

NEWS TODAY

Union Cabinet approved the Export Promotion Mission (EPM) for six years

This initiative, first announced in the Union Budget 2025–26, is designed to serve as a comprehensive and flexible framework to bolster India's export ecosystem amidst evolving global trade challenges.

Key Features of Export Promotion Mission (EPM)

- **Financial Outlay and Timeline:** Rs. 25,060 crore from FY 2025–26 to FY 2030–31.
- **Mission Objective:** To enable **Affordable trade finance** (particularly for MSMEs); **Enhanced competitiveness** through compliance and certification; **Greater international market access, job creation**, etc.
- **Target:** To support **MSMEs, first-time exporters, and labour-intensive sectors**, such as Textiles, Leather, Gems & Jewellery, etc.
- **Mission Architecture:** The mission will operate through **two distinct but integrated sub-schemes**:
 - ⊕ **Niryat Protsahan (Financial Support):** Improving access to **affordable trade finance** through financial instruments, such as
 - ◆ Interest subvention, collateral guarantees, credit cards for e-commerce exporters, etc.
 - ⊕ **Niryat Disha (Non-Financial Support):** Designed to **enhance the market readiness and competitiveness** of Indian exporters through
 - ◆ Export quality and compliance support, assistance for international branding, export warehousing and logistics, etc.
- **Implementing Agency:** The **Directorate General of Foreign Trade (DGFT)** in collaboration with **Department of Commerce, Ministry of MSME, Ministry of Finance, Financial Institutions, Export Promotion Councils, State Governments**, etc.
- **Consolidation of Schemes:** Integrates and modernizes key existing schemes, such as the **Interest Equalisation Scheme (IES)** and the **Market Access Initiative (MAI)**.

Related News: Cabinet approves Credit Guarantee Scheme for Exporters (CGSE)

- **Total Credit Support:** Up to additional **₹20,000 crore collateral-free** with 100% guarantee coverage by **National Credit Guarantee Trustee Company Limited (NCGTC)**.
- **Beneficiaries:** Both MSME and non-MSME exporters.
- **Objective:** To enhance liquidity, support market diversification, boost employment, and improve global competitiveness.
- **Implementing Agency:** Department of Financial Services (DFS) through NCGTC.
- **Oversight Body:** A management Committee formed under the chairmanship of Secretary, DFS.

India-Botswana Announces Cheetah Translocation Pact

India-Botswana formally announced translocation of **eight cheetahs** to India as a part of 'Project Cheetah'.

About Project Cheetah

- **About:** Launched in **2022**, Project Cheetah aims to **translocate African cheetahs** to India. It is the **world's first intercontinental large wild carnivore translocation initiative**.
 - ⊕ In **2022**, **eight cheetahs** from **Namibia** were translocated to **Kuno National Park**, followed by **twelve cheetahs** from **South Africa** in **2023**.
- **Implementing agency:** National Tiger Conservation Authority (NTCA).
 - ⊕ NTCA is a **statutory body** under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of **Wildlife (Protection) Act, 1972**, as amended in 2006.
- **Cheetah Project Steering Committee:** Established by NTCA in 2023 to oversee, evaluate, and advise on implementation of Project Cheetah.
- **It operates under the umbrella of Project Tiger (renamed as Project Tiger and Elephant from 2023-24).**

Significance of Re-introducing Cheetah in India

- **Ecological Restoration:** Cheetahs are apex predators and play a vital role in maintaining the balance of prey species and the overall health of grassland ecosystems.
- **Biodiversity Conservation:** Cheetah will serve as a flagship to save not only its prey-base, but also other endangered species of the grassland and semi-arid ecosystems.



About Cheetah (Acinonyx Jubatus Venaticus)

- World's fastest Mammal and the only large carnivore to be **extinct in India (1952)**.
- Unlike other big cats (lions, tigers, leopards, and jaguars) cheetahs don't roar.
- **Two Species** of Cheetahs exists :
 - ⊕ **African Cheetah** (IUCN Status- Vulnerable).
 - ⊕ **Asiatic Cheetah** (IUCN Status- Critically Endangered).
- Found only in the **arid regions of eastern Iran in Asia, and in Africa**.

Hydrogen Valley Innovation Clusters (HVICs)

Union Minister of Science and Technology announced that 4 HVICs are being developed across the country to demonstrate complete green hydrogen value chain.

About HVICs

- **Aim:** To demonstrate **full hydrogen value chain** (production, storage, transport and utilization) and India's **first large-scale hydrogen demonstration projects**.
- Originally conceptualized by the **Department of Science and Technology**, they are now integrated under the **National Green Hydrogen Mission (NGHM)**.
 - ⊕ **NGHM is an Umbrella** programme launched in **2023** to create a Green Hydrogen ecosystem. It **targets** to produce **5 MMT** of Green Hydrogen annually by **2030**.

What is Green Hydrogen?

- Hydrogen produced using renewable energy, such as solar or wind power, instead of fossil fuels.
- **Process:** By **electrolysis** (splitting water into oxygen and hydrogen) or **gasification of biomass**.
- **Criteria:** Emissions from the process should not be more than **2 kg of CO₂ equivalent for every 1 kg of Hydrogen produced**.
- **India's First 3 Green Hydrogen Hubs:** Deendayal Port (Gujarat), V.O. Chidambaranar Port (Tamil Nadu), and Paradip Port (Odisha).

Green Hydrogen



Opportunities/Significance

- ⊕ **Abundant Renewables:** Vast solar & wind potential
- ⊕ **Energy Security:** Reduces fossil fuel imports
- ⊕ **Export Hub:** Global market opportunity
- ⊕ **Industrial Use:** Decarbonize steel, refineries, fertilizers
- ⊕ **Job Creation:** New employment in manufacturing & R&D
- ⊕ **Climate Goals:** Key to net-zero by 2070



Challenges

- ⊕ **High Costs:** More expensive than grey hydrogen
- ⊕ **Infrastructure Gap:** Need pipelines, storage & distribution
- ⊕ **Water Scarcity:** Large water needs in stressed regions
- ⊕ **Technology:** Advanced electrolyzers required
- ⊕ **Grid Issues:** Intermittent renewable power supply
- ⊕ **Policy Needs:** Frameworks, incentives & standards

Prime Minister of India concludes two day visit to Bhutan

Key Outcomes of the Visit

- **Energy:**
 - ⊕ Joint inauguration of the **1,020 MW Punatsangchhu-II project** (to supply electricity to both India and Bhutan); renewed work on the **1,200 MW Punatsangchhu-I**.
 - ⊕ India extended a concessional **Line of Credit of ₹4000 crore** for Bhutan's energy sector.
 - ◆ This will be **India's first line of credit** for supporting development efforts of Bhutan.
- **Economic:** India extended support to **Bhutan's 13th Five Year Plan** (including **Economic Stimulus Programme**) and the **Gelephu Mindfulness City** of Bhutan.
- **Cultural Exchange:** Public exhibition of sacred **Holy Piprahwa Relics of Lord Buddha** from India in Thimphu.
 - ⊕ Piprahwa Relics (associated with the **mortal remains** of Buddha) were discovered in 1898 in **Piprahwa, Siddharthnagar** (ancient Kapilavastu), Uttar Pradesh.

India-Bhutan Relations

- **Special Partnership:** India is Bhutan's leading development partner.
 - ⊕ The **1949 Treaty of Friendship** (revised in 2007) established mutual sovereignty, close cooperation and open borders.
- **Strategic Convergence:** Close coordination on **regional stability, secure borders** (significant for **India's Chicken Neck**, e.g. **Doklam conflict** in 2017) and **sustainable development**.
- **Economic Linkages:**
 - ⊕ **Bilateral trade:** With **\$1.7 Billion** (In 2023-24 excluding electricity), India is **Bhutan's largest trade partner**, (nearly **80%** of Bhutan's trade)
 - ⊕ **FDI from India:** 55% of total FDI in Bhutan.
 - ⊕ **Connectivity:** E.g. **cross-border rail links** (such as **Gelephu-Kokrajhar** and **Samtse-Banarhat**).
- **People-to-People Ties:** Shared Buddhist heritage and robust cultural exchanges.
- **Key Issues:** Delays in hydropower projects, need to diversify beyond hydropower, Chinese influence, etc.



Also In News



Quantum Diamond Microscope

IIT Bombay develops India's first Quantum Diamond Microscope under the National Quantum Mission.

About Quantum Diamond Microscope

- **Technology:** Uses **Nitrogen-Vacancy (NV) centres** in diamond to image magnetic fields at **nanoscale resolution at room temperature**.
- **Applications:** Enables advanced research in neuroscience, materials science and non-destructive semiconductor testing.
- **Significance:** Secures India's first patent in quantum sensing and strengthens national capabilities in frontier instrumentation.



Protection of Plant Varieties and Farmers' Rights (PPV&FRA) Act, 2001

'Plant Genome Saviour Awards Ceremony' was held to celebrate 25 years of the Protection of Plant Varieties and Farmers' Rights (PPV&FRA) Act, 2001.

About PPV&FRA Act, 2001

- **Objectives:** To establish an effective protection system for plant varieties, farmers' and breeders' rights; encourage new variety development and seed industry growth.
- It recognizes following **rights**:
 - ⊕ **Farmers' rights:** Registration and protection of new, farmers', and extant varieties; rewards for conservation.
 - ⊕ **Researchers' rights:** Use of any registered variety for experiments.
 - ⊕ **Breeders' rights:** Exclusive rights to produce, sell, import or export etc.
- **Protection of Plant Varieties and Farmers' Rights Authority (PPV&FRA):** Established in 2005 as a **statutory body** under **Ministry of Agriculture and Farmers Welfare**.
 - ⊕ **Functions:** Registration of new plant varieties, national gene bank etc.

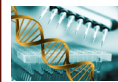


Fourier Transform Infrared Spectroscopy

Recent reports highlight the use of **FTIR spectroscopy** as a rapid and effective tool for detecting **material evidence** in post-blast forensic investigations.

About Fourier Transform Infrared Spectroscopy

- It is a technique used to **analyze materials** by measuring how they **absorb infrared light**.
- It uses a special device called an **interferometer** to record data, which is then processed by a computer to make a graph (called a spectrum).
- **Significance:** non-destructive (preserve sample); require minimal material, **provides both qualitative & quantitative data etc.**
- **Applications:** Commonly used across fields such as pharmaceuticals, materials science, environmental analysis, and forensics



DNA Identification

DNA **Identification**/profiling used to identify suspects or victims at Red fort blast site.

DNA Identification

- It is a technique used to identify individuals by analyzing unique patterns in their DNA.

Key Methods

- **Short Tandem Repeat (STR):** Examines short repeating DNA sequences in the nucleus.
- **Mitochondrial DNA (mtDNA):** Used if nuclear DNA is degraded. mtDNA is abundant and maternally inherited, allowing matches with maternal relatives.
- **Y Chromosome:** Focuses on STRs on the Y chromosome, inherited from father to son. Identifies male victims by matching paternal male relatives.
- **Single Nucleotide Polymorphisms (SNPs):** Used for highly degraded DNA.
 - ⊕ SNPs are single-base differences unique to individuals, matched with personal items like toothbrushes.





Pratyush Sinha Committee

A SEBI-appointed High-Level Committee (HLC), under the chairmanship of Pratyush Sinha recommended stronger rules to prevent conflicts of interest among top officials within SEBI.

Key Recommendations of the Committee

- **Mandatory Disclosure:** Of assets and liabilities by the Chairperson, whole-time members and senior officers.
- **Insider Classification:** Top SEBI leadership to be categorised as "insiders" under insider-trading regulations.
- **Investment Restrictions:** Senior officials and dependent family members allowed investing **only through pooled, professionally-managed funds.**
- **Ethics Oversight:** Creation of an **Office of Ethics & Compliance, digital disclosure registry, and formal recusal reporting.**
- **Dedicated whistleblower channel** for conflict of interest reporting.



Aurora

Auroras were witnessed in Northern America, Australia etc. due to a **cannibal solar storm.**

- A **cannibal solar storm** happens when a **faster solar storm catches up with an earlier storm**, resulting in a stronger storm, affecting GPS and power systems.

About Aurora

- An aurora is a **natural light display in the night sky**, usually only appearing in **lower Polar Regions.**
- They occur when **high-energy charged particles from the Sun** collide with **atoms in the upper atmosphere.**
 - ⊕ E.g. **Oxygen** (green and red light), **Nitrogen** (blue and purple).
- Near the North Pole, it is called an **aurora borealis** or **northern lights** and near the South Pole, it is called **aurora australis** or the **southern lights.**



Gynandromorphism

Scientists in Thailand discovered a rare spider that is **half-female and half-male (gynandromorphism)** named *Damarchus inazuma*.

About Gynandromorphism

- It is an **abnormal reproductive condition** in which **both female and male characteristics are displayed** in the same individual.
- It is most frequently recognized in organisms that have **strong sexual dimorphism** such as **certain butterflies, spiders and birds.**
- **Cause:** It is typically an **event in mitosis during early development.**
 - ⊕ **One of the dividing cells does not split** its sex chromosomes, producing mixed male/female cell lines.



Ricin and Ammonium Nitrate

Recently, terror attacks were averted related to Ricin poison and Ammonium Nitrate.

About Ricin

- It is a **protein** found naturally in **castor beans** and can be made from waste residue of castor beans.
- **Lethal poison:** Even 1 mg mixed in food can kill an adult. There is **no antidote or specific treatment** for ricin poisoning.
- It works by getting inside the cells of a person's body and **preventing the cells from making the proteins they need.**

Ammonium Nitrate

- Pure **ammonium nitrate (NH₄NO₃)** is a **white, water-soluble, crystalline substance** with a **melting point of 170°C.**
- It is **not explosive by itself.** However, it is **one of the ingredients used for the manufacture of explosives.**