

NEWS TODAY

Remove Debris In-Orbit Servicing (RISE) Mission is a promising step towards Circular Economy in Space

RISE is first in-orbit servicing mission of European Space Agency which is a significant step towards refuelling, refurbishment, and assembling in orbit - all essential elements for creating a circular economy in space.

- It will be launched in 2028 and will have the ability to dock and control orbit of geostationary satellites.
- RISE will rise up to the so-called geostationary graveyard, about 100 km higher, where satellites are 'parked' after they have reached the end of their mission.

Circular Space Economy

- **Circular space economy** draws inspiration from the broader concept of a circular economy, which aims to minimize waste and maximize resource efficiency.
- **Key aspects of circular space economy** include satellite refurbishment & repair, space debris removal, resource utilization (materials extracted from asteroids or the Moon), etc.

Significance of Space Circular Economy

- **Reduced Space debris** helps to mitigate the risk of collisions and further debris generation.
- **Resource Conservation** due to reusing and recycling materials in space.
- **Cost Reduction** by extending lifespan of satellites.
- **Faster development times** by assembling and manufacturing space systems directly in orbit.

Challenges to Space Circular Economy

- **Technological limitations:** Developing necessary technologies for in-orbit servicing, recycling, and asteroid mining.
- **Funding:** Developing specialized equipment, conducting R&D etc. require significant investment.
- **Regulatory Challenges:** Establishing global standards & regulations for space sustainability.

Initiatives Promoting Circular Space Economy

Global

- **ESA's Circular Economy in Space Goal** by 2050, and achieving debris neutrality by 2030.
- **NASA's Consortium for space Mobility and ISAM (in-space servicing, assembly and manufacturing) Capabilities (COSMIC).**
- **Reusable Launch Vehicles** such as SpaceX's Falcon 9.

India

- **ISRO's Reusable Launch Vehicle Technology Demonstrator** program aimed at developing a reusable rocket.
- **Debris-Free Space Missions** by all Indian space actors by 2030.

Closing Window of Opportunity: Mapping Threats to Important Areas for Conservation in Pantropics Report Released

Unveiled at **Convention on Biological Diversity COP16** in Cali (Colombia), it maps alarming overlap of oil, gas, and mining concessions with **Key Biodiversity Areas (KBAs)** across Amazon Basin, Congo Basin, and Southeast Asia.

- These regions store vast amounts of carbon, playing vital role in regulating global climate and sustaining life on earth.

Key Findings

- **518 KBAs (or 18% of KBAs by area)** in pantropics are under active and potential oil and gas concessions.
- Oil and gas blocks overlap with **14% of KBAs and 12% of Indigenous Territories** by area in Amazon.
- **Over 180 million hectares of high-integrity forests** are either undergoing or have planned fossil fuel extraction projects across pantropics.

About KBAs

- KBA are sites of global importance to **planet's overall health** and **persistence of biodiversity.**
- Sites qualify as global KBAs if they meet **one or more of 11 criteria**, clustered into **five higher-level categories** i.e.
 - ⊕ Threatened biodiversity; Geographically restricted biodiversity; Ecological integrity, Biological processes, and Irreplaceability.

Challenges in protecting KBAs

- **Competing interests between conservation and resource extraction** such as growing demand for minerals which are used in renewable energy technologies. E.g. Nickel Mining
- **Unprotected KBAs are vulnerable to degradation from spillover effects** associated with infrastructure development for oil, gas, and mining projects.

Recommendations

- **Provide Indigenous peoples** with resources and authority for self-governance while respecting their sovereignty over traditional territories.
- **Implement and enforce legal frameworks** to stop new resource extraction in protected areas and phase out existing operations.
- **Limit green energy resource extraction** to non-critical habitats with strict environmental standards, protecting vital ecosystems.

Initiatives for KBAs

- **Global Standard for the Identification of Key Biodiversity Areas 2016 by IUCN.**

CAQM ordered the implementation of Stage II of Graded Response Action Plan (GRAP) in Delhi NCR

Centre's Sub-Committee for operationalisation of GRAP has directed all relevant agencies in NCR to enforce measures outlined under Stage II of GRAP to prevent deterioration in air quality.

- GRAP Stage-2 in NCR enforces **ban on use of coal and firewood** and **diesel generator sets**, except for emergency and essential services.

About GRAP

- It is an **emergency response mechanism based on AQI level of Delhi**. It is divided into **four stages, based on AQI levels**.
 - Stage 1:** Poor category (AQI 201 to 300).
 - Stage 2:** Very poor category (AQI 301-400).
 - Stage 3:** Severe category (AQI 401-450).
 - Stage 4:** Severe + category (AQI 451+).
- CAQM in NCR and adjoining areas oversees implementation of GRAP.**

Reasons for rise in air pollution every winter in Delhi

- As monsoon withdraws, predominant **direction of winds changes to north westerly** which brings dust from Rajasthan and sometimes from Pakistan & Afghanistan.
- High-speed winds are very effective at dispersing pollutants, and **winters bring a dip in wind speed**.
- Other sources:** Farm fires to get rid of paddy stubble; Dust and vehicular pollution etc.

Initiatives to prevent Air Pollution

- 11-point action plan by CAQM** includes mechanical sweeping, use of dust suppressant, etc.; System of Air Quality and Weather Forecasting and Research (SAFAR); Spraying PUSA bio-decompose in farmlands; etc.

About Air Quality Index (AQI)

- Issued by government agencies to **gauge air pollution levels and communicate risks to public**.
- Eight pollutants (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb) are considered for calculating AQI.

About Commission for Air Quality Management (CAQM)

- Established under **Commission for Air Quality Management in NCR and Adjoining Areas Act, 2021**.
- Replaced **Environment Pollution (Prevention and Control Authority)**.
- Purpose:** Air Quality Management in NCR and Adjoining Areas for **better coordination, research, identification, and resolution** of air quality problems.

Health Statements for AQI Categories

AQI	Category	Possible health impact
0-50	Good	Minimal impact
51-100	Satisfactory	Minor breathing discomfort to sensitive people
101-200	Moderate	Discomfort to people with lung, asthma, and heart diseases
201-300	Poor	Discomfort to most people on prolonged exposure
201-400	Very poor	Respiratory illness on prolonged exposure
401-500	Severe	Affects healthy people and seriously impacts those with existing diseases

International Monetary Fund (IMF) releases World Economic Outlook (October 2024) Report

Report is usually **published twice a year** and provides **analyses and projections of the global economy** in the short and medium term.

Key highlights of Report

- Global growth:** Projected to remain stable at **3.2% in 2024 and 2025**.
- Uncertainty factors:** Geopolitical conflict, increasing trade tensions and elections looming and leadership changes in major economies.
- India's Growth:** Expected to grow at **6.5% in 2025-26**.
- Report highlights the **urgency of structural reforms** and discusses strategies to enhance the **social acceptability of these reforms**.

Structural Reforms

- Structural Reforms are **policy changes** that modify acquired rights and economic rents **with aim of improving the allocation of resources** in the economy.
- Social Acceptability:** Securing social acceptance for structural reforms can be difficult, as **gains and losses from reforms are unevenly distributed across society and time**.
- Determinants of attitude towards Structural Reforms: Key determinant** is personal beliefs, perceptions and other behavioural factors about effects of policy.
 - It includes **misinformation** about policies and **misperceptions** about how they work.
 - Socioeconomic characteristics** underlying individuals' economic self-interest also influences policy views.

Strategies for Boosting Support for Structural Reforms

- Information:** Providing clear and nonpartisan information that corrects misperceptions.
- Engagement:** Dialogue between officials and the public should be two-way, allowing people to help shape policies.
- Mitigation:** Acknowledging that reforms may hurt some groups and addressing those concerns with tailored mitigating measures (like temporary cash support or capacity building) is essential.
- Trust:** Establishing credible and independent government bodies, and first generation reforms to address corruption and improve governance.

Delhi High Court closed contempt proceedings against Wikipedia

Contempt proceedings were closed after Wikipedia took down an article titled 'Asian News International v. Wikimedia Foundation'.

- The article criticized **ANI news agency's defamation lawsuit against Wikimedia Foundation (Wikipedia's parent foundation)**.
 - ⊕ ANI has **filed a defamation lawsuit** as Wikipedia page on ANI described ANI as a propaganda tool for the central government, and misreporting events.

High court Judgement

- Court ruled that article **violated the sub-judice principle**, which prohibits publications or statements or commentary that could influence the court or prejudice an ongoing case.
 - ⊕ Court highlighted that Wikipedia page describing criticism of the lawsuit **"amounts to interference in Court proceedings"**.

Contempt of Court

- **Contempt of Court Act, 1971** defines Contempt of Court as **Civil Contempt or Criminal Contempt**.
 - ⊕ **Civil contempt:** Wilful disobedience to any judgment, decree, direction, order, writ or other process of court.
 - ⊕ **Criminal contempt:** Publishing content or performing actions that:
 - ◆ Scandalize or diminish a court's authority; or
 - ◆ Prejudices, or interferes with due course of judicial proceeding; or
 - ◆ Interferes with or obstructs administration of justice.
- **Constitutional Provisions:**
 - ⊕ **Article 129:** Makes the Supreme Court a **'court of record'** and confers power to punish for contempt of itself.
 - ◆ **Article 215** confers similar powers on High Courts.
 - ⊕ **Article 142:** Allows the Supreme Court to make any order for punishment of contempt of itself.

Ministry of Cooperatives released Standard Operating Procedures (SOPs) on 'White Revolution 2.0'

It was launched during diamond jubilee celebration of National Dairy Development Board (NDDB).

About NDDB

- NDDB was **founded by Dr. Verghese Kurien** (father of white revolution) in **1965**. Initially, it was registered as a society under the Societies Act 1860.
- Later it was merged with erstwhile Indian Dairy Corporation, by NDDB Act 1987. **It is declared as an institution of national importance.**
- It developed & implemented **Operation Flood program** (1970 to 1996), which led to **White Revolution**.

White Revolution 2.0

- **Aim: Increase milk procurement by dairy cooperative societies by 50 % over next 5 years** (1,007 lakh kg/ day by 2028-29).
 - ⊕ It seeks to **empower women, generate employment, and expand cooperative coverage.**
- **National Programme for Dairy Development (NPDD) 2.0:** Targets of White Revolution 2.0 have been subsumed under newly proposed Central Sector Scheme, **NPDD 2.0**.
 - ⊕ **Financial assistance under NPDD** is provided for setting up of village level milk procurement system, milk chilling facilities for quality milk procurement to strengthen dairy infrastructure.
- **Dairy cooperative societies (DCS):** Plan to **establish/strengthen 1 lakh DCS** for achieving objective of White Revolution 2.0.

India's Status in milk production

- **India is world's top milk producer**, with 230.58 million tonnes production during 2022-23.
- **National per capita availability of milk is 459 grams/ day**, which is higher than global average of 323 g/ day.

Other Initiatives to boost Dairy Sector

- Rashtriya Gokul Mission; National Programme for Dairy Development; Livestock Health & Disease Control Programme (LHDCP); Animal Husbandry Infrastructure Development Fund etc.

Also in News



Sri Kartarpur Sahib corridor

India and Pakistan have renewed agreement on Sri Kartarpur Sahib Corridor for next five years.

- Agreement originally signed in 2019 was valid for 5 years.

Sri Kartarpur Sahib corridor

- It facilitates the **visit of pilgrims from India to Gurdwara Darbar Sahib Kartarpur, Narowal** in Pakistan without a visa.
 - ⊕ **Guru Nanak**, founder of Sikhism, **spent last 18 years of his life at Kartarpur** (located at west bank of river Ravi).
- Corridor provides a **4.5-kilometer route** from Indian border at Dera Baba Nanak in Punjab to Kartarpur corridor.



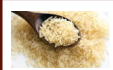
Maternity Benefit Act, 1961

Madras High Court ruled that contractual employees are also entitled to maternity benefits.

- Court held that provisions of the **Maternity Benefit Act, 1961** would **prevail over contractual conditions** if the latter either deny or offer less favourable benefits.

About Maternity Benefit Act 1961

- It provides **paid maternity leave to women workers.**
- **Amendment in 2017** brought following changes:
 - ⊕ **Increased paid maternity leave from 12 weeks to 26 weeks** for women with less than two surviving children.
 - ⊕ Depending upon the nature of work, Act provides for **work from home** for nursing mothers.
 - ⊕ Extension of **12 weeks** of maternity benefit to **commissioning mothers and adopting mother.**



Parboiled Rice

Union Government has **scrapped export tax** on parboiled rice to boost rice exports.

- Decision could lead to increase global supplies and soften international rice prices.

About Parboiled Rice

- **Parboiled rice** refers to rice that has been partially boiled at the paddy stage in its inedible husk, before milling.
 - ⊕ It is called **miniket** in West Bengal and Odisha.
- Generally, there are **three major steps** in parboiling, i.e. **soaking, steaming and drying.**
- **Significance:** Increase in rice yield, prevents from insect attacks, contains more of B-vitamins and produces a bran higher in oil content.



Global Energy Monitor

As per Global Energy Monitor, **Fossil capacity is set to drop below half of the power capacity mix** in BRICS bloc for the first time ever in 2024.

Other Key Findings

- **Wind and utility-scale solar capacity** in development across BRICS is double the amount of coal, oil, and gas power capacity.
- BRICS countries have **enough renewables projects in development to nearly triple capacity by 2030.**

BRICS Members

- Brazil, Russia, India, China, South Africa, UAE, Iran, Saudi Arabia, Ethiopia, and Egypt.



Atlantic Meridional Overturning Circulation (AMOC)

Climate scientists are urging Nordic ministers to **prevent global warming from causing major change/ collapse in Atlantic Ocean current.**

- This collapse of AMOC would **increase cooling of Northern Hemisphere**, raise Atlantic sea levels, **drop precipitation over Europe and North America** and shift monsoons in South America.

About AMOC

- A system of ocean currents that **circulates water within Atlantic Ocean**, bringing warm water north and cold water south.
- **AMOC shutdown would cool northern hemisphere and decrease rainfall over Europe.** It can also have an **effect on the El Nino.**
- It **distributes heat and nutrients** throughout the world's ocean basins.



India's Fourth Nuclear Submarine

India's fourth **nuclear-powered ballistic missile submarine (SSBN)**, referred to as S4*, was launched into water.

- India currently has 2 SSBNs operational i.e. **INS Arihant & INS Arighaat (S3).**
- Third SSBN **Aridhman (S4)** is currently undergoing sea trials.

About S4*

- S4* submarine boasts nearly **75% indigenous content** and is equipped with **K-4 ballistic missiles**, which have a range of 3,500 km.
- SSBNs are a potent and highly specialized military asset, which serve as a crucial component of nuclear deterrence.
 - ⊕ They are operated by only few countries namely **US, Russia, China, UK, France and India.**



National Water Awards (NWA)

Recently, President of India presented fifth NWA in New Delhi.

About National Water Awards

- **Nodal Ministry:** Ministry of Jal Shakti.
- **Aim:** To create awareness among people about importance of water and motivate them to adopt the best water usage practices.
- **Presented in nine categories:** Best State, Best District, Best Village Panchayat, Best Urban Local Body (ULB), Best School/College, Best Industry, Best Water User Association, Best Institution (other than school/college), and Best Civil Society.
 - ⊕ **Odisha is best state** and Surat, Gujarat is Best ULB.



Commonwealth Games (CWG) 2026

Recently, CWG 2026 (will be held in Glasgow) edition was unveiled which features **only 10 sports.**

About CWG 2026

- **Six of 12 disciplines** in which India won a medal at 2022 CWG (contributing 30 out of total 61 medals) have been dropped from 2026 edition.
 - ⊕ These include **badminton, cricket, hockey, squash, table tennis and wrestling.**

About CWG

- First held in 1930 in **Hamilton, Canada.**
- Held **every four years.** India hosted Games in 2010 at Delhi.

Personality in news



Ashfaqulla Khan (1900-1927)

Recently, tribute was paid to freedom fighter Ashfaqulla Khan on his birth anniversary.

- He was born in 1900 at **Shahjahanpur, Uttar Pradesh.**

Key Contributions

- He along with Ram Prasad Bismil, Sachindra Nath Bakshi and Jogesh Chandra Chatterjee, **founded the Hindustan Republican Association in 1924.**
 - ⊕ **Manifesto of HRA titled "The Revolutionary"** listed its objective as **establishing a federal Republic of United State of India** by an organized and armed revolution.
- He participated in **Kakori Train Action 1925** and was awarded death sentence along with **Ram Prasad Bismil, Rajendra Lahiri and Roshan Singh.**

Values: Courage, Integrity, Justice.

