the **Indo-Tibetan Border Police (ITBP)** after 1962.
- It has been a vital trade route since the **5th century,** which ceased after the **1962 Sino-India War, post-Doklam standoff** and **Covid-19**.
- Shipki La facilitated **India-Tibet trade**, with **imports like wool, livestock, yak products, religious items, and minerals,** and exports of grains, spices, tobacco, timber, and metal tools.

Mountain Passes

- **Passes** are **natural low points or gaps** in **mountain ranges** that facilitate the movement of people, goods, and armies across otherwise difficult terrain.
- They are f**ormed by erosion, glaciation, or tectonic activity** and serve as **connectors between valleys** or **regions**, historically enabling **trade, migration, and military movement**, with strategic, **economic, and cultural significance.**

MAJOR PASSES IN INDIA

FACTS

- **Umling La pass** located in Eastern Ladakh has recently become the **world's highest motorable pass** (Project Himank).
- **Lipu Lekh Pass** is located close to the **tri junction of Uttarakhand (India), China and Nepal**.
- **Nathu La** (Sikkim) is situated on the **Indo-Tibetan border**. It is **one of the three open trading** passes between India and China (other two: **Shipki La and Lipu Lekh Pass)**.
- **Naku La**, located in Sikkim, was recently in news due to the **Indo-China face-off along the LAC at the pass**.
- **Zoji La** links Leh with Srinagar and is known as the **"Mountain Pass of Blizzards"**. The Zojila tunnel is **Asia's longest tunnel**.
- **Dungri La** (or Mana) Pass connects India and Tibet. It is **located in the Nanda Devi Biosphere** Reserve of the Zanskar mountain range (Uttarakhand). Even Indian nationals **need prior permits from the Army** to travel through this pass.
- **Rohtang Pass** (Himachal Pradesh) is situated in the **Pir Panjal Range** of the great Himalayas and **connects Kullu Valley with Lahaul and Spiti Valleys**.
- The **widest gap of Western Ghats is at Palakkad (or Pal Ghat)** in Kerala adjoining Tamil Nadu.

Drishti IAS

Read More: [China and Bhutan Meet to Delimit Boundary]

NISHAD Designated as Global Rinderpest Holding Facility

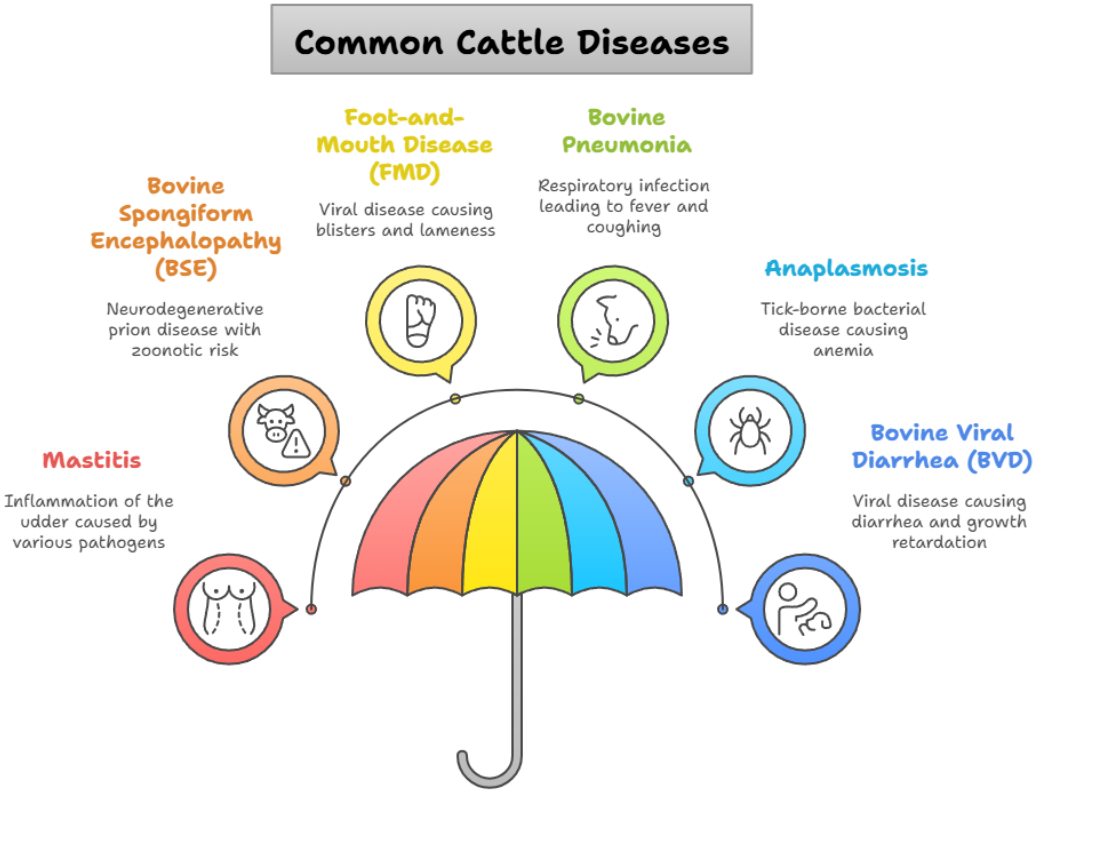
Source: PIB

ICAR-NIHSAD, Bhopal, has been designated a **Category A Rinderpest Holding Facility** by **World Organisation for Animal Health (WOAH)** and the **Food and Agriculture Organization (FAO)** , making India one of 6 countries globally entrusted with **securely holding Rinderpest Virus-Containing Material.**

- **Rinderpest: Rinderpest (cattle plague)** was a **highly contagious and deadly viral disease, globally eradicated in 2011**, that affected **cattle, buffaloes, and some wild ruminants** caused by the ***Rinderpest virus*** **(a *Morbillivirus* related to measles**).
    - It **spread via contact** with i**nfected secretions or contaminated feed/water.** Symptoms included **high fever, mouth ulcers, diarrhoea, and rapid death**.
    - It caused **massive livestock losses across Africa, Asia, and Europe,** leading to economic collapse and food insecurity.
- The **virus of this disease is still stored** in a **few high-security laboratories,** and any accidental or intentional release could lead to its re-emergence.
    - Therefore, **FAO and WOAH strictly regulate the storage and handling of Rinderpest Virus-Containing Material (RVCM)**.

NIHSAD (National Institute of High Security Animal Diseases)

- **NIHSAD** is India's premier **Biosafety Level-3 (BSL-3) facility** high-containment lab for research on **exotic and emerging animal pathogens**, disease diagnosis, and bio-containment of high-risk organisms.
    - Established in **1984** as **High Security Animal Disease Laboratory (HSADL)** and later renamed, it serves as a **reference lab for avian influenza, Newcastle disease**, and other **transboundary and zoonotic diseases** under the **One Health** framework.
- It functions under **Indian Council of Agricultural Research (ICAR)**, **Ministry of Agriculture & Farmers' Welfare.**



Read More: Lumpy Skin Disease

Electricity Derivatives

Source: BL

The **Securities and Exchange Board of India (SEBI)** has approved the launch of **electricity derivatives on Multi Commodity Exchange (MCX)** to enhance electricity price risk management, and support the integration of renewable energy (RE).

- **Electricity derivatives** are financial instruments that help **Gencos, Discoms, and large industrial consumers** hedge against fluctuations in power prices by trading on future electricity output.
    - **Electricity futures contracts, options, and swaps** will enable players to hedge risks, ensure supply certainty, and improve demand forecasting—key for deploying **energy storage systems (ESS)**.
    - It will **boost liquidity**, allow participation by **hedgers, speculators, and investors**, and separate financial settlement from physical delivery—deepening the short-term power market.
- The move supports India's broader clean energy vision—**over 50%** (**500 GW non-fossil fuel**) **of installed capacity from RE by 2030** and **net-zero emissions by 2070**, needing **USD 250 billion investment annually till 2047.**

Derivatives are **contracts** whose **value depends on underlying assets or indicators** such as **currencies**, **stocks**, or **commodities**, and include instruments like **forwards**, **futures**, and **options**.

- A **futures contract** is a **legal agreement** obligating the **buyer** and **seller** to transact an **asset** at a **predetermined price** on a **specific future date**, regardless of **market price** at expiry.
- An **option** gives the **holder** the **right**, but not the **obligation**, to **buy (call)** or **sell (put)** an **asset** at a **specified price** before or at a **certain date**, for a **premium**.
- A **swap** is a **private agreement** to **exchange cash flows** or **financial instruments** over a **specified period**, e.g., **interest rate**, **currency**, or **commodity/electricity swaps**.

Read More: Options Writing
