

NEWS TODAY

Value of Antarctic and Southern Ocean (A&SO) Ecosystem Services

- A recent study published in a journal estimated economic value of ecosystem services of A&SO at around \$180 billion (USD) per annum.
- **Ecosystem services:** Defined as the **direct and indirect contributions of ecosystems to human well-being**, and have an impact on our survival and quality of life.
- **Ecosystem Services provided by A&SO**
 - ⊕ **Provisioning services:** Characterised by **ability of humans to obtain products from ecosystems**.
 - ◆ Antarctic toothfish and krill used as food for humans, high-value pharmaceuticals, etc.
 - ⊕ **Regulating services:** Benefits obtained from natural processes and functioning of ecosystems, such as **climate regulation, natural hazard regulation**, etc.
 - ◆ **Southern Ocean absorbs CO₂ from atmosphere** and helps transport water around the globe.
 - ⊕ **Cultural services:** **Non-material benefits** obtained by people from ecosystems such as spiritual enrichment, recreation, etc.
 - ◆ Tourism and scientific research in Antarctic.
- **Governance of A&SO**
 - ⊕ **Antarctic Treaty (1959):** Applies to area south of 60° South latitude, stipulates peaceful use of Antarctica.
 - ⊕ **Antarctic Treaty System:** Comprises the Treaty itself and a number of related agreements related to scientific cooperation, protection of Antarctic environment, etc.

India's interests in A&SO

- **Scientific Research:** Two operational research stations in Antarctica - **Maitri (1989)** and **Bharati (2012)**.
 - ⊕ **Dakshin Gangotri** was decommissioned in 1990.
- **Indian Antarctic Act, 2022:** Aimed at having India's own national measures for protecting Antarctic environment and associated ecosystem.
- **India is a signatory to Convention on the Conservation of Antarctic Marine Living Resources and Madrid Protocol.**

Prime Minister (PM) inaugurates three Space Infrastructure Projects in Kerala worth around Rs 1800 crores

- During PM's visit to Vikram Sarabhai Space Centre (VSSC) in Thiruvananthapuram, projects were launched to reform country's space sector.
- Three projects include
 - ⊕ **PSLV Integration Facility (PIF) at Satish Dhawan Space Centre, Sriharikota** to boost frequency of **Polar Satellite Launch Vehicle (PSLV) launches** from 6 to 15 per year.
 - ◆ It also caters to **launches of Small Satellite Launch Vehicle (SSLV)** and other small launch vehicles designed by private space companies.
 - ◆ PSLV is a **four-stage launch vehicle** capable of launching satellites into **Geosynchronous and Geostationary orbits**.
 - ◆ **SSLV is a 3-stage Launch Vehicle** capable of launching satellites in **low earth orbit at low cost**.
 - ⊕ **Semi-cryogenics Integrated Engine and Stage Test facility at ISRO Propulsion Complex at Mahendragiri** will enable development of semi-cryogenic engines and stages, which will **increase payload capability of present launch vehicles**.
 - ◆ Facility is equipped with **liquid Oxygen and kerosene supply systems** to test engines up to 200 tons of thrust.
 - ⊕ **Trisonic Wind Tunnel at VSSC** for aerodynamic testing for characterisation of rockets and aircraft during flight in atmospheric regime.
- PM also reviewed Gaganyaan Mission (India's **first human spaceflight mission**) progress and **bestowed 'astronaut wings' to four astronaut-designates**, which symbolize trust, courage, and discipline.

About VSSC

- It is the **lead Centre of Indian Space Research Organisation (ISRO)** under Department of Space.
- Named in memory of **Dr Vikram A Sarabhai (father of Indian Space Programme)**.
- **Virtual Launch Control Centre (VLCC) at VSSC** played an important role in launch of **LVM3 vehicle carrying Chandrayaan-3 spacecraft**.
 - ⊕ **VLCC remotely carries out system checks on launch vehicle prior to mission.**

Government notified methodology for Calculation of Green Credits (GC) for Tree Plantation Activity

- On recommendation of Indian Council of Forestry Research and Education (ICFRE), **Ministry of Environment, Forest and Climate Change (MoEFCC)** notified following methodologies in pursuance of GC Rules 2023.
 - ⊕ Forest Department of every State and Union territory shall **identify degraded land parcels** under their administrative control **for increasing green cover**.
 - ⊕ Land parcel identified for plantation must be free **from all encumbrances** and **must have size of 5 hectares or above**.
 - ⊕ ICFRE direct Forest Department to **carry out tree plantation within two years**.
 - ⊕ **ICFRE issues GC**. One grown tree will amount to one GC, subject to **minimum density of 1100 trees per hectare**.
- GC refers to a **unit of an incentive provided for a specified activity**; delivering a positive impact on environment.
 - ⊕ **Tree Plantation** is one of the eight activities under **Green Credit Program (GCP)**.
 - ⊕ GCP aims to **incentivise environmental positive actions** through **market-based mechanism** and **generate GC**, which shall be **tradable and made available for trading** on a domestic market platform.
 - ⊕ **ICFRE** serves as **GCP Administrator**, responsible for program implementation, management, monitoring, and operation.
 - ◆ ICFRE (HQ: Dehradun) is a **Society registered under Societies Registration Act, 1860** and an autonomous body as declared by MoEFCC.

Other sectors identified for GCP

- ⊕ Water Conservation
- ⊕ Sustainable Agriculture
- ⊕ Water Management
- ⊕ Air Pollution Reduction
- ⊕ Mangrove Conservation and Reduction
- ⊕ Ecomark label development
- ⊕ Sustainable building and infrastructure

Expert Committee on Arbitration Law submitted its report to Union Ministry of Law & Justice

- Committee was set up in Jun 2023 to **examine working of Arbitration Law in the country** and recommend reforms to **Arbitration & Conciliation (A&C) Act, 1996**.
- **Arbitration**: It is a **quasi-judicial proceeding**, wherein parties in dispute appoint an arbitrator by agreement to adjudicate the dispute. It is a type of **Alternate Dispute Resolution (ADR)**.
- **Key recommendations of the committee**
 - ⊕ **Separate Arbitration division in High Court (HCs)**: At least in select HCs and the Government may earmark separate funds for select HCs having heavy pendency of arbitration cases.
 - ⊕ **Legal framework**: Separate laws for domestic arbitration and international arbitration in the long run.
 - ◆ **Greater supervision by Courts** is required given varied forms of domestic arbitration.
 - ⊕ **Diversity in Arbitral appointments**: Arbitral Institutions must strive to empanel and appoint significantly more women arbitrators to arbitral panels.
 - ⊕ **Arbitration in SEZ and GIFT cities**: Creation of an arbitration ecosystem in SEZs with speedy visa facilitation for international arbitrators.
 - ⊕ **Virtual arbitration and AI**: Wait for and evaluate the effect of migration of arbitrations to virtual mode and assess further development in arbitration using AI.

Alternate Dispute Resolution (ADR)

- It is a **method of settling disputes without formal litigation**.
- It includes **various mechanisms** such as **arbitration, negotiation, mediation, conciliation, facilitated settlements, ombudsman, etc.**

Government declares 'Jamaat-e-Islami Jammu Kashmir (Jel)' as an 'Unlawful Association' for a further period of 5 years

- Notification was issued by **Union Ministry of Home Affairs (MHA)** under **Section 3 of the Unlawful Activities (Prevention) Act (UAPA), 1967**.
 - ⊕ Previously, Jel was **banned in February, 2019**.
- **Reasons for declaration**: Jel is continuing to be involved in **fomenting terrorism and anti-India propoganda** for fueling secessionism in Jammu and Kashmir, which are **prejudicial to internal security** and **public order** and have **potential of disrupting unity and integrity of the country**.
 - ⊕ Jel members are often **alleged to be working as Over Ground Workers (OGWs)**.
- **OGWs**: People who **provide logistic support to militants** and **assist them in their surreptitious movement**.
- **Role played by OGWs for terrorist organizations**
 - ⊕ **Recruitment**: Recruiting local youth for joining terrorist ranks, including forced recruitments.
 - ⊕ **Funding**: Through illegal trade, counterfeit currency, tax evasion, Hawala transactions, etc.
 - ⊕ **Coordination** with other stakeholders: Such as secessionist leaders, organised crime networks, etc.
 - ⊕ **Legitimization**: Through propoganda, radicalization, exploitation of local grievances, etc.
- **Measures to neutralize influence of OGWs**: Rehabilitating orphans and women to ensure Social welfare [e.g., **Operation Sadbhavana (Goodwill)**], improve Intelligence Infrastructure to keep track of radicalization attempts, Fast track courts for speedy conviction of terrorists and OGWs, etc.

Unlawful Activities (Prevention) Act (UAPA), 1967

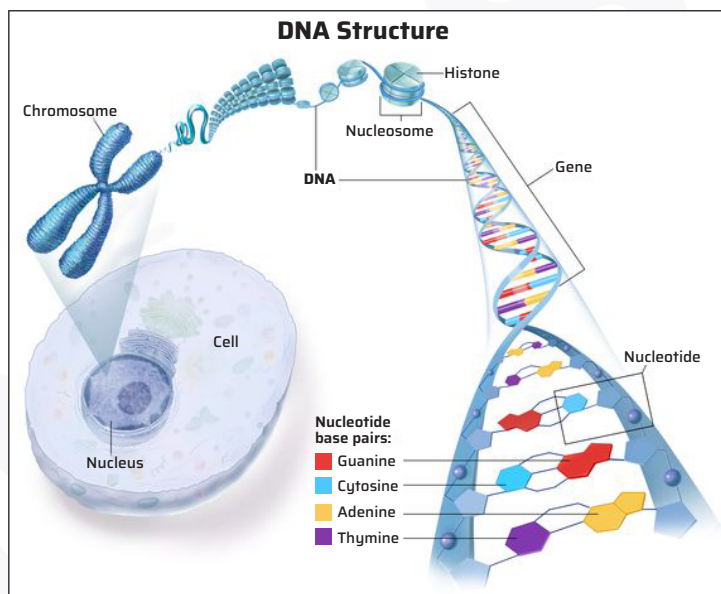
- Provides for effective **prevention of certain unlawful activities of individuals and associations**, and for dealing with terrorist activities.
- **UAP (Amendment) Act, 2019** empowered the government to **designate individuals as terrorists, in addition to organizations**.
 - ⊕ It also added **International Convention for Suppression of Acts of Nuclear Terrorism (2005)** to define terrorist acts.

Department of Biotechnology (DBT) announced completion of sequencing 10,000 Human Genome

- Sequencing whole genome of 10,000 healthy individuals from 99 communities of diverse Indian populations was completed under **Genome India Project (GIP)**.
- GIP, **inspired from Human Genome Project**, was **launched and funded by DBT** (under Ministry of Science & technology) in **2020** to collect 10,000 genetic samples from citizens across India, to build a reference genome.
 - ⊕ It is a consortium of 20 national institutes and **led by Centre for Brain Research Bengaluru**-based Indian Institute of Science.
- **Significance of GIP:** Creating a database of Indian genomes can help researchers to **learn about genetic variants that are unique to India's population groups** and use that to **customise drugs and therapies**.
- **About Genome and its sequencing**
 - ⊕ Genome is **entire set of DNA** instructions found in a cell.
 - ⊕ In humans, it **comprises 23 pairs of chromosomes** (thread-like structures of DNA) in cells' nucleus and **small chromosome in cells' mitochondria**.
 - ◆ Deoxyribonucleic acid (DNA) is molecule that **carries genetic information** for functioning of an organism.
 - ◆ **DNA contains unique chemical codes** determined by order of **Adenine (A), Cytosine (C), Guanine (G) and Thymine (T)** (four nucleotide bases present in DNA).
 - ⊕ Genome sequencing refers to **figuring out order of DNA nucleotides in a genome** (i.e., order of **As, Cs, Gs, and Ts**).

Other initiatives for Genome sequencing

- **Human Genome Project**, launched in 1990 (completed in 2003), covered about 92% of total human genome sequence.
- **IndiGen programme** to undertake whole genome sequencing of thousands of individuals representing diverse ethnic groups from India.
- **Global Alliance for Genomics and Health (GA4GH)** sets standards to expand genomic data use within a human rights framework.



Also in News



SWAYAM Plus platform

- **Ministry of Education (MoE)** launched SWAYAM Plus Platform.
- SWAYAM is **Massive Open Online Course platform** providing educational opportunities for learners.
- **About SWAYAM Plus platform**
 - ⊕ In alignment with National Education Policy 2020, it will now include **courses supporting industry needs** that enhance learners' employability in collaboration with industry leaders.
 - ⊕ It features innovative elements like multilingual content, AI-enabled guidance, credit recognition, and pathways to employment
 - ⊕ **IIT Madras has been appointed as nodal agency** for implementing it.
 - ⊕ **Funded by MoE, Department of Higher Education.**



Amrit Bharat Station Scheme (AMBS)

- Prime Minister laid the foundation stone for redevelopment of 554 Railway stations under AMBS.
- **About Amrit Bharat Station Scheme**
 - ⊕ Launched under **Ministry of Railways**, it aims to **enhance and modernize railway stations** throughout Indian Railways network.
 - ⊕ **Stations will have modern passenger amenities** like roof plaza, inter modal connectivity, kids play area, kiosks, etc.
 - ⊕ Design of station buildings **inspired by local culture, heritage and architecture**.
 - ⊕ It emphasizes **integrating stations with surrounding city areas** on both sides, providing facilities for individuals with disabilities, implementing eco-friendly solutions etc.

WEIDE | **Women Exporters in the Digital Economy (WEIDE) Fund**

- **WTO and International Trade Center (ITC)** launched a USD 50 million global fund called **WEIDE Fund**.
- **Objectives of Fund:** To assist women-led businesses and entrepreneurs in developing economies and least-developed countries in adopting digital technologies and expanding online presence.
- **ITC is the joint agency of UN and WTO**, fully dedicated to supporting small businesses of developing countries to trade.
 - ⊕ Originally created by **General Agreement on Tariffs and Trade (GATT)** in 1964.

| **Nature Restoration Law (NRL)**

- European Parliament adopted **NRL** to restore 20% of EU's land and sea.
- **NRL will restore degraded ecosystems in all member states**, help achieve the EU's climate and biodiversity objectives, and enhance food security.
 - ⊕ It is a key element of the **EU Biodiversity Strategy**, which calls for binding targets to restore degraded ecosystems.
- **Objective:** Enable long-term and sustained recovery of biodiverse and resilient nature.
- **Implementation:** EU countries are expected to submit National Restoration Plans to the Commission within 2 years of the Regulation coming into force.

| **Representative Concentration Pathways (RCPs)**

- RCPs have emerged as one of the **latest approach to determine emission scenario**.
- **About RCPs**
 - ⊕ RCPs describe **four different 21st century pathways of greenhouse gas (GHG) emissions and atmospheric concentrations, air pollutant emissions, and land use**.
 - ⊕ Developed using **Integrated Assessment Models (IAMs)** as input to a **wide range of climate model simulations** to project their consequences for climate system.
 - ⊕ These climate projections, in turn, are **used for impacts and adaptation assessment**.

| **Africa Club**

- African Union established **Africa Club** [also known as **Alliance of African Multilateral Financial Institutions (AAMFI)**] at its 37th Summit.
- **About Africa Club**
 - ⊕ **Coalition of African Multilateral Financial Institutions (AMFIs)** to address shortcomings in global and continental financial architecture.
 - ⊕ Seeks to **introduce innovative financial instruments** and provide a venue for debt management discussions.
 - ⊕ **Core membership:** African Export Import Bank, Trade and Development Bank, Africa Finance Corporation, African Reinsurance Corporation, etc.
 - ⊕ **Membership will be open to all African Multilateral Financial Institutions.**

| **Clean Air Flagship**

- At **Climate and Clean Air Ministerial 2023, Climate and Clean Air Coalition (CCAC)** launched **Clean Air Flagship**.
- **Clean Air Flagship is aimed to**
 - ⊕ **Achieve cleaner air**, consistent with improved WHO air quality interim targets;
 - ⊕ **Reduce emissions of short-lived climate pollutants** simultaneously with other harmful pollutants;
 - ⊕ **Maximize co-benefits** by improving agricultural productivity, economic development and overall quality of life.

| **Ecocide**

- **Belgium has become the first country in Europe to recognize 'ecocide' as a national as well as an international crime.**
- **Ecocide:** It means **unlawful or wanton acts** committed with knowledge that there is a substantial likelihood of severe and either **widespread or long-term damage to the environment** being caused by those acts.
 - ⊕ Term was invented by **American Biologist Arthur Galston in 1970**.
- **India is yet to make it an offense.**

Places in News



Sweden (Capital: Stockholm)

- Sweden is set to join **North Atlantic Treaty Organization (NATO)**.
- **Political Boundaries**
 - ⊕ Located on **Scandinavian Peninsula in northern Europe**.
 - ⊕ **Land border:** Finland and Norway.
 - ⊕ **Maritime borders:** Denmark, Germany, Poland, Russia, Lithuania, Latvia and Estonia.
 - ⊕ Bounded by **Baltic Sea, Gulf of Bothnia, Kattegat, Skagerrak, and Öresund straits**.
- **Geographical features**
 - ⊕ **Highest point:** Kebnekaise.
 - ⊕ **Largest lake:** Vänern.
 - ⊕ **Major Rivers:** Torne, Dalälven, Ume.
 - ⊕ **Natural resources:** Iron ore, Copper, Lead, Zinc, Gold, Silver, Tungsten, Uranium, etc.

