Restructuring of GST highlights challenges in fiscal health of states

With the latest restructuring of Goods and Services Tax (GST), **GST Compensation Cess stands abolished, raising concerns over states' revenue loss and fiscal autonomy.**

- GST Compensation Cess aimed at providing **compensation to states for loss of revenue** arising on account of implementation of GST.

Trends in State's Fiscal Autonomy

- **Erosion of States' Fiscal Autonomy:** GST effectively shifted taxation powers from states to GST council in which the Centre has a dominant role.
- **Expenditure-Resource Mismatch:** States bear major responsibilities like **law & order, health, education, etc.,** and post-GST introduction, revenue-raising power is largely centralised while expenditure responsibility remains largely with states creating fiscal imbalance.
- **Declining Devolution Share:** Actual tax devolution to states as a percent of Gross Tax Revenue has fallen short due to increasing cesses and surcharges, which are not part of shareable pool.
- **Penalising Tax Sharing Criteria:** There are grievances regarding the tax sharing criteria of Finance Commission, which often penalizes progressive states.
- **Dependence on Central Transfers:** Central transfers account for **44% of States' revenue,** with higher dependence in some States (e.g., Bihar 72%), affecting **liquidity management** and may cause **political friction** in Opposition-ruled States.

Way Forward

- **Restructured tax-sharing principles:** To restore fiscal space, enhance cooperative federalism, and reduce over-dependence on Central transfers.
  - ➡ Central government can share the tax base on Personal Income Tax with states where tax is collected.
- **Empowering States:** Some states suggest **Canada model** where federal government collects 46% of tax revenue and spends 40%, while sub-national governments collect 54% and spend 60%, giving more autonomy and flexibility to states.
- **Monitoring Fiscal Health:** Using tools like Fiscal Health Index and taking proactive measures to enhance the state's financial health.

International Union for Conservation of Nature (IUCN) World Conservation Congress 2025 concludes in Abu Dhabi, UAE

Held once every four years, the IUCN World Conservation Congress hosts the **Members' Assembly,** which is the **IUCN's highest decision making body.**

Key Resolutions at Member's Assembly

- **Strategic Vision:** Approved the 20-year Strategic Vision and a new programme for next four-year period.
- **Abu Dhabi Call to Action:** Accelerate action across **five key areas** – reaffirming nature as foundation of well-being, strengthening multilateralism, ensuring justice and inclusion, advancing knowledge and innovation, and scaling up resources for nature and climate action.
- **New Members:** Over 100 new members including six states – Armenia, Tajikistan, Marshall Islands, Gabon, Tuvalu, and Zimbabwe.
- **First-ever Policy on Synthetic Biology and Nature Conservation:** Synthetic biology may carry both substantial benefits (e.g., to restore lost genetic diversity or to locally eradicate invasive alien species) and significant risks (e.g. unintended ecological cascades), necessitating balanced policy.
- **Fossil Fuels (Motion 042):** Recognized production of fossil fuel as a direct threat and urged a global phase-out treaty and just transition.
- **Wildlife Trade (Motion 108):** Proposed regulation to curb commercial trade in wild animals kept as pets.
- **Crime of Ecocide (Motion 061):** Recognizes ecocide (deliberate environmental harm) as international crime under the International Criminal Court.

About IUCN

- **Genesis:** Founded in 1948, IUCN is now the **world's largest and most diverse environmental network.**
- **Headquarters:** Gland, Switzerland.
- **Membership:** 1,400+ members (states, NGOs, research institutions). **India is a member.**
- **Governance: Members' Assembly** of IUCN World Conservation Council being highest governing body with IUCN Council serving as principal governing body in between the sessions of World Conservation Congress.
- **Key Instruments:** IUCN Red List, World Heritage Outlook, The World Database on Protected Areas.

Sundarbans Aquaculture Model Wins FAO Global Recognition

The Sustainable Aquaculture in Mangrove Ecosystems (SAIME) model, developed by **Nature Environment and Wildlife Society** has received **Global Technical Recognition** from the **UN's Food and Agriculture Organization (FAO).**

What is the SAIME Initiative?

- SAIME is a **Multi-Stakeholder Partnership (MSP)** to strengthen transformative processes in shrimp trade as a basis for the protection of mangrove ecosystems in South Asia.

- In Sundarbans, SAIME aims to build a resilient ecosystem **standardizing a practice of culture methodology of brackish water aquaculture integrating native black tiger shrimp** as one of the major candidate species in an ecosystem-based approach and capacitating the existing brackish water farmers for the same.

- The initiative exemplifies an **ecosystem-based, climate-adaptive, and conservation-linked livelihood approach.**
    - It aims to reduce **blue carbon emissions** by integrating mangroves as natural carbon sinks and **enhance market access** through farmer institutions, branding, and certification to ensure fair prices and inclusive growth.

- **Funding: Global Nature Fund (GNF) in consortium with Naturland e.V. and Mercedes Benz.**

- **It also** operationalizes the **Integrated Mangrove Aquaculture (IMA) which aims to promote extensive culture of low stocking densities with no additional feed input.**

About Sundarbans

- The Sundarbans mangrove forest lies on the delta of the **Ganges, Brahmaputra and Meghna** rivers on the Bay of Bengal.

- The site is intersected by a complex network of **tidal waterways, mudflats and small islands of salt-tolerant mangrove forests,** and presents an excellent example of ongoing ecological processes.

- It is the **only mangrove forest throughout the world (besides Bangladesh) to harbour a significant tiger population.**

- West Bengal (42.45%) has the highest mangrove coverage followed by Gujarat (23.66) and Andaman & Nicobar Islands (12.39%).

- Overall, India's total mangrove cover stands at 4,991.68 km2, making up 0.15% of the country's total geographical area.(ISFR-2023).

Google AI model unveils a promising approach to treating cancer

The model, C2S-Scale (Cell2Sentence-Scale 27B), generated a novel hypothesis about cancer cell behavior, which was later confirmed through experimental validation in living cells, marking a breakthrough in cancer treatment via data-driven scientific discovery.

- The model C2S Scale developed by **Google DeepMind and Yale University** has been designed to **understand the language of individual cells** and interpret complex biological interactions.
  - ⊕ It identified **Silmitasertib** as a drug that enhances the immune response against tumors.

Role of AI (Large Language Model) in Healthcare

- **Understanding Cellular Language:** LLMs like C2S-Scale **decodes cellular signals,** translating complex biological data into interpretable insights.
  - ⊕ **AI as Scientific Collaborator:** Generates **testable hypotheses** and validates them experimentally, acting as a **digital scientist.**
- **Drug Discovery Acceleration:** Simulates **thousands of drug–cell interactions,** identifying novel targets **faster than traditional methods.**
- **Precision Medicine:** Enables **personalized therapies** based on individual **genetic and cellular profiles.**
- **Patient Engagement and Support:** Chatbots powered by LLMs can provide 24/7 health information, answer common patient queries, and provide guidance on lifestyle, medications, or post-treatment care.

Also In News

International Union for the Protection of New Varieties of Plants (UPOV)

A report, by **GRAIN** documented how a growing number of FTAs compel countries to adopt standards set by the 1991 UPOV Convention.

About UPOV Convention (Estd:1961, **HQ:** Geneva, Switzerland)

- UPOV stands for **International Union for the Protection of New Varieties of Plants.**
- **Mission:** It is an intergovernmental organization to provide and promote an effective system of **Plant Variety Protection (PVP).**
- **Function:** It **grants Breeder's Rights** (an IP right) to incentivize the development of new, improved plant varieties for agriculture and food security.
- **UPOV Convention 1991: It strengthens breeders' rights** and makes the farmer's privilege (to save seeds) **optional** for member countries.
- **India's Status:** India is **not a member** and uses its own sui generis law, **the Protection of Plant Varieties and Farmers' Rights Authority Act, 2001,** which uniquely protects both breeder and farmer's rights.

Mercosur

India and Brazil agreed to broaden the scope of the existing preferential trade agreement (PTA) between India and Mercosur bloc.

About Mercosur (Estd: 1991, HQ: Montevideo, Uruguay)

- It is a **South American trade bloc** promoting free trade and economic cooperation.
- **Membership:** Argentina, Bolivia, Brazil, Paraguay & Uruguay. **Venezuela's membership is suspended.**
- **Governance:** Council of the Common Market (CMC), Common Market Group (GMC), and Mercosur Trade Commission (CCM),
- **Role:** It functions as a **customs union with a common external tariff,** facilitating regional integration.

State Mining Readiness Index

Ministry of Mines releases **State Mining Readiness Index (SMRI)**

About State Mining Readiness Index

- **Objective:** To capture State's relative contribution in **developing the country's mining sector,** promote **mining sector reforms** and assess State performance.
- **Basis:** The index evaluates States based on **auction performance, early mine operationalization, exploration thrust,** and **sustainable mining practices** related to **non-coal minerals.**
- **Classification:** States are classified into **three categories** based on their **mineral endowment.**
  - ⊕ Top Performers in these categories are:
    A: Madhya Pradesh, Rajasthan, and Gujarat
    B: Goa, Uttar Pradesh, and Assam
    C: Punjab, Uttarakhand, and Tripura

Dopamine

Digital technologies release dopamine through notifications, likes, and content feeds and exploit **reward schedules,** reinforcing compulsive behaviors and fractured attention.

About Dopamine

- It is the brain's **"feel-good" neurotransmitter,** central to **motivation, reward, and pleasure.**
- **Released during enjoyable experiences:** food, achievements, social interactions.
- It basically drives **reward-based learning.**
- Addictive substances (cocaine, nicotine, alcohol) **cause massive dopamine surges,** leading to desensitization and the need for higher doses causing addiction.

Commonwealth Games

Ahmedabad recommended as host city for **centenary edition of the Commonwealth Games in 2030.**

About Commonwealth Games

- **Inaugural event** held in Hamilton, Canada in **1930**.
  - **Recent Edition:** 2022, Birmingham.
  - **Next Edition:** 2026, Glasgow.
- **Headquarters:** London, United Kingdom.
- **Governing Body: Commonwealth Sport** (formerly, Commonwealth Games Federation)
- **Members:** 72 nations and territories.
- **Frequency:** Held every four years.
- **Structure:** Multi-sport international event for athletes from the Commonwealth.

State of Finance for Forests 2025

The UN Environment Programme releases the first State of Finance for Forests 2025 report, providing a global overview of public and private forest finance in 2023.

Major Findings

- Report finds an annual forest finance gap of US$ 216 billion between current financial flows and the investment required to achieve global forest goals by 2030.
- Annual investment in forests will need to triple to $300 billion by 2030, and grow sixfold by 2050, from US$84 billion in 2023.
- Governments were the primary source of forest funding, accounting for 91% of total flows in 2023.
- Meeting global climate and biodiversity goals requires expanding nature-based solutions by 1 billion hectares by 2030 and 1.8 billion by 2050.

Scheme for Innovation and Technology Association with Aadhaar (SITAA)

Unique Identification Authority of India (UIDAI) launches Scheme for Innovation and Technology Association with Aadhaar (SITAA).

About SITAA

- **Aim:** To strengthen India's digital identity ecosystem and combat emerging **security threats such as deepfakes, spoofing, and presentation attacks.**
- **Implementing Agency:** UIDAI under Ministry of Electronics & Information Technology.
- **Focus Areas:** Biometric authentication, AI/ML solutions, data privacy, and advanced biometric security.
- Program will be kick started through a pilot with few initial challenges including **face liveness detection, presentation attack detection, and contactless fingerprint authentication.**

United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM)

India elected as Co-Chair of the Regional Committee of United Nations Global Geospatial Information Management for Asia and the Pacific (UN-GGIM-AP).

- UN-GGIM-AP is one of the five regional committees under the **United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM).**

About UN-GGIM

- **Established:** UN **intergovernmental body** under **Economic and Social Council (ECOSOC),** established in **2011** to coordinate global geospatial data governance.
- **Functions:** Apex intergovernmental mechanism for decision-making on geospatial information policy, aiming to address global challenges through enhanced use of geospatial data and technologies.

Place in News — Brazil (Capital: Brasilia)

India-Brazil Business Dialogue was held in presence of Vice President of Brazil.

Political Features

- Largest country in **South America.**
- **Bordering Countries:** Borders **all South American nations except Chile and Ecuador.**
  - Argentina and Paraguay (Southwest), Bolivia and Peru (West), Columbia (Northwest), and Venezuela, Guyana, Suriname and French Guiana (North).
- **Bordering Water Bodies:** Atlantic Ocean.

Geographical Features

- **Encompasses most of the Amazon Basin,** which is World's largest river system and tropical rainforest.
- Consists of dry grasslands known as **Pampas** and Wetland ecosystem of **Pantanal** (World's largest tropical wetland).
- **Major River Systems:** Amazon, Paraguay–Paraná–Plata System, Tocantins–Araguaia System and São Francisco River.

AHMEDABAD BENGALURU BHOPAL CHANDIGARH DELHI GUWAHATI HYDERABAD JAIPUR JODHPUR LUCKNOW PRAYAGRAJ PUNE RANCHI