

NEWS TODAY

India's Defence Exports Reached an All-time High of Rs. 21,083 crore in FY 2023-24: Ministry of Defence

- This indicated that **defence exports have grown by 31 times in last 10 years** as compared to FY 2013-14 and growth of 32.5% over FY 2022-23.
 - ⊕ Also, number of **export authorisations rise** to 1,507 in FY 2023-24.
 - ⊕ **Private sector** contributed about 60% in defence exports.
- **Significance of Growth in Defence exports**
 - ⊕ Enhances **Self-reliance in defence** by increasing defence manufacturing capabilities.
 - ⊕ Encouraging **use of new technology**.
 - ⊕ **Integration with Defense value chain** by exporting to major countries like Italy, Nepal, etc.
 - ⊕ **Enhancing diplomatic relations** between countries, strengthen strategic partnerships, and fostering cooperation in defense.
- **Challenges with Defence Export**
 - ⊕ Large orders are required to ensure profitability given **high costs of manufacturing armaments**.
 - ⊕ **Delays in export clearances** decreasing competitiveness of Indian defence products.
- **Initiatives taken to promote Defence exports**
 - ⊕ Foreign Direct Investment was enhanced upto **74% through automatic route**.
 - ⊕ **Innovation for Defence Excellence (iDEX)** to achieve self - reliance and foster innovation and technology development in Defence.
 - ⊕ **Defence Acquisition Procedure (DAP 2020) increased Indigenous Content** in various categories of procurement (refer table).
 - ⊕ **Establishment of Defence Industrial Corridors** in Uttar Pradesh and Tamil Nadu.

Category	Indigenous Content
Buy (Indian- – Indigenously Designed Developed and Manufactured) i.e. Buy (Indian- IDDM)	Indigenous design and ≥ 50%
Buy (Indian)	In case of indigenous design ≥ 50%, otherwise ≥ 60%
Buy and Make (Indian)	≥ 50% of the 'Make' portion
Buy (Global - Manufacture in India)	≥ 50%
Buy (Global)	Foreign Vendor – Nil Indian Vendor ≥ 30%

Expert Committee on developing GIFT IFSC as 'Global Finance and Accounting Hub' submits report to IFSCA

- Committee was formed following a **Ministry of Finance notification**.
 - ⊕ The notification classified **book-keeping, accounting, taxation, and financial crime compliance** as 'financial services' under **International Financial Services Centre (IFSC) Act, 2019**.
- **Gujarat International Finance Tech- City (GIFT City)-IFSC was established as Special Economic Zone (SEZ) in 2015, in Gujarat.**
 - ⊕ An **IFSC caters to customers outside the jurisdiction of the domestic economy**. Such centres deal with flows of finance, **financial products and services across borders**.
- **Opportunities for GIFT IFSC to become Global Finance and Accounting Hub**
 - ⊕ **Strong technology-driven outsourcing capabilities**.
 - ⊕ **Large talent pool of skilled manpower** in the fields of accounting, etc.
 - ⊕ **"Accounting and finance services"** recognised as one of the **12 Champion sectors in services for exports**.
- **Recommendations**
 - ⊕ **Proposes a new regulation**, providing for comprehensive and inclusive definition for Bookkeeping, Accounting, Taxation, and Financial Crime Compliance Services.
 - ◆ Only firms that are registered as a company or a Limited liability partnership should be allowed to offer these services.
 - ⊕ **Long-term strategies** for education and skill acquisition through developing specialized degree or diploma programs, etc.

IFSC Authority

- **IFSC Authority** is a **statutory body** established under **IFSC Act, 2019**.
- A **unified regulator** for development and regulation of financial products, financial services and financial institutions in IFSCs in India.

International Organization for Migration (IOM) released a report “A Decade of Documenting Migrant Deaths”

- Report was released on completion of **ten year of IOM’s Missing Migrants Project (MMP)**.
 - ⊕ MMP was launched in 2014 to **document deaths and disappearances of people in migration process** towards an international destination.
 - ⊕ **IOM, Established in 1951**, is leading intergovernmental organization in field of migration.
- Headquartered at **Geneva (Switzerland)** and consists of **175 member states (including India)**.
- **Key findings**
 - ⊕ **More than one in three migrants** whose country of origin could be identified comes **from countries in conflict**.
 - ⊕ **More than two-thirds** of those whose **deaths were documented** through IOM’s MMP are **unidentified**.
 - ⊕ **Major causes of death:** Drowning; Vehicle accidents; Suffocation due to fuel inhalation, Inadequate shelter, healthcare etc.
- **Migration** refers to movement of persons away from their place of usual residence, either across an international border or within State.
- **Factors behind Migrations:** Urbanisation, Marriage, Economic disparities, Political instability, Impacts of climate change, etc.
- **Consequences of migration**
 - ⊕ Intermixing of diverse cultures and **evolution of composite culture**.
 - ⊕ **Overcrowding in cities** led to their haphazard growth and slum development.
 - ⊕ Changes **resource- population ratio**.
 - ⊕ **Brain drain** i.e. skilled people migrate from poorer countries to developed countries for better economic opportunities.

Initiatives taken related to Migration

- ⊕ **Global:**
 - ⊕ **Global Compact for Safe, Orderly and Regular Migration (GCM):** First intergovernmental agreement, prepared under United Nations, to cover all dimensions of international migration in holistic manner.
- ⊕ **India:**
 - ⊕ **Welfare measures in destination countries** like Pravasi Bharatiya Bima Yojana.
 - ⊕ **Pre-departure orientation Training** to better prepare migrants for their life abroad and awareness of their rights, duties, etc.

Scientists discover evidence of Ozone (O₃) on Jupiter’s moon Callisto

- The discovery came to light while the researchers were investigating the chemical evolution of **Sulphur dioxide (SO₂)** on Jupiter’s moon, with Ultraviolet (UV) irradiation.
 - ⊕ This revealed the traces of formation of O₃ on the Callisto.
- **About O₃ and its Significance**
 - ⊕ **Formed of three oxygen atoms, it is an unstable compound** and can be easily formed and broken down.
 - ⊕ **O₃ layer in Stratosphere** (around 15-35 km above ground) acts as **invisible shield and protects from harmful UV radiation** from Sun.
 - ◆ UV rays can **damage DNA, trigger mutations, and cause skin cancer** and cataracts in humans.
 - ◆ UV light also **inhibits plant growth** and has detrimental effects on various organisms.
 - ⊕ **However, O₃ found near surface of earth** is considered a pollutant which has negative effects on humans, plants and animals.
- **About Callisto**
 - ⊕ It was **discovered by Galileo Galilei**.
 - ⊕ Callisto is **Jupiter’s second largest moon and third largest moon in solar system**.
 - ◆ Jupiter has **95 officially recognised moons** of which **largest is Ganymede**.
 - ⊕ It is **most heavily cratered object in our solar system**.

Prime Minister attends Commemoration ceremony of 90 years of Reserve Bank of India (RBI)

» Brief History of RBI

- ⊕ **Royal Commission on Indian Currency, 1926 (Hilton Young Commission)** recommended establishment of RBI, which was reiterated by **Indian Central Banking Enquiry Committee, 1931**.
- ⊕ **RBI was established in 1935**, under **Reserve Bank of India Act, 1934** with **Sir Osborne Smith** as its first Governor.
- ⊕ It was **nationalised in 1949**.

» Organisational Structure

- ⊕ Governed by a **Central Board of Directors** headed by **Governor** and four **Deputy-Governors, appointed by Central Government**.
- ⊕ Governor and Deputy Governor shall hold office for such term **not exceeding five years as Central Government may fix when appointing them**, and shall be **eligible for re-appointment**.

» Functions of RBI

- ⊕ **Monetary Authority** to formulate, implement and monitor monetary policy to maintain price stability.
- ⊕ **Regulator and supervisor of financial system** to maintain public confidence.
- ⊕ **Issuer of currency** to supply currency notes and coins.
- ⊕ **Regulator and Supervisor** of Payment and Settlement Systems.
- ⊕ **Banker to Government and Banks**.

» Key Achievements

- ⊕ **Gross Non-Performing Assets** of public sector banks reduced to 3% (2023) from 11.25% (2018).
- ⊕ Size of **RBI's balance sheet stands around Rs 63 lakh crore (2023)**.
- ⊕ **Foreign exchange Reserve** of bank currently stands around **\$642 Billion**.

Artificial sun sets the new world record of 48-second-long operation at 100 million degrees

- » Korea Superconducting **Tokamak Advanced Research (KSTAR)** fusion reactor reached temperatures **seven times that of the Sun's core** in latest advancement for nuclear fusion.
- » KSTAR also maintained **high confinement mode (H-mode)** for **over 100 seconds**
 - ⊕ H-mode is a **stable plasma state**.
 - ⊕ Plasma is **hot, charged gas made of positive ions and free-moving electrons** with unique properties distinct from solids, liquids, or gases.
- » **About Tokamak:**
 - ⊕ Scientists generally use **donut-shaped reactor** called tokamak where **hydrogen variants** are **heated** to extraordinarily high temperatures to **create a plasma**.
 - ⊕ This is called **artificial Sun** because it **replicates** reaction of **nuclear fusion** taking place in Sun.
- » Nuclear fusion is process by which **two light atomic nuclei combine** to form single heavier nuclei while releasing massive amounts of energy.
- » **Significance of Nuclear Fusion:**
 - ⊕ **Abundant energy:** Releases nearly four million times more energy than burning of coal, oil, or gas.
 - ⊕ **Limited risk of proliferation:** No enriched materials used that could be exploited to make nuclear weapons.
 - ⊕ **No risk of meltdown:** Fusion reactors are considered to be inherently safe.
 - ⊕ Fuel is **inexpensive and abundant** in nature.

Key Challenges associated with nuclear fusion:

- » **Development of materials** that can **withstand fusion conditions for decades**.
- » **Physics of Plasma** is not well understood by researchers.
- » maintaining extremely high **temperature** of around **50-million-degree celsius**.

Also in News



One Vehicle, One FASTag

- » National Highways Authority of India (NHA)'s norms of 'One Vehicle, One FASTag' has come into force.
- » **About One Vehicle, One FASTag**
 - ⊕ Aims to **discourage use of single FASTag for multiple vehicles** or linking multiple FASTags to a particular vehicle.
 - ⊕ This will enhance **efficiency of electronic toll collection system** and provide seamless movement at toll plazas.
- » **About FASTag**
 - ⊕ It is a device that **employs Radio Frequency Identification technology** for making toll payments directly while vehicle is in motion.
 - ⊕ Flagship programme of **Ministry of Road Transport and Highways & NHAI**.



Snow leopard (Panthera Uncia)

- » Experts had pushed for **Conservation of Snow leopards**, citing them as important "**Indicator Species**".
 - ⊕ **Indicator species** is an organism whose presence or absence will reflect specific condition in its ecosystem.
- » **Protection Status:**
 - ⊕ **IUCN:** Vulnerable
 - ⊕ **CITES:** Appendix I
- » **Habitat:** There are **12 snow leopard range countries** namely **Afghanistan, Bhutan, China, India, Kazakhstan** etc.
 - ⊕ Currently, there are around **718 snow leopards in India**
- » **Characteristics:**
 - ⊕ live in high-altitude mountainous terrain, usually at **elevations of 3,000-4,500m**.
 - ⊕ Have **short forelimbs and long hind limbs** for traversing in rugged environments.

SEBI Complaint Redress System (SCORES 2.0)

- Securities and Exchange Board of India (SEBI) launched **SCORES 2.0 version** which **strengthens investor complaint redress mechanism** in securities market by making process more efficient.
- **SCORES** is an online system where **investors in securities market can lodge their complaints** through web URL and an App.
- **Salient features of SCORES 2.0**
 - ⊕ Reduced timelines for redressal of investor complaints across Securities Market i.e. **21 Calendar days from date of receipt of complaint.**
 - ⊕ **Introduction of auto-routing of complaints** to concerned regulated entity to eliminate time lapses.
 - ⊕ Integration with **KYC Registration Agency database** for easy registration.

Negative Leap Second

- Researchers have shown that **increased ice melting** may have delayed need for adding negative leap second.
- Negative leap second is a second that is subtracted from clocks to keep them aligned with Earth's rotation.
 - ⊕ It is done when **Earth is spinning more quickly** and length of day is decreasing.
- It is **opposite of positive leap second** (one-second addition to clocks).
 - ⊕ It is done when length of day is rising (**Earth is spinning more slowly**).
- So far, there have been **27 positive leap seconds**, but **no negative leap seconds**.

Konda Reddi Tribe

- The tribe shared their **indigenous knowledge** about Indian Laurel tree with Forest officials.
- **About Konda Reddis**
 - ⊕ Particularly **Vulnerable Tribal Group** inhabiting banks of **river Godavari** in Andhra Pradesh.
 - ⊕ They practise **Podu cultivation**, a type of shifting cultivation.
- **About Indian Laurel Tree (Terminalia tomentosa)**
 - ⊕ **Deciduous trees** growing up to 30 m tall.
 - ⊕ **Has the ability to store water** in its trunk during summers.
 - ⊕ Tree is used in **haemorrhage, ulcers, fractures** etc.
 - ⊕ Known as **Indian Silver Oak**, its timber has great **commercial value**.

National Information System for Climate and Environment Studies (NICES) Programme

- NICES programme has invited Indian researchers to join in combating climate change.
- **About NICES Programme**
 - ⊕ Conceptualized in 2012, it is operated by **Indian Space Research Organisation (ISRO)** and **Department of Space** along with **other ministries** under framework of **National Action Plan on Climate Change.**
 - ⊕ Its objective is **generation and dissemination of long-term Essential Climate Variables**, derived from Indian and other Earth Observation satellites, which are crucial for characterizing Earth's climate.
 - ⊕ Now, aims to **enhance participation of academia and research institutions** in addressing climate change-related challenges through multidisciplinary scientific investigations.

Kodaikanal Solar Observatory (KSO)

- KSO is entering its **125th year of establishment**
- It was **established in 1899** and subsumed then Madras Observatory.
- It was set up to **obtain data on how Sun heats up Earth's atmosphere** and to understand monsoon patterns.
- Kodaikanal was chosen for its **proximity to equator** and its **dust-free high-altitude location.**
- Observatory is currently under **Indian Institute of Astrophysics** and is **located in Palani range (Tamil Nadu).**
- It also houses telescopes like
 - ⊕ H-alpha telescope, Twin Telescope, WARM (White light Active Region Monitor) telescope etc.

Insoluble Sulphur/Polymeric Sulphur

- An anti-dumping probe has been initiated on 'insoluble sulphur' imports from China and Japan.
- **Insoluble Sulphur** is amorphous form of sulfur that does not dissolve in carbon disulfide.
- **Applications**
 - ⊕ It is an **important rubber additive agent**, used in **automobile rubber parts and other rubber products.** E.g., Tyres, Shoes.
 - ⊕ It is used as **vulcanization accelerator** in rubber industry.
- Vulcanization is **chemical process** that **hardens rubbers** by **cross-linking rubber molecules** with other substances.
 - ⊕ It **improves product quality, wearability, etc.**

Places in News



Tajikistan (Capital: Dushanbe)

- Tajikistan's state security service has detained nine individuals in relation to Moscow concert hall attack.
- **Political features**
 - ⊕ **Landlocked** country in Central Asia.
 - ⊕ Bordered by **Kyrgyzstan** (north), **China** (east), **Afghanistan** (south), and **Uzbekistan** (west and northwest).
- **Geographical features**
 - ⊕ **Highest Peak:** Imeni Ismail Samani or Ismoil Somoni.
 - ⊕ **Major rivers:** Amu Darya, Vakhsh River.

