

NEWS TODAY

50th anniversary of Biological Weapons Convention (BWC) commemorated

BWC, the first multilateral disarmament treaty to ban an entire category of Weapons of Mass Destruction (WMD), was opened for signature in April, 1972 and entered into force on 26th March 1975.

About BWC

- ▶ Formally known as “**The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction**”.
- ⊕ **Biological and toxin weapons** are either **microorganisms** like virus, bacteria or fungi, or **toxic substances** produced by living organisms that are produced and released deliberately to cause **disease and death in humans, animals or plants**.
 - ◆ **Example:** Anthrax, Botulinum toxin and Plague.
- ⊕ **Consequences** may include **food shortages, environmental catastrophes, devastating economic loss**, and widespread illness, fear and mistrust among the public.
- ▶ **Background:** The Convention was negotiated by the **Conference of the Committee on Disarmament in Geneva, Switzerland**.
- ▶ **Provision:** BWC effectively prohibits the **development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons**.
 - ⊕ It supplements the **1925 Geneva Protocol**, which had prohibited **only the use of biological weapons**.
- ▶ **Membership:** Almost **universal membership with 188 States Parties and four Signatory States (Egypt, Haiti, Somalia, and Syria)**.
 - ⊕ **India is a member of BWC.**

Other Conventions/Treaties prohibiting WMD

- ▶ **Nuclear Weapons:** Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Treaty on the Prohibition of Nuclear Weapons (TPNW), Comprehensive Nuclear-Test-Ban Treaty (CTBT).
- ▶ **Missiles:** Hague Code of Conduct (HCOG), Missile Technology Control Regime (MTCR).
- ▶ **Chemical Weapons:** Chemical Weapons Convention (CWC).

Neuralink aims to implant 'Blindsight' chip in first human by 2025

Earlier, Blindsight was designated as a '**breakthrough device**' by the U.S. Food and Drug Administration (FDA).

About Blindsight

- ▶ It is a **Brain Computer Interface (BCI) implant** that aims to **restore vision** by bypassing the retina and directly stimulating the **visual cortex**.
 - ⊕ Visual cortex is a **region of the cerebral cortex (outermost layer of nerve cell tissues)** that is responsible for **processing visual data relayed from the retinas**.
- ▶ Blindsight consists of **microelectrode array**, embedded in the visual cortex, capable of stimulating neurons or nerve cells.

About BCI

- ▶ BCI is a system that **process brain activity** and send signals to external software, **allowing a user to control devices with their thoughts**.
- ▶ **Applications:**
 - ⊕ **Healthcare:** Diagnosing brain disorders, assistive technologies for physically challenged people etc.
 - ⊕ **Communication and Control:** Decoding of thoughts, smart device control, environmental auto-adjustment systems etc.
 - ⊕ **Commercial Applications:** Transportation, Advertisements etc.
 - ⊕ **Others:** Games and entertainment, security and authentication, neurofeedback and enhancement of brain functions etc.
- ▶ **Concerns:**
 - ⊕ **Usability challenge:** Limitations to user acceptance of BCI technology utilization.
 - ⊕ **Safety Issues:** Tissue damage, seizures, cognitive impairment etc. and long-term impact including are not fully understood.
 - ⊕ **Ethical concerns** regarding informed consent.

Indian Supreme Court (SC) was first to shift from Human-centric to Eco-centric Approach in international jurisprudence

For this, SC has used its power under different **Constitutional Articles** such as **32** (constitutional remedies) and **142** (make such order as is necessary for doing complete justice).

About Eco-centric Approach

- This approach **prioritises** the well-being of the **entire ecosystem and its components**, viewing nature as valuable for its own sake, not just for human use.
- The Approach also found recognition during the **deep ecology movement (by Arne Naess)**.
 - ⊕ This movement is based in the belief that humans must radically change their relationship to nature from one that **values nature solely for its usefulness to human beings** to one that **recognizes that nature has an inherent value**.



Key SC judgement which paved way for Eco-centric Approach

- **T.N. Godavarman Thirumulpad vs Union Of India & Ors (1996)**: Expanded 'forest' meaning to preserve green expanses, irrespective of their nature, classification or ownership.
- **Center for Environmental Law, WWF-1 v. Union of India and others (1998)**: SC directed the government to strengthen conservation measures and strictly implement the Wildlife Protection Act, 1972.
- **N.R. Nair v. Union of India (2000)**: SC upheld that **animals are conscient beings** and have the **right to live with dignity** without any form of cruelty.
- **Animal Welfare Board of India v. A. Nagaraja (2014)**: SC upheld an eco-centric approach by prioritising **rights of the animals** over human traditions in practices like **Jallikattu**.

CBDT signed the highest number of Advance Pricing Agreements in a financial Year

In FY 2024-25, Central Board of Direct Taxes (CBDT) signed **174 APAs** surpassing 125 APAs of FY 2023-24.

- **The Ministry of Finance** introduced the **provisions of APA** under the **Finance Act, 2012**, by inserting **Sections 92CC and 92CD** into the **Income Tax Act, 1961**.

What is Advance Pricing Agreement (APA)?

- An APA is an **agreement between the Board (tax authority) and the person (taxpayer)**.
- It aims to provide **certainty to taxpayers** in the area of **transfer pricing** by specifying pricing methods and determining the **arm's length price** (refer to box) of international transactions.
- The term of APA can be a **maximum of 5 years** with **no minimum period**.
- **Types**
 - ⊕ **Unilateral APA**: It involves **only the tax payer and the tax authority of the country**.
 - ⊕ **Bilateral APA**: It involves the **taxpayer and tax authority of the country**, as well as an **associated enterprise (AE) of the taxpayer** in another country.
 - ⊕ **Multilateral APA**: It involves the **tax payer**, two or more **AEs of tax payers in different foreign countries**, tax authority of the country, and the tax authorities of AEs.



Significance of APAs

- **Reduce the risk of potential double taxation.**
- **Reduce compliance cost** by eliminating the risk of transfer pricing audit, etc.
- **Enhance ease of doing business**, particularly for multinational enterprises.

2025 marks 90 years of RBI's first Monetary Policy

In 1935, the Reserve Bank of India (RBI) was established and announced its **first monetary policy** by fixing bank rate and cash reserve ratio.

About Monetary Policy

- Refers to the process through which the Central Banks manages the supply of money in the economy.
- **Objective:** Price stability, economic growth, financial stability, etc.
- **Instrument of Monetary Policy**
 - ⊕ **Quantitative tools:** Repo Rate, Reverse Repo Rate, Statutory Liquidity Ratio, and Marginal Standing Facility.
 - ⊕ **Qualitative Tools:** Moral Suasion, Direct Action, etc.
- **Types of Monetary Policy:**
 - ⊕ **Contractionary Monetary policy (or Tight monetary policy):** It increases interest rates and limits the outstanding money supply to decrease inflation, etc.
 - ⊕ **Expansionary Monetary Policy:** It decreases interest rates and increases money supply which results in increase in borrowings and consumer spending.

Current Monetary Policy framework in India

- Prior to the year 2016, the **Governor of RBI was singularly responsible** for the formulation of monetary policy.
- The **Finance Act, 2016** amended **Reserve Bank of India Act, 1934** to provide for a **statutory and institutionalised** framework for a **Monetary Policy Committee (MPC)**.
 - ⊕ Subsequently, **flexible inflation targeting (FIT)** was formally adopted.

About Monetary Policy Committee (MPC)

- **Members:** MPC consists of six members-three Members from RBI and three are appointed by the Central Government.
- **Chairman:** RBI governor is the **ex officio Chairperson** of the committee.
- **Voting:** Each MPC member has one vote; in case of a tie, the RBI Governor casts the deciding vote.

Union Cabinet approved inclusion of Kosi Mechi Intra-State Link Project of Bihar under PMKSY-AIBP

The Project, under **Pradhan Mantri Krishi Sinchai Yojana-Accelerated Irrigation Benefits Programme (PMKSY-AIBP)**, will be completed by 2029, aiding irrigation and flood management in Bihar.

Kosi Mechi Intra-State Link Project

- It envisages diversion of part of **surplus water of Kosi River** to **Mahananda basin** in Bihar by linking it to **Mechi river**.
- This will be done by remodelling and extension of the existing **Eastern Kosi Main Canal (EKMC)**.
 - ⊕ EKMC is a part of the **Kosi Project (1954)** between **India and Nepal** to overcome the **problem of shifting of course of the Kosi River**.

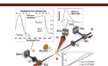
About PMKSY

- PMKSY is an **umbrella scheme** launched in 2015-16.
- **Aim:** To enhance **physical access of water on farm**, expand cultivable area under irrigation, **improve on-farm water use efficiency**, introduce sustainable water conservation practices, etc.
- **Major Components:**
 - ⊕ **Accelerated Irrigation Benefit Programme (AIBP)** and **Har Khet Ko Pani (HKKP)** being implemented by **Ministry of Jal Shakti**.
 - ⊕ **Watershed Development (WD)** being implemented by **Ministry of Rural Development**.
- **PMKSY- AIBP**
 - ⊕ AIBP was launched in **1996-97** and amalgamated in **PMKSY in 2015-16**.
 - ⊕ **Aim:** Provision of **Central Assistance to major and medium irrigation projects** under **Long Term Irrigation Fund**, with borrowings from **NABARD**.

About Kosi and Mechi River

- **Kosi River** is a transboundary river originating from **Tibet**, flowing through **Nepal** in Himalayan Mountains and **Bihar** in the lower plains and merges into the **River Ganga**.
 - ⊕ **Major tributaries of Kosi:** Sun Kosi, Arun Kosi and Tamur Kosi.
- **River Mechi** is a **perennial river**, lying to the **east of Kosi**, and is a **tributary of river Mahananda**.

Also In News



Avalanche Breakdown

U.S. physicists demonstrated a novel method to detect radioactive materials from a distance using **carbon-dioxide lasers**.

- At the core of the new technique is a phenomenon called **avalanche breakdown**.

About Avalanche Breakdown

- When **radioactive materials decay**, they **release charged particles** that **ionize** the surrounding air, i.e. **separate its positive and negative charges** and create a state of matter called plasma.
- Negative charges, or electrons, then can be accelerated to collide with other atoms and **release even more electrons**. This is **avalanche breakdown**.
- **Potential application:** Security applications such as in scanning shipping containers at ports and emergency response etc.



Safe Harbour

Central Board of Direct Taxes (CBDT) notifies amendments in Income-Tax Rules, 1962 to expand the scope of safe harbour rules.

- **Scope of safe harbour rules** has been expanded by:
 - ⊕ **Increasing threshold** for availing safe harbour from Rs. 200 Crore to Rs. 300 Crore.
 - ⊕ **Including Lithium-Ion Batteries** for use in electric or hybrid electric vehicles in **definition of core auto components**.

Safe Harbour

- Safe harbour is generally defined as circumstances in which the tax authority shall **accept the transfer price declared by the taxpayer to be at arm's length**.
- **Income-tax Act, 1961** empowers CBDT to make safe harbour rules.



PCA Framework

About 500 Primary Urban Co-operative Banks (UCBs) under the RBI's supervisory action framework will **shift to the prompt corrective action (PCA) framework** from April 1, 2025.

About PCA Framework

- RBI had introduced a **PCA Framework** for Scheduled Commercial Banks in 2002 & for UCB in July, 2024.
 - ⊕ PCA framework for UCBs **replaced the existing Supervisory Action Framework (SAF)**.
- **Objective:** To enable supervisory intervention at an appropriate time and require the UCBs to initiate and implement remedial measures in a timely manner, to restore their financial health.
- **Application:** All UCBs in tier 2, tier 3, and tier 4 categories.
- **Capital, Asset Quality and Profitability of UCBs** are the key areas for monitoring.



Trade Watch Report

NITI Aayog released the second edition of "Trade Watch Quarterly".

- The **report** offers a comprehensive analysis of India's trade position on a quarterly basis.

Key Highlights of Report

- **USA, UAE, and the Netherlands** continue to be **India's leading export markets**, accounting for 33% of total export.
- **China, UAE, and Russia** continue to **lead imports**.
- India ranks among the **top 10 global exporters** (6th largest textile exporter in 2023), holding a modest **4% share in global trade**.



WHO Global Conference on Air Pollution and Health

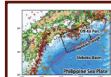
Second WHO Global Conference on Air Pollution and Health was held in **Catragen, Columbia**.

About the Conference

- It was co-organized by **WHO and Columbia** and other **UN Agencies** like UNEP, WMO etc.
- **Objectives:** Accelerating action for **clean air, clean energy access and climate change mitigation**.

Key Highlights

- **Over 50 countries**, have committed to the **shared goal of reducing the health impacts of air pollution by 50% by 2040**.
- India reaffirmed its commitment to reducing air pollution's health impacts by 2040 through actions aligned with the **National Clean Air Programme**.



Nankai Trough

Japan warned of potential "megaquake" in the **Nankai Trough**.

- **Megaquake (megathrust earthquake)** is an earthquake of exceptional **destructive power** usually with a **magnitude of 8 or greater**.

About Nankai Trough

- It is a **subduction zone between 2 tectonic plates-** the **Philippine Sea Plate** subducting under the **Eurasian Plate in the Pacific Ocean**.
 - ⊕ A **subduction zone** is a spot where 2 of the planet's **tectonic plates collide and one dives, or subducts, beneath the other**.
- It is situated off **Japan's southwest Pacific coast** and runs for approximately **900 km**.



SAFE Project

ASEAN Food Security Information System (AFSIS) appreciates ISRO & other space agencies for successful implementation of the **SAFE Agromet Project**.

- AFSIS is a project led by **Thailand** to provide the reliable information on food security.

About Space Applications for Environment (SAFE) Project

- Established by **Asia-Pacific Regional Space Agency in 2008**.
- **Aim:** Use of space technology (specifically Earth observation satellites) observation in understanding environmental changes and climate change related issues.
- **The Agromet project** was implemented as a SAFE multilateral project in **2018**.
 - ⊕ Collaboration with **ISRO, JAXA, and other agencies**.
 - ⊕ **Aim** to develop a mechanism to share agrometeorological information to improve agriculture information services in the region.



Bodh Gaya Temple

Buddhist monks are protesting at the **Mahabodhi Mahavihara or Bodh Gaya Temple** in Bihar to repeal the **Bodh Gaya Temple Act (BTA), 1949**.

About Bodh Gaya Temple

- It is **one of the four holy sites** related to the life of the Lord Buddha, and particularly to the **attainment of Enlightenment**.
 - ⊕ It has been listed in **UNESCO World Heritage List since 2002**.
- It is **one out of the 84000 shrines** erected by **King Asoka** in the **3rd century B.C**.
 - ⊕ The **present temple structure, built in the 5th or 6th century A.D.**, belongs to the **Gupta period**.
 - ⊕ It is one of the earliest **Buddhist temples built entirely in bricks**.
- A **comprehensive description** of the temple is left by **Huen Tsang**, a Chinese pilgrim.



Self-amplifying mRNA (saRNA) Vaccine

Genovva Biopharmaceuticals is developing a **pioneering self-amplifying mRNA (saRNA) vaccine** candidate against the **Nipah virus**, as part of expanded funding from the **Coalition for Epidemic Preparedness Innovations (CEPI)**.

- Nipah virus, a **zoonotic virus**, belongs to the **Paramyxovirus family**. **Fruit bats** are natural hosts of the virus.

About saRNA vaccines

- mRNA vaccines **use the body's own machinery to make antigenic protein** rather than injecting the antigen directly into the body.
- **saRNA vaccines work by giving the body instructions to replicate mRNA** needed to create the desired antigen, potentially **enhancing the immune response with lower doses** compared to existing mRNA vaccines.



Exercise Tiger Triumph

The **Fourth edition of Exercise Tiger Triumph** has commenced at **Vishakhapatnam coast**.

- It is the **Bilateral Tri-Service India-US Humanitarian Assistance and Disaster Relief (HADR) Exercise**.
- It aims at developing **interoperability for conducting HADR operations** and for the formulation of **Standard Operating Procedures (SOPs)** to establish a **Combined Coordination Center (CCC)**.

