

## Eleven new biosphere reserves added to World Network of Biosphere Reserves (WNBR)

UN Educational, Scientific and Cultural Organization (UNESCO) added biosphere reserves from countries like Colombia, etc. under the **Man and Biosphere (MAB) Programme**.

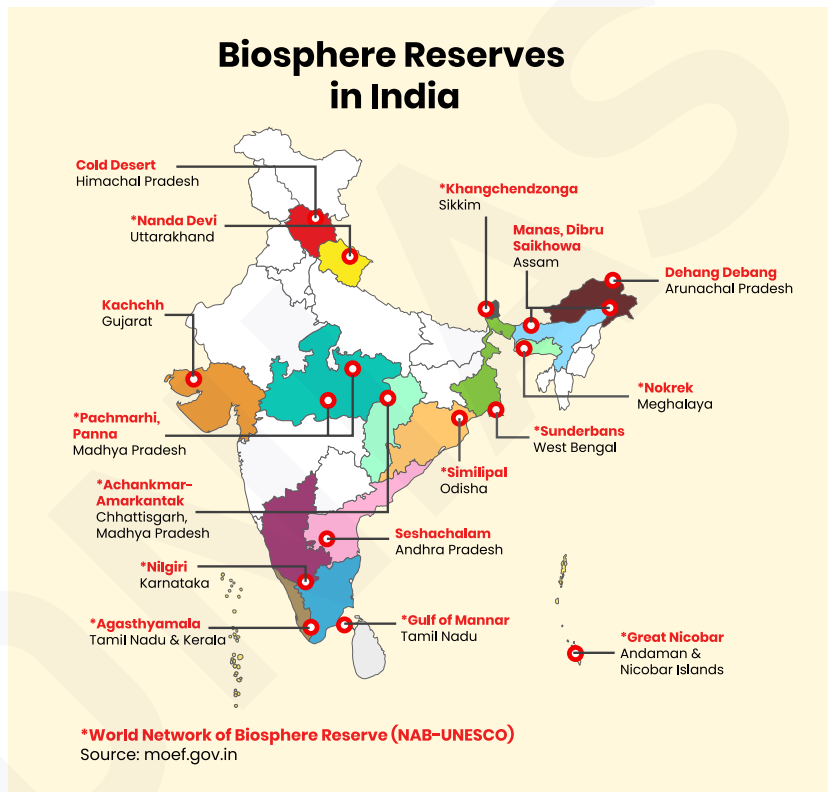
- WNBR now totals 759 sites in 136 countries.
- Also, for the first time, two trans-boundary biosphere reserves were added.
  - ⊕ It includes Kempen-Broek (Belgium and Netherlands) and Julian Alps (Italy and Slovenia)

### About MAB Programme

- Launched in 1971 as an **intergovernmental scientific programme**.
- **Aim:** To establish a scientific basis for enhancing the relationship between people and their environments.
  - ⊕ Combines the **natural and social sciences** with a view to improving human livelihoods and safeguarding natural and managed ecosystems.
  - ⊕ Promotes economic development that is socially and culturally appropriate and environmentally sustainable.
- Out of 18 biosphere reserve in India, 12 are recognised under it (refer map).
  - ⊕ **Nilgiri Biosphere Reserves** was first to be recognized.

### About Biosphere Reserves (in situ conservation)

- Areas representing **diverse natural and cultural landscapes** across terrestrial, coastal, or marine ecosystems.
- Consists of **three main zones**-
  - ⊕ **Core areas:** Comprise a strictly protected zone
  - ⊕ **Buffer zones:** Used for activities compatible with sound ecological practices that can reinforce scientific research, etc.
  - ⊕ **Transition area:** Communities foster socio-culturally and ecologically sustainable activities.



## United Nation Chief urges leaders of regional bloc to resolve Conflicts

At the 24<sup>th</sup> Summit of the **Shanghai Cooperation Organisation (SCO)**, the world's largest regional security body UN Chief said that the SCO has the power and the responsibility to push for peace in Afghanistan.

- He also highlighted that **deep global divisions and conflicts** must end to clear a path to tackle world's two **existential threats** (climate change and the **unchecked rise of digital technologies**, particularly AI).
- These global challenges cannot be solved on a country-by-country basis; hence, regional multilateralism is essential.

**Regional Bloc's or Organisation's** role in resolving conflicts is facilitated by factors such as **Geographical proximity, Cultural affinity, etc.**

- Major region blocks include European Union, ASEAN, South Asian Association for Regional Cooperation (SAARC) etc.

### Role in Resolving Conflicts and Addressing Existential Threats

- **Preventive Diplomacy:** Aimed at preventing existing disputes from escalating into conflicts E.g., **Conflict Prevention Centre** of Organization for Security and Co-operation in Europe (OSCE)
- **Mediation and Negotiation:** ASEAN mediated conflicts successfully between member states. E.g., Thai-Cambodian border dispute in 2011.
- **Post-Conflict Reconstruction:** Assist in rebuilding post-conflict societies. E.g. EU's role in the Western Balkans.
- **Addressing Existential Threats**
  - ⊕ EU has enacted **Net-Zero Industry Act** and **EU Artificial Intelligence Act**

### Challenges faced by Regional blocs in Resolving Crisis

- Regional institutions are unable to fulfill their core mandates due to **insufficient funding**.
- **Internal rivalries** within regional organizations like SAARC often prevent unified action and effective conflict management.
- **Lack of effective cooperation from member states: ASEAN has failed to manage conflicts** in Myanmar due to the lack of commitment by Myanmar generals.

## India participates in 86th session of the Executive Committee (CCEXEC) of the Codex Alimentarius Commission (CAC)

Food Safety and Standards Authority (FSSAI) represented India (as a member elected on a geographic basis (Asia)), in the CCEXEC session held in Rome.

### Key highlights of the Session

- India proposed **Codex guidance on recycled materials** in food packaging.
  - ⊕ India also shared guidelines (developed by FSSAI) on recycling **polyethylene terephthalate (PET)** containers, bottles, etc.
- India advocated for **standards development in spices** (cardamom, turmeric, and vanilla).
  - ⊕ This would **facilitate smoother international trade**.
- Also supported standards for **vegetable oils, guidelines for the control of Shiga Toxin-Producing Escherichia coli**, etc.

### About Codex Alimentarius Commission (CAC)

- **Genesis:** An international food standards body established jointly by **Food and Agriculture organization (FAO)** and **WHO** in 1963.
- **Objective:** Protecting consumer's health and ensuring fair practices in food trade. Develops food standards called **Codex Alimentarius (CA)**.
  - ⊕ CA is a collection of international standards, guidelines and codes of practice to protect the health of consumers and ensure fair practices in the food trade.
    - ◆ These standards are voluntary in nature.
  - ⊕ WTO Agreements on Sanitary and Phytosanitary Measures (SPS Agreement) encourages members to harmonise national regulations with CA.
- **Members:** 189 (188 Member Countries and 1 Member Organization (EU))
- **HQ:** Rome

### Related News

#### FSSAI proposed new Labelling Pattern

- FSSAI proposed that nutritional information regarding total sugar, salt and saturated fat in bold letters and relatively increased font size on labels of packaged food items.
- **The Food Safety and Standards (Labelling and Display) Regulations, 2020** specifies requirements to mention **servings size and nutritional information** on the food product label.
- **Significance:** Empowering consumers to **make healthier choices**; help to **combat the rise of Non-Communicable Diseases (NCDs)** etc.

## Support Establishment of PACS in all villages: Minister of Cooperation

While addressing a programme on **102<sup>nd</sup> International Day of Cooperatives**, Union Minister of Home Affairs and Cooperation urged stakeholders in cooperative societies to support establishment of **Primary Agricultural Credit Societies (PACS) in all villages and blocks of the country**.

- International Day of Cooperatives, celebrated annually on first Saturday of July since **1923**, by **International Cooperative Alliance (ICA)**.

### About PACS

- PACS are **grass root level arms of the short-term co-operative credit structure**.
- It serves as the final **link between ultimate borrowers and higher financing agencies**, namely Scheduled Commercial Banks, and RBI/NABARD.
- PACS **deals directly with the rural (agricultural) borrowers** and also **undertake distribution and marketing functions**.
- Currently, there are **~65,000 functional PACS** in the country.
  - ⊕ Government target is that by **2029 all Panchayats of the country will have their own PACS**.

### Significance of PACS

- First **building block of the cooperative banking system** of India.
- Brings farmer communities closer to **credit, inputs, market, and value addition**.
- Can also play a major role by **integrating its warehouse with physical and financial supply chain of agro-commodities** in the Gramin Agriculture Markets (GrAMs) or large warehouses in private sector.

### Initiatives to promote Cooperatives in India

- **Constitution (Ninety-Seventh) (Amendment) Act, 2011:** Granted constitutional status to the Cooperative Societies.
- **Union Ministry of Cooperation:** Created in 2021 to realize the vision of '**Sahkar se Samridhhi**' (Cooperation to Prosperity).
- **Multi-State Co-operative Societies (Amendment) Act, 2023:** To strengthen governance, enhance transparency, increase accountability, and reform electoral process in Multi State Cooperative Societies.

## China has made world's first high-temperature superconducting Tokamak device - 'HH70'

Previously, the EU and Japan inaugurated JT-60SA, the world's largest and most advanced Tokamak fusion reactor in Japan and pledged support to advance fusion research for International Thermonuclear Experimental Reactor (ITER).

- Tokamak is a machine for controlled thermonuclear fusion with a toroidal shape, similar to a doughnut.

### About Nuclear Fusion

- A process by which **two light atomic nuclei** combine to form a **single heavier one** while releasing **massive amounts of energy**.
  - ⊕ In **nuclear fission**, on the other hand, large atomic nuclei are split into smaller atomic nuclei to release energy.
- Most fusion reactors use a mixture of **deuterium and tritium** – **hydrogen atom isotopes** that contain extra neutrons.

### About ITER

- ITER is a **global scientific partnership** between **China, Europe, Japan, India, the Republic of Korea, Russia and the US**.
  - ⊕ It's currently under construction in **France**.
- **Objective: To prove the viability of fusion as an energy source.**
- It will be the **largest Tokamak device** to test **magnetic confinement** to produce **fusion energy**.
- ITER has been designed for **high fusion power gain with about 10-fold return (expressed as  $Q \geq 10$ )**, i.e., ratio of heating input power to thermal output power.
  - ⊕ **Current record for fusion power gain in a Tokamak is  $Q = 0.67$**  by European JET facility in the UK.

### ITER-India

- India formally joined the **ITER Project in 2005**.
- **ITER-India** is the **Indian domestic agency**, a specially empowered project of the **Institute for Plasma Research (IPR)**,
  - ⊕ IPR an aided organization under Department of Atomic Energy, Government of India.
- **ITER-India is responsible for delivery of ITER packages** such as Cryostat, In-wall Shielding, Cooling Water System, Cryogenic System, Ion-Cyclotron RF Heating System, etc.

## Union Government notified Draft Rules to operationalize Digital Bharat Nidhi

Department of Telecommunication (DoT) has notified the draft Telecommunications (Digital Bharat Nidhi) Rules, 2024 under Sections 26 and 56 of the Telecommunication Act, 2023.

### About Digital Bharat Nidhi (DBN)

- DBN has been created under the Telecommunication Act, 2023 and it will replace the **Universal Service Obligation Fund (USOF)** created under the Indian Telegraph Act, 1885.
  - ⊕ **USOF** is a pool of funds generated by a **Universal Access Levy** through the **license fee charged on licensee of DoT @ 5% of the Adjusted Gross Revenue**.
- Balance of Credit under DBN is **non-lapsable at the end of financial year**.
- **Objectives:** Promoting access to and delivery of telecommunication services in underserved rural, remote and urban areas, support research and development of telecommunication services, technologies, etc.

### Key Highlights of the draft rules

- Funds under DBN can be allocated to implementers through-
  - ⊕ **Bidding:** Promote and support Telecommunication services for promoting access to and delivery of established telecommunication services in underserved rural, remote and urban areas.
  - ⊕ **Nomination:** Promote and support Research and development of new or emerging telecommunication technologies/products/services, etc.
- **Sharing of telecom network established under DBN:** DBN implementer shall share and make available such telecommunication network, and telecommunication services on an open and non-discriminatory basis.

## Also in News



### Blue Line

UN warns of escalating tensions on Lebanon-Israel 'Blue Line' frontier.

#### About Blue line:

- **Israel and Lebanon have no official border** separating them, except the Blue Line.
- It was **set by the United Nations in 2000**. It is made of blue barrels and runs from the Mediterranean to the Golan Heights to the east.
- Its purpose was to **confirm the withdrawal of Israeli forces from the south of Lebanon**.



**Note:** Blue Line is also a learning ecosystem created by the UN System Staff College.



### Zorawar Tank

Defence Research and Development Organisation (DRDO) unveils prototype of the country's indigenous light Zorawar tank.

#### About Zorawar Tank

- Jointly developed jointly by the DRDO and private sector firm L&T.
- Named after the legendary **General Zorawar Singh** who led multiple successful victories in Tibet.
- **Key Features:**
  - ⊕ Equipped with advanced technologies such as **artificial intelligence (AI)**, integration of tactical surveillance drones, etc.
  - ⊕ Designed for **rapid deployment** and **manoeuvrability in mountainous regions**, providing the same firepower as regular tanks but with enhanced mobility and situational awareness.
  - ⊕ Tanks are **amphibious**, making them versatile for operations in riverine regions.



### National Security Council

Union Government has restructured reporting relationships within National Security Council Secretariat (NSCS).

#### About National Security Council (NSC)

- It is a 3-tiered organization, created in 1998, that oversees political, economic, energy, and security issues of strategic concern.
  - National Security Advisor presides over the NSC.
- It operates within the executive office of the Prime Minister of India.
- It comprises the Strategic Policy Group, National Security Advisory Board, and Secretariat from the Joint Intelligence Committee.
- NSC's agenda includes issues of external and internal security, military affairs, conventional and non-conventional defense, etc.



### Vaquita (Phocoena sinus)

A recent survey revealed a devastating decline in population of endangered marine mammal, the Vaquita.

#### About Vaquita

- It is the smallest and now most endangered species of the cetacean order.
- It is a toothed whale, like dolphins and sperm whales, as opposed to whales with baleen (Baleen is a filter-feeding system inside the mouths), such as the blue whale.
- It is endemic to the Gulf of California where it lives in the shallow waters bordering the Colorado estuary.
- IUCN Conservation Status: Critically endangered.
- Threats: Low reproductive rate and limited geographical distribution make it highly vulnerable to human disturbances.



### Pangong Tso (Lake)

As per Satellite images it has been claimed that China is digging in close to Pangong Tso in Eastern Ladakh to build some structure.

#### About Pangong Tso

- Located at 4,350m altitude and is an endorheic (landlocked).
  - World's highest saltwater lake.
  - One-third of the lake lies in India and the other two-thirds in China.
- Change colors (appears blue, green and red at different times).
- Neither a part of the Indus River basin, nor a Ramsar Site.
- Acts as an important breeding ground for a variety of birds including a number of migratory birds.
- Formerly, Pangong lake had an outlet to Shyok River (tributary of Indus) but it was closed off due to natural damming.



### Denisovan

Scientists have identified bone remains found in a Tibetan Baishiya Karst Cave as belonging to a Denisovan individual.

#### About Denisovans

- An extinct species of hominid and a close relative to modern humans.
- May have ranged from Siberia to Southeast Asia during the last Ice Age.
- DNA evidence suggests Denisovans are related to both Neanderthals and modern humans, and may have interbred with both.
- Share a common ancestor - Homo heidelbergensis (most likely lived in Africa) - with both modern humans and Neanderthals.



### Partnership for Maternal, Newborn & Child Health (PMNCH)

India Participated in the 33rd PMNCH Board Meeting at Geneva (Switzerland).

#### About PMNCH

- Established in 2005
- About: World's largest alliance for women's, children's and adolescents' health and well-being.
  - Funded by inter-governmental organizations, and UN agencies etc.
- Aim: To have world in which every woman, child and adolescent realizes their right to health and well-being, leaving no one behind.
- Governance: PMNCH is governed by a Board and administered by a Secretariat hosted by World Health Organization (WHO).



### Integrated Tribal Development Programme

NABARD will launch an Integrated Tribal Development Programme (ITDP) in the Kulathupuzha Gram Panchayat in Kerala.

#### About ITDP

- It is a flagship project of NABARD that has been implemented since 2005-06.
- It is centred around 'wadi', which is a small orchard based programme.
  - 'Wadi' model is holistic in approach, based on tribals' affinity to trees and forests.
- Projects are funded through Tribal Development Fund (TDF).
  - Objective of TDF: To create replicable models of integrated development of tribal families on participatory basis, through adoption of sustainable income generating activities.



### Transposon

A recent paper published by researchers at the University of California emphasized on the role of transposons in gene-editing.

#### About Transposons

- Transposons, or jumping genes, are DNA sequences that can change their position within a genome.
- Discovered by: Noble Laureate Barbara McClintock.
- Function: Transposons can reversibly alter gene expression depending on their insertion points.
- Prevalence: Over 45% of the human genome consists of transposable elements.
- Role in Evolution: Transposons are crucial for genetic diversity and evolution, capable of turning genes on or off using epigenetic mechanisms.
- Can also cause mutations leading to diseases.



### Project PARI (Public Art of India)

Ministry of Culture initiates Project PARI for the 46<sup>th</sup> World Heritage Committee Meeting.

- First intervention under Project is taking place in Delhi

#### About Project PARI

- It's being executed by Lalit Kala Akademi (an autonomous institution under the Ministry of Culture) and National Gallery of Modern Art.
- Aim: Promotes democratization of art through public installations in urban landscapes which transforms them into accessible galleries.
- More than 150 visual artists from all over the country would create artwork in Delhi such as paintings, murals, sculptures etc.
  - It includes Thangka painting (Sikkim/Ladakh), Cheriyal painting (Telangana), Bani Thani Painting (Rajasthan), Alpana art (Tripura), etc.



AHMEDABAD



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BHOPAL



CHANDIGARH



DELHI



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HYDERABAD



JAIPUR



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