

NEWS TODAY

Union Cabinet approves establishment of Rs. 1,000 crore Venture Capital Fund for Space Sector under IN-SPACe

A **Venture Capital (VC) Fund** is a specialized form of private equity financing that invests in **early-stage startups** with high growth potential.

About VC Fund for Space sector:

- The proposed fund will support **startups** across the entire **space supply chain—upstream, midstream, and downstream.**
- **Financial structure:** It will operate over five years, deploying **₹150-250 crore** annually.
 - ⊕ **Investment per startup:** Range from **₹10-60 crore.**
 - ⊕ **Target:** Support approximately **40 startups**
- **The Funds aims to strategically position India as one of the leading space economies by:**
 - ⊕ **Capital infusion:** To create a multiplier effect by attracting additional funding for later-stage development of the Start-up
 - ⊕ **Accelerate private space industry's growth:** To meet the goal of a **five-fold expansion** of the Indian space economy in **next 10 years.**
 - ⊕ **Drive advancements:** In space technology and strengthening India's leadership through private sector participation.
- **Benefits:**
 - ⊕ **Retention of space companies** domiciled within India
 - ⊕ **Generating jobs** in engineering, software development, data analysis, and manufacturing, etc
 - ⊕ **Creating a vibrant innovation ecosystem** and **boost global competitiveness.**
- **India's Space sector:** India (ranks 5th) constitutes 2-3% of the global space economy (currently valued at \$8.4 billion, with a target to reach \$44 billion by 2033).

About Indian National Space Promotion and Authorisation Centre (IN-SPACe) (Established: 2020)

- It is a **single-window, independent, nodal agency** that functions as an **autonomous agency** in the **Department of Space (DOS).**
- It acts as an **interface between ISRO and Non-Governmental Entities (NGEs)** to facilitate **private sector participation.**
- It authorizes and supervises various space activities like **building launch vehicles & satellites, sharing space infrastructure** etc.

Initiatives by Private sector in Indian Space sector:

- India's first private launch vehicle, **Vikram-1** developed by Skyroot Aerospace.

Study reveals 77% children in India aged 6-23 months lacking minimum dietary diversity

According to WHO, **Minimum dietary diversity(MDD)** is present when a diet **contains five or more of following 8 food groups** i.e. breast milk; grains; legumes; dairy products; flesh foods ; eggs; fruits & Vegetables.

- Food intake from less than five food groups is considered **minimum dietary diversity failure (MDDF).**

Key finding of Study Related to MDD in India (Year 2019-21):

- **Regional Disparities:** Central region of India, particularly Uttar Pradesh, Rajasthan, Gujarat, Maharashtra, and Madhya Pradesh, has over 80% of **children with MDDF.**
- **Age Impact on MDDF:** Children in younger age group, i.e. 6–11 months (87%) have highest prevalence of MDDF relative to higher age groups.
- **Vulnerable Sections:** Children from Other Backward Classes (OBC) have highest MDDF (79%), followed by Scheduled Castes (77%) and Scheduled Tribes (76%).
- **Other findings:** Children of **illiterate, young and rural-residing mothers** with no exposure to mass media were more likely to be diet deficient.

Initiatives taken by India to arrest malnutrition:

- **POSHAN Abhiyan:** Promotes nutrition awareness through Jan Andolans targeting pregnant women, lactating mothers, and young children.
- **Rashtriya Poshan Mah:** Highlights collaboration among ministries to engage communities.
- **Integrated child development services (ICDS) Scheme-** Benefits children aged 0-6 years, pregnant women, and lactating mothers.

Issues in ensuring dietary diversity:

- **Nutritional Composition:** Fruits, vegetables & animal products are consumed minimally.
- **Lack of Education:** illiterate mothers have an MDDF of 81%, versus 75% for educated mothers.

Recommendations:

- **Targeted Outreach** (Prioritize efforts aimed at pregnant women, especially those with high-risk pregnancies),
- **Engaging communities** using local governance for nutrition activities.

Gram Panchayat-Level Weather Forecasting Initiative Launched to make Village Climate Resilient

For the first time localized weather forecasts will be available at the **Gram Panchayat level**, supported by **India Meteorological Department's (IMD)** expanded sensor coverage.

About Gram Panchayat-Level Weather Forecasting Initiative

- **Ministry:** The initiative, is a joint program of the **Panchayati Raj Ministry, IMD, and the Ministry of Earth Sciences.**
- **Features:**
 - ⊕ **2.5 lakh Gram Panchayats:** They can see data on the current temperature, wind speed, cloud cover, rainfall, and relative humidity.
 - ⊕ **Digital platforms:** e-GramSwaraj, Gram Manchitra, and Meri Panchayat will deliver 5-day and hourly weather forecasts.
 - ⊕ **SMS alerts:** Will be sent to panchayat representatives regarding extreme weather events. **E.g., cyclones and heavy rainfall.**

India's localised weather forecasting capabilities

- **IMD has ability to forecast weather events over a 12 km x 12 km area.**
 - ⊕ **It's a 40% improvement in forecast accuracy over the past decade.**
- **IMD is trying out experimental forecasts for 3 km x 3 km grids, with the eventual objective of making hyper-local forecasts for 1 km x 1 km areas.**
 - ⊕ **A weather information network and data system (WINDS) has been launched to generate long-term, hyper-local weather data.**
- **Other initiatives:** Agro Advisory Services (AAS) and Gramin Krishi Mausam Sewa (GKMS)

Significance of Localised Weather Forecasts:

- **Safeguard agricultural livelihoods:** Empower farmers to optimize agricultural activities like sowing, irrigation, and harvesting through **precise weather data.**
- **Strengthens grassroots governance:** By making rural populations more climate-resilient and better equipped to tackle environmental challenges.
 - ⊕ It will also **enhance rural disaster preparedness** against extreme weather events, thereby reducing **disaster-led mortality.**
- **It underscored India's role in global climate resilience:** India's IMD serves as **UN Early Warning for All advisor** to five developing nations, demonstrating leadership in global climate resilience.

UN COP16 Nature Summit to debate rules regarding Digital Sequence Information (DSI)

It aims to **streamline laws** and create a **single, multilateral system** focused on generating **revenues for conservation** from use of DSI.

About Digital Sequence Information (DSI)

- It is a **policy term** that refers broadly to **genomic sequence data and other related digital data.**
- It includes **digital representation of genetic resources and biological data**, such as DNA, RNA, and protein sequences.
 - ⊕ There is yet **no consensus as to exact interpretation** and scope of term.

Initiatives taken for DSI :

- **Kunming-Montreal Global Biodiversity Framework:** Target 13 of framework promotes sharing of benefit from Digital sequence information on genetic resources.
- **Digital sequencing Initiatives in India:** **E.g. Genome India Project** (to map genetic diversity of Indian population) etc.

Significance

- **Research:** It can aid in **biological research** like understanding evolution of life, **bioprospecting (systematic search for useful products from bio resources)** etc.
 - ⊕ **E.g. virologists used SARSCoV-2 DSI** to design diagnostic kits for COVID-19
- **Agriculture and food security:** Helps develop pest-resistant, high-yield, and climate-resilient crop varieties.
- **Species conservation:** Help identify and **mitigate risks to threatened species, track illegal trade** etc.

Challenges Associated with Digital Sequencing:

- **Lack of accountability:** **Public databases** used to share DSI, established **prior to the adoption of CBD (1992), are not accountable to CBD or its parties.**
- **Lack of equitable benefit sharing:** Primary sectors linked to DSI **generate \$1.6 trillion annually in revenues**, excluding potential benefits to country of origin and communities.
- **Other issues:** Privacy Concerns, Data Security risks, Ownership issues, Technological Constraints etc.

UN Environment Programme Releases Emissions Gap Report 2024

Report focuses on **global emission trends, future projections** and what is required from **next NDCs** to achieve long-term temperature goals of **Paris Agreement**.

Key Observations:

- **Greenhouse-gas(GHG) emissions rose to a new high** of 57 gigatons(Gt) of CO2 equivalent in 2023 (1.3 % increase from 2022).
 - ⊕ India ranks **3rd in total GHG emissions** with 4,140 MtCO2e compared to China (1st) & US (2nd).
- **Large disparities in Current and historic GHG emissions:** Six largest GHG emitters accounted for 63 % of global GHG emissions while least developed countries accounted for only 3 %
 - ⊕ Similarly, **India's historical CO2 emissions (1850–2022)** are much lower i.e 83 GtCO2 than China (300 GtCO2) & US (527 GtCO2).
- **Missing NDC targets:** Adoption of more stringent policies is required across countries to achieve NDC targets for 2030.

Recommendations for limiting global warming to 1.5°C:

- Nations must collectively commit to **cut 42 % off annual greenhouse gas emissions by 2030** and 57 % by 2035 in next NDCs.
- NDCs must include **all gases listed in Kyoto Protocol**, cover all sectors, and set specific targets.
- **Increased deployment of solar photovoltaic technologies** and wind energy could deliver 38 % of total emission reduction potential in 2035.

About Nationally Determined Contributions (NDCs):

- These are **national climate action plans** by each country to reduce GHG emissions.
- **Paris Agreement** requires that **NDCs are updated every five years** with increasingly higher ambition, taking into consideration each country's capacity.
- After original NDCs in 2015, and second round in 2020/2021, next round of NDCs – **"NDCs 3.0" are due in early 2025**.

Urbanisation and industries draining groundwater reserves in 5 Hotspots: Study

The study raises serious concerns for five hotspots: Punjab and Haryana (Hotspot I), Uttar Pradesh (Hotspot II), West Bengal (Hotspot III), Chhattisgarh (Hotspot IV) and Kerala (Hotspot V).

- India is the **largest groundwater user in world** (more than 25% of global total).

Key findings of the Study:

- **The northern and northwestern hotspots (I & II):** They have suffered a staggering loss of **approximately 64.6 billion cubic metres** of water over the past two decades.
 - ⊕ **Punjab & Haryana** were the most affected areas showing the **highest decline** in India.
- **Uttar Pradesh:** Urban expansion has shifted water usage from **agriculture to domestic needs**.
- **Chhattisgarh:** Increased **irrigation, domestic, and industrial use** are causes of reduced groundwater availability.
- **West Bengal & Kerala:** Domestic and industrial use surged by **24% & 34% respectively**.

Solutions for Depleting Groundwater Resources:

- **User rights:** Instituting a formalized groundwater rights detached from land ownership.
- **Granting community rights:** Would entail collective responsibility and equal access, mitigating the exploitative tendencies observed under private ownership
- **Artificial Groundwater Recharge in India:**
 - ⊕ **Direct surface techniques:** E.g., Flooding, Basins or percolation tanks, Stream augmentation, etc.
 - ⊕ **Direct sub surface techniques:** E.g., Injection wells or recharge wells, Recharge pits and shafts, etc.

Initiatives taken by the Government

- **Atal Bhujal Yojana (ATAL JAL):** To improve the management of groundwater resources in 7 states (Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh).
- **Jal Shakti Abhiyan- "Catch The Rain":** To promote Rainwater harvesting & water conservation.
- **Master Plan for Artificial Recharge (2020):** Aims to create 1.42 crore rainwater harvesting structures.
- **Financial assistance to States:** Financial assistance under the 15th Finance Commission tied grants can be utilized for rainwater harvesting.

Also in News



Aadhaar

The **Supreme Court (SC)** observed that while **Aadhaar card** can be used to **establish identity**, it is **not an authoritative proof for date of birth**.

About Aadhaar Card:

- It is a **12-digit unique identification number** issued by the **Unique Identification Authority of India (UIDAI)**.
 - ⊕ It can also be **deactivated or omitted by UIDAI**.
- It requires **minimal demographic and biometric information**.
- Aadhaar is **not a proof of citizenship or domicile**.

Previous SC observations:

- Aadhaar **metadata** cannot be stored for **more than six months**.
- Aadhaar **cannot** be made **mandatory** for any services **except welfare schemes**.



Mormugao Port Authority

Mormugao Port Authority has been recognized globally as an **incentive provider** on the **Environmental Ship Index (ESI) platform**.

- ESI is published by the **International Association of Ports and Harbors (IAPH)** since 2011.
- It identifies ships that perform better in reducing air emissions than required by the current emission standards of the **International Maritime Organization (IMO)**.

About Mormugao Port:

- It's a **major port** of India located in **Goa**,
- **India's first port to introduce Green Ship Incentives (Harit Shrey scheme)** through the ESI.

Harit Shrey scheme (2023):

- Incentivises ships with favourable ESI scores; and "it aims towards **decarbonization and green shipping**"



Bihta Dry Port

Bihar's first dry port also known as inland container depot (ICD) inaugurated in **Bihta near Patna**.

- Dry Ports provide a **logistics facility away from a seaport or airport for cargo handling**, storage, and transportation.

Significance of Bihta Dry Port

- **Exports:** It will boost exports, mainly agro-based, garments and leather products from Bihar.
- **Improved Logistics:** It will streamline cargo handling and transportation, lowering transportation costs, and securing storage and handling.
- **Benefits to adjoining states:** Catering to entire eastern India.
 - ⊖ It is **connected by rail to major gateway ports** of Kolkata, Haldia, Visakhapatnam, Nhava Sheva, & major national and international trade routes.



Common Pledge Initiative

The initiative was launched recently at a UN Security Council debate on women, peace, and security.

About "Common Pledge" initiative

- It is **designed to bring together mediators, governments, and civil society** to ensure the full, equal and meaningful engagement of women in peace processes.
 - ⊖ It **involves appointing women as lead mediators** and including them in mediation teams.
- It is in line with **landmark resolution 1325 (2000)** on women, peace and security.
 - ⊖ **Resolution 1325**-It was first formal acknowledgment of **gender aspects of conflict**, which emphasize women's vital role in peace building and conflict resolution.



Lake Erie

Toxins from bacteria called **microcystin** can make animals and people sick when they come into contact with infected water of Lake Erie: Study

About Lake Erie:

- Lake Erie, **fourth largest of the five Great Lakes of North America (Lake Superior, Michigan, Huron and Ontario)**.
- It's the **warmest, most shallow and most biologically diverse of the North American Great Lakes**
- It forms the boundary between **Canada (north) & US (west, south, and east)**.
- **Niagara Falls** is located on the **Niagara River**, which flows from **Lake Erie to Lake Ontario**.



Water Hyacinth

Women from **flood-prone Borchila in Assam** are transforming water hyacinth into eco-friendly products and creating jobs under **SBM-Urban**.

- Water Hyacinth is a **non-native aquatic invasive plant** that has become **widespread in India**.

Negative Impacts of Water Hyacinth

- **Water Quality Degradation:** It depletes oxygen in water, harming aquatic life.
- **Ecological Imbalance:** It can outcompete native plant species, leading to a decline in biodiversity in freshwater ecosystems.

Positive Impact/Usage of Water Hyacinth

- It can **reduce water pollution** (Absorb heavy metals, toxins) and process animal feed, compost, and bioenergy.
- It can **be harvested and processed into eco-friendly products** like crafts and furniture.



Carbon border adjustment mechanism (CBAM)

Kazan Declaration adopted by BRICS rejected CBAM, calling it discriminatory.

About carbon border adjustment mechanism (CBAM)

- It is European Union's (EU) policy to impose a **carbon tax** on imports of certain products from countries with less stringent climate policies. **E.g. Steel**.
- Carbon Border Tax aims to **prevent companies shifting production to less-regulated countries**.
- **CBAM, implemented in 2023**, moves from transitional phase to full enforcement by **2026**.

India's Concerns

- It could create **new trade barriers** for its exports to the EU.
- **CBAM tax burden** would represent **0.05% of India's GDP** (Centre for Science and Environment).



SIMBEX 2024

31st edition of **Singapore India Maritime Bilateral Exercise (SIMBEX)** is going on in Eastern Naval Command at **Visakhapatnam**.

- SIMBEX, which began as **'Exercise Lion King' in 1994** is one of the most significant bilateral maritime collaborations between **Indian Navy and Republic of Singapore Navy (RSN)**.

Personality in News



Rani Chennamma (1778 -1829)

On the **200th anniversary**, a commemorative postage stamp was released to celebrate **Rani Channamma's glorious victory on 23rd October, 1824 against the British rule**.

- She was born in in present-day **Belagavi district in Karnataka**.

About Rani Chennamma

- She was the **Queen of Kittur**.
- After death of her husband & only son **she adopted Shivalingappa** with aim of making him heir to throne of Kittur.
 - ⊖ However, British **refused to recognize Shivalingappa under the 'doctrine of lapse'** and subsequently led to the Revolt.

About Kittur Revolt (1824)

- It is regarded as the **first Indian armed rebellion** against British EIC. Also, one of the earliest **woman-led anti-colonial struggles**.
- Though British lost **1st battle in 1824**, **Rani Chennamma was later captured & imprisoned, till her death in 1829**.

