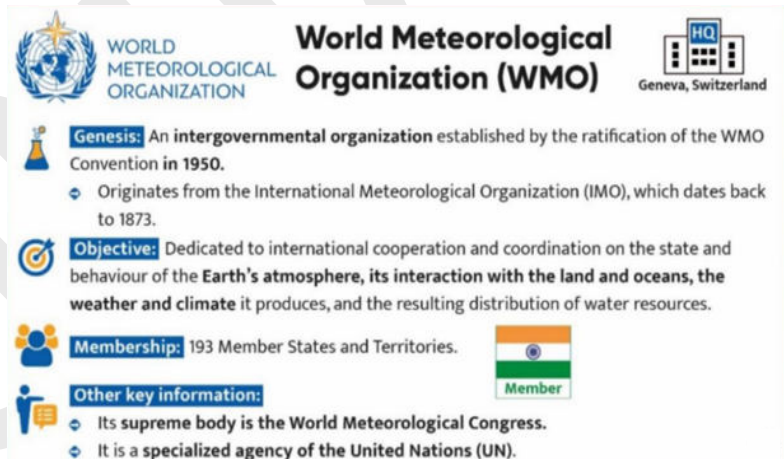


NEWS TODAY

WORLD METEOROLOGICAL ORGANIZATION (WMO) EXECUTIVE COUNCIL ENDORSES GLOBAL GREENHOUSE GAS MONITORING INFRASTRUCTURE (GGGI) PLAN

- It aims to **fill critical information gaps and support action to reduce heat-trapping gases** which are fuelling temperature increase.
 - At present, **there is no comprehensive, timely international exchange of surface and space-based greenhouse gas (GHGs) observations** or modelling products.
- GGGI will consist of four main components:**
 - Global set of surface-based and satellite-based observations** of CO₂, methane (CH₄) and nitrous oxide (N₂O) concentrations.
 - Prior estimates of GHG emissions** based on activity data and process-based models.
 - A set of global high-resolution Earth System models** representing GHG cycles.
 - Data assimilation systems** that optimally combine the observations with model calculations.
- About GHGs**
 - Gases that trap heat in atmosphere** are called GHGs.
 - Main **GHGs whose concentrations are rising** are CO₂, CH₄, N₂O, hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) and ozone in the lower atmosphere.
 - CO₂ remains** in the atmosphere **for many decades**.
 - Methane is more potent** but has a **shorter life-span** of about 10 years.
 - Nitrous oxide** (from natural sources and agriculture) is the third most important gas.
 - WMO measures atmospheric concentrations of GHGs** – what remains in atmosphere after gases are absorbed by sinks like ocean and biosphere.



ISRO SUCCESSFULLY CARRIES OUT CONTROLLED RE-ENTRY EXPERIMENT OF DECOMMISSIONED MEGHA-TROPIQUES-1 (MT-1) SATELLITE

- MT-1** was launched by **ISRO and French space agency** for carrying out **tropical weather and climate studies**.
- Controlled re-entries involve deorbiting** (large satellites/rocket bodies) **to very low altitudes** to ensure impact occurs within a targeted safe zone.
- UN/IADC** (Inter-Agency Space Debris Coordination Committee) **space debris mitigation guidelines** recommend **deorbiting a LEO** (Low Earth Orbit) **object** at its End Of Life:
 - Through controlled re-entry** to a safe impact zone.
 - By **bringing it to an orbit** where **orbital lifetime is less than 25 years**.
- Space debris **encompasses both natural** (meteoroid) **and artificial** (man-made) **particles**.
 - Much of the debris is in LEO**, though some debris can be found in geostationary orbit.
 - LEO is normally **at an altitude of less than 1000 km** but could be **as low as 160 km above Earth**.
- Initiatives taken by ISRO for space debris mitigation**
 - ISRO System for Safe and Sustainable Space Operations Management (IS4OM)** for tracking and monitoring space objects.
 - Project NETRA**: To provide first-hand information on the status of debris.
 - SPADEx**, a space docking experiment, to provide in-orbit servicing.
- In a related news, **ISRO has received NASA-ISRO SAR (NISAR) satellite from NASA**.

ABOUT NISAR

- It is a **LEO observatory** jointly developed by **NASA and ISRO**.
- It will **map the entire globe in 12 days** and provide data for **understanding changes in Earth's ecosystems, ice mass, vegetation biomass, sea level rise, groundwater and natural hazards**.
- NISAR carries **L and S dual-band Synthetic Aperture Radar (SAR)**.

VICE PRESIDENT'S PERSONAL STAFF ATTACHED TO SEVERAL COMMITTEES OF RAJYA SABHA

- A **parliamentary committee** means a committee that
 - Is **appointed or elected** by House or nominated by Speaker / Chairman.
 - Works under the **direction of the Speaker / Chairman**.
 - Presents its **report to the House or to the Speaker / Chairman**.
 - Has a **secretariat provided** by Lok Sabha / Rajya Sabha.
- **Parliamentary committees are of two kinds:**
 - **Standing Committees: Permanent** (constituted every year or periodically) and work on a continuous basis. For Example:
 - **Financial Committees** (Public Accounts Committee, Estimates Committee and Committee on Public Undertakings).
 - **Departmental Standing Committees.**
 - **Ad Hoc Committees: Temporary** and cease to exist on completion of the task assigned to them. Can be divided into two categories:
 - **Inquiry Committees:** Constituted from time to time, **either by two Houses** on a motion adopted, **or by Speaker / Chairman**, to inquire into and report on specific subjects.
 - **Advisory Committees:** Include **select or joint committees** on bills, which are appointed to consider and report on **particular bills**.

IMPORTANCE OF PARLIAMENTARY COMMITTEES

Examine proposed legislation, government policies and expenditure in detail

Examine petitions from the public

Help manage the administration of Parliament

Help parties reach consensus on various issues

MINISTRY OF FINANCE NOTIFIED 2023 AMENDMENT TO PREVENTION OF MONEY-LAUNDERING (MAINTENANCE OF RECORDS) RULES, 2005

- **Aim is to:**
 - **Tighten oversight** of non-governmental organisations (NGOs) and politically exposed persons (PEPs).
 - **Widen ambit of reporting entities** under money laundering provisions.
 - **Define PEPs** in line with recommendations of **Financial Action Task Force (FATF)**.
- **Key amendments are**

	Amendments
For NGOs	<ul style="list-style-type: none"> • Definition of NGOs has been linked to definition of charitable purpose provided under Income Tax Act, 1961. • Reporting entities to register details of the client if it's a NGO on DARPAN portal of NITI Aayog and also to maintain registration records for five years from closure of the business.
For PEPs	<ul style="list-style-type: none"> • Defines PEPs as individuals who have been entrusted with prominent public functions by a foreign country, including heads of States or Governments, senior politicians etc.
Others	<ul style="list-style-type: none"> • Lowered threshold (from 25% to 10%) for identifying beneficial owners by reporting entities. • Due diligence documentation requirement has been extended.

- In a separate notification, **Ministry of Finance has also brought cryptocurrencies** and other virtual digital assets (VDAs) trade **under PMLA ambit** to prevent misuse of crypto through money laundering and other illegal activities.
 - **New rules mandate** crypto exchanges and intermediaries dealing in virtual assets to **maintain KYCs of their clients and report suspicious transactions** to financial intelligence units.

ABOUT PREVENTION OF MONEY LAUNDERING ACT (PMLA)

- **Act was enacted in 2002** in response to India's global commitment (including Vienna Convention) to **combat money laundering**.
 - It **enables authorities to confiscate the property** earned from illegally gained proceeds.
 - **Enforcement Directorate (ED)**, a financial investigation agency under Department of Revenue, **enforces the PMLA**.

INDIA TO HAVE A MODERN AND SMART POWER TRANSMISSION SYSTEM

- Ministry of Power accepted **recommendation of a Task Force** that was setup to suggest ways for **modernization of Transmission Sector** and making it smart and future ready.
- Smart and future-ready transmission **is based on the latest technologies and is vital to:**
 - **Reduce operations and management costs for utilities**, and ultimately lower power costs for consumers.
 - **Provide 24x7 reliable and affordable power** and also meet sustainability goals.
- **Key recommendations by Task Force**
 - **Real-time monitoring and automated operation of grid** by using technique like Artificial Intelligence and Machine Learning.
 - **Use of Robots & Drones in construction and inspection** of transmission assets.
 - **Better situational assessment and capability** for increased share of renewable capacity in power-mix.
 - **Greater resilience against cyber-attacks** as well as natural disasters.
 - **Centralized and data driven decision-making.**
 - **Reduction in forced outages** through self-correcting systems etc.
- Based on the recommendations, **Ministry of Power has directed Central Electricity Authority (CEA) to formulate standards and regulations** for adoption of identified technological solutions.
 - **CEA is a statutory body** to assist the Ministry of Power in **all technical and economic matters**.

NEW MATERIAL OFFERS LOSSLESS ENERGY POSSIBILITY

- Researchers from US have claimed that they have **created a new superconductor that can operate at room temperature and a much lower pressure** than previously discovered superconducting materials.
 - **Named reddmatter**, it was formed by **combining lutetium (a rare earth metal) with hydrogen and nitrogen**.
 - It can **conduct electricity without resistance at 21 degrees Celsius** and around just 10,000 atmospheres of pressure.
- Superconductors are **materials that can conduct electric currents without any loss** when they are **cooled below a critical temperature** (referred to as T_c).
 - These materials **also expel magnetic fields** as they transition to the superconducting state (**Meissner effect**).
- However, **it is considered extremely impractical** because they typically **need to be extremely cooled**, to around minus 195 degrees Celsius, and **subjected to extreme pressure to work**.
- **Potential applications of superconductors:**
 - **In Nuclear magnetic resonance** and magnetic resonance imaging (MRI).
 - **In high-energy physics accelerators** and in thermonuclear fusion reactors.
 - **Frictionless, levitating high-speed trains**.
 - **Power grids** that transmit electricity without the loss of energy.

ALSO IN NEWS



First India-Central Asia Joint Working Group (JWG) on Afghanistan

- It **was held in New Delhi** and was attended by **Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan**.
- **Key Highlights**
 - India to offer **customised capacity building courses for UNODC** (United Nations Office on Drugs and Crime) officials.
 - India to **partner with UNWFP** (UN World Food Programme) **for delivery of wheat to Afghanistan via Chabahar Port**.
 - Located in Gulf of Oman at Sistan-Baluchistan province of Iran on Makran Coast.
 - It is **jointly developed by India, Iran and Afghanistan**.



Summit for Democracy

- **Election Commission of India (ECI) hosted an international conference** as the lead for Cohort on Elections Integrity which was established as a follow up to Summit for Democracy.
- Summit for Democracy was **an initiative of US President to set forth an affirmative agenda for democratic renewal** and to tackle greatest threats faced by democracies today.
- Following this Summit, **a Year of Action was proposed** and Summit also **developed two platforms**:
 - **Focal Groups and Democracy Cohorts** to facilitate participation in the Year of Action.
 - **ECI is leading** Democracy Cohort on Election Integrity.



Chinese wall policy

- **SEBI has amended rules governing stock exchanges** and clearing corporations to **follow a "Chinese Wall policy"** to separate the functions under a vertical.
- Chinese wall policy is a **virtual information barrier** erected between **those who have material, non-public information, and those who don't**, to prevent conflicts of interest.
- It is intended to **prevent misuse of inside information** in securities trading by limiting availability of material, non-public information to **departments of firm that might misuse such information**.



Multiple Indicator Survey (MIS)

- **National Sample Survey Office (NSSO) carried out MIS in its 78th round** (2020-21) for collecting information for SDG indicators, on migration etc.
- **Key Findings**

	Rural	Urban	Overall
Percentage of persons reported to have improved source of drinking water	95%	97.2%	95.7%
Percentage of households using clean fuel as primary source of energy for cooking	49.8%	92%	63.1%
Percentage of persons of age 15-24 years not in education, employment or training as on date of survey	30.2%	27%	29.3%



Women Icons Leading Swachhata' (WINS) Awards 2023

- First edition of WINS Awards was **announced by Ministry of Housing & Urban Affairs**.
- Awards aim **to recognize** inspiring and exemplary **initiatives in urban sanitation and waste management by women led organizations and individual women**.
- **State nominations will be evaluated at the national level** on their innovativeness, impact, uniqueness, sustainability & replicability.



Kalakad-Mundanthurai Tiger Reserve (KMTR)

- **Researchers** have **spotted a rare moth species** (*Mimeusemia ceylonica*) **for the first time in India** in KMTR.
 - It is a moth species **belonging to the subfamily Agaristinae and family Noctuidae**.
- **About KMTR:**
 - **Located in** Tirunelveli and Kanyakumari District of **Tamil Nadu**, it forms **part of the interstate Agasthyamalai Biosphere Reserve**.
 - It **includes three sanctuaries**, viz. Kalakad, Mundanthurai and part of Kanyakumari Sanctuary.
 - **Flora:** Varies from thorny shrub jungle to lush evergreen forests.
 - **Fauna:** Tiger, Leopard, Sambar, Indian Pangolin, Sloth, Mouse Deer, Monitor Lizard, Great Indian Hornbill etc.



Study on Himalayan glaciers

- A recent study has found that **glacier retreat rate is controlled by climate change and topographic setting and morphology** of the glacier.
 - Two glaciers (**Pensilungpa Glacier (PG) in Suru River and Durung-Drung Glacier (DDG) in Doda River** basins of Zaskar in Ladakh) were studied for a **comparative study of glaciers**.
- Comparative analysis helped to trace **influence of factors like snout geometry, glacier size, elevation range, slope, debris cover** etc on glaciers.
 - **Change in debris cover plays a critical role** in the glacier surface lowering, shrinkage, retreat, and mass balance.



Sodium Intake Reduction

- A WHO report highlights that **world is off-track to achieve its global target of reducing sodium intake by 30% by 2025**.
- Sodium, an essential nutrient, **increases the risk of heart disease, stroke and premature death** when **eaten in excess**.
 - **Main source of sodium is table salt** (sodium chloride).
- **Global average salt intake** is estimated **more than double of WHO recommendation** of less than 5 grams of salt per day (one teaspoon).



Gateway of India

- **A recent structural audit** of the Gateway of India has **revealed cracks along the façade**.
- Gateway of India is **located in South Mumbai** and overlooks the **Arabian Sea**.
- It is an **architectural monument** in the **Indo-Saracenic style**.
- It was built **to commemorate landing of Emperor George V**, first British monarch to visit India, in 1911.
- It was later **used as a symbolic ceremonial entrance** to India for **Viceroy and the new Governors** of Bombay.



Places in News

Macquarie Island (Australia)

- **Tasmania** (Australia) has planned to give **greater protection to Macquarie Island** (also declared a World Heritage Area).
- Macquarie Island is an **oceanic island in the Southern Ocean**, lying south-east of Tasmania.
- **Several seabird species**, including **penguins and albatross**, have been recorded on Macquarie Island.
- **Physical features**
 - It is the **only place on earth** where **rocks from earth's mantle are being actively exposed** above sea-level.
 - Island is **exposed crest of undersea Macquarie Ridge**, raised to its present position where Indo-Australian tectonic plate meets Pacific plate.
 - Macquarie Ridge **impedes the eastward flow of** a current called **Antarctic Circumpolar Circulation**.

