

## DAILY CURRENT AFFAIRS (DCA)

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## DEEP-SEA METALS: A VITAL RESOURCE OR ENVIRONMENTAL DISASTER

### Context

- **The International Seabed Authority (ISA)**, is working on a set of rules to regulate the extraction of raw materials from the ocean floor.

### Current status of deep-sea mining

- The ISA wants to define a set of **legally binding** rules to manage deep-sea mining **by 2025**.
  - ♦ Without these rules, any planned mining operation will not be able to get started.
- **32 countries of ISA** are in favor of suspending deep-sea mining outright, a stance supported by environmental organizations and many marine scientists.
- **China, along with Norway, Japan, and Nauru** have pushed for a quick agreement so that mining companies can start putting their plans into action.

### What is deep-sea mining ?

- Deep-sea mining involves hoovering **polymetallic nodules** off the ocean floor and piping them up to vessels on the water's surface.
- Polymetallic nodules are **lumps of iron, manganese hydroxides, and rock** partially submerged in many parts of the ocean floor. These nodules contain **copper, lithium** and other treasured elements.
  - ♦ If their concentration exceeds **10 kg per sq. m**, mining them is considered to be economically feasible.

### How could deep-sea mining harm marine ecosystems?

- **Disruption of Habitats:** Mining robots would physically destroy the ocean floor, eliminating habitats for over 5,000 different species, many of which are not well-researched.
  - ♦ These ecosystems are extremely fragile, with species highly adapted to specific conditions. The destruction of their habitat could lead to a loss of biodiversity.
- **Sediment Plumes:** The operations would create large clouds of sediment that will smother marine organisms, disrupt feeding, and reduce water quality.

- **Oxygen Production:** A study indicated that minerals in manganese nodules can produce oxygen through electrolysis in the absence of sunlight. Destroying these nodules could disrupt this oxygen production, affecting the broader marine environment.
- **Technical Challenges:** The technology for deep-sea mining is not fully developed, and the extreme water pressure at these depths makes it difficult to repair robots and other equipment.
- **Ethical Considerations:** A growing number of major companies, including SAP, BMW, Volkswagen, Google and Samsung SDI have pledged not to use any raw materials recovered from the seafloor, and have said they would not support mining activities.

### Way Ahead

- Deep-sea mining could have profound and irreversible impacts on marine ecosystems.
- The destruction of fragile habitats, direct harm to marine life, disruption of ecological processes, and potential economic and operational challenges highlight the need for cautious and well-informed decision-making before proceeding with such activities.

### United Nations Convention on the Law of the Sea (UNCLOS)

- **UNCLOS** was adopted in **1982**, and came into force in **1994**.
- It lays down a **comprehensive regime of law and order in the world's oceans** and seas establishing rules governing all uses of the oceans and their resources.
- It establishes the **International Seabed Authority** to regulate mining and related activities on the ocean floor beyond national jurisdiction.

### The International Seabed Authority (ISA)

- The International Seabed Authority (ISA) is an autonomous international organization established under
  - ♦ The **1982** United Nations Convention on the Law of the Sea (UNCLOS) and
  - ♦ The **1994** Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea.
- All States Parties to UNCLOS are members of ISA.
  - ♦ As of May 2023, ISA has **169 Members**, including **168 Member States and the European Union**.
- **Headquarters:** Kingston, Jamaica

Source: IE

## 14TH ORGAN DONATION DAY

### Context

- The **14th Organ Donation day** was observed on the **3rd August**.

### About

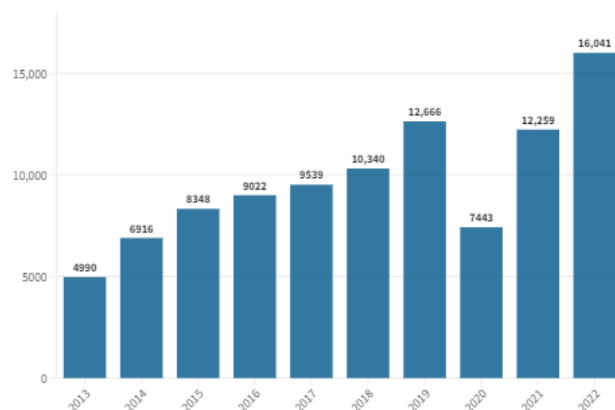
- The Indian Organ Donation Day (IODD) is **observed annually since 2010** to augment awareness about brain stem death and organ donation, and encourage the citizens to donate organs and tissues after death.
- This year under the campaign “**Angdaan Jan Jagrukta Abhiyaan**” various awareness activities have been organized across the country.
  - ♦ Under the Abhiyaan, the **month of July** was observed as the **Organ Donation Month**.

### Organ Transplant and Donation

- **Organ Transplantation/ Donation** is a surgical procedure in which an organ, tissue or a group of cells are removed from one person and surgically transplanted into another person.
- In India, the organ transplantation **is one of the lowest** in comparison with the western nations.
- According to the Health Ministry's data, the number of donors (including deceased) only grew from **6,916 in 2014 to about 16,041 in 2022**.

#### Inadequate rise

The chart shows the number of organ donors, according to data from the Ministry of Health. A total of 16,041 donations were recorded in 2022.



Source: National Organ & Tissue Transplant Organisation • The Hindu Graphics

### National Organ and Tissue Transplant Organisation (NOTTO)

- It is a National level organization set up under the **Directorate General of Health Services**, Ministry of Health and Family Welfare.

- **Functions:** National Network division of NOTTO function as apex center for All India activities of coordination and networking for procurement and distribution of Organs and Tissues and registry of Organs and Tissues Donation and Transplantation in the country.

### Benefits of Organ Donation

- **Saving Lives:** Organ donation saves lives by providing individuals suffering from organ failure with a chance for a healthier and longer life.
- **Addressing Organ Shortages:** There is a global shortage of organs available for transplantation. Organ donation helps address this shortage and increases the pool of organs available for those in need.
- **Promoting Human Solidarity:** It is a selfless act that transcends cultural, racial, and geographical boundaries, bringing people together in a shared commitment to saving and improving lives.
- **Raising Awareness:** Organ donation initiatives help raise awareness about the importance of donation and transplantation.
- **Legal and Ethical Considerations:** Organ donation is often guided by legal and ethical frameworks that prioritize the autonomy and consent of donors.

### Issues

- High Burden (Demand Versus Supply gap).
- Poor Infrastructure especially in Govt. sector hospitals.
- Lack of Awareness of the concept of Brain Stem Death among stakeholders.
- Poor Awareness and attitude towards organ donation--- Poor Deceased Organ donation rate.
- Lack of Organized systems for organ procurement from deceased donors.
- Prevention and Control of Organ trading.
- High Cost (especially for uninsured and poor patients).

### Laws and Rules Governing Organ Transplantation in India

- **Transplantation of Human Organs Act 1994:** It is the primary legislation related to organ donation and transplantation in India and is aimed at **regulation of removal, storage and transplantation** of human organs for therapeutic purposes and for prevention of commercial dealings in human organs.

- **Transplantation of Human Organs (Amendment) Act, 2011:** It allows swapping of organs and widens the donor pool by including grandparents and grandchildren in the list.
- **Transplantation of Human Organs and Tissues Rules (THOT), 2014:** It has many provisions to remove the impediments to organ donation while curbing misuse/misinterpretation of the rules.

### Suggestions

- **The Director-General of Health Services (DGHS)** has urged the health authorities to ensure that a **unique NOTTO-ID** for both the donor and recipient of organs is generated by the hospital concerned in all cases of organ transplants.
- The States and U.T.s must devise a system of **regular inspection of the registered transplant/retrieval hospitals** to ensure on-site monitoring of their activities, quality of transplantation, post operative follow-up of donor and recipient, and outcomes of transplantation.
- The DGHS underscored the need to **ensure regular collection and sharing of data** of all transplant cases, including those of foreigners.

### Facts Related to Organ Donation

- **13th August** is observed every year as **World Organ Donation Day** to raise awareness on Organ Donation.
- **Indian Organ Donation Day** was celebrated every year on **November 27** but from 2023, the day is being celebrated on August 3 to commemorate the first successful deceased heart transplant in India on **3rd August 1994**.
- NOTTO has declared **July** as the month of Organ donation.

Source: PIB

## LOW DISBURSAL OF MGNREGA UNEMPLOYMENT ALLOWANCE

### Context

- Recently, only 90,000 was released as 'unemployment allowance' in 2023-24 under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

### About

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), enacted in 2005,

aims to enhance the livelihood security of households in rural areas.

- It is one of the largest public workfare programs in the world and has been instrumental in addressing the issue of rural poverty and unemployment in India.
- One of its key objectives is to ensure that work is provided promptly to those who demand it.

### Key Provisions

- **Guaranteed Employment:** MGNREGA guarantees at least 100 days of unskilled work per year for every rural household that seeks it. This work can include projects related to water conservation, land development, construction, agriculture, and allied activities.
- **Decentralised planning:** The program is implemented through Gram Panchayats, which are local self-governance institutions, ensuring decentralised planning and implementation.
- **Demand-Driven Approach:** Unlike top-down programs, MGNREGA is demand-driven.
  - ♦ **As per the Section 7(1) of MGNREGA,** if a household requests work, it **must be provided within 15 days**. If not, the worker is entitled to a **daily unemployment allowance**.
  - ♦ It is meant to provide relief to workers when work is not provided despite their demand.
- **Wage Payments:** Unskilled workers must receive their wages within 15 days. In case of delays, the central government compensates them.
- **Coverage:** MGNREGA covers all rural districts in India except those with a 100% urban population. It's a lifeline for rural households, especially during challenging times.
- **Statutory Limit:** Wages must be paid according to the wages specified for agricultural labourers in the state under the Minimum Wages Act, 1948.
- **Social Security Measures:** The program provides for a number of social security measures such as unemployment allowances and pension schemes for the aged and widows.
- **Transparency and Accountability:** MGNREGA provides for transparency and accountability through the use of biometric tools and a transparent complaint redressal mechanism.

### Unemployment Allowance (Figures)

- In the financial year 2023-24, various states released a mere 90,000 as unemployment

allowance. To put this in perspective, the corresponding figure in the previous year (2022-23) was ₹7.8 lakh.

- Clearly, there has been a significant drop in disbursements, raising concerns about the effectiveness of MGNREGA in addressing rural unemployment.

### State-Level Disbursements

- In the last two financial years (2022-23 and 2023-24), only six states disbursed the unemployment allowance.
- In the preceding years (2021-22 and 2020-21), the numbers were even lower—only three and four states, respectively, paid the allowance.

### Underlying Issues

- Unavailability of Work:** Work is often unavailable for beneficiaries. Despite their demand, suitable employment opportunities are scarce. This situation exacerbates rural economic distress.
- Delayed Registration of Demand:** Block-level functionaries responsible for registering work demand may not do so in real time. Consequently, formal data on MGNREGA work demand may not accurately reflect the true demand.
- Flawed Reporting System:** The reporting system for MGNREGA has its flaws. Work demanded is only reported on the portal when actual employment is provided.
  - It may be driven by a desire to reduce the state government's liability towards unemployment allowance.

### Other Challenges

- Funding:** Adequate funding is crucial to sustain the program. Budget allocations need to keep pace with demand.
- Effective Implementation:** Ensuring timely work provision and wage payments remains a challenge. The recent release of only 90,000 as "unemployment allowance" in FY 2023-24 highlights this issue.
- Monitoring and Accountability:** Strengthening monitoring mechanisms and social audits can enhance transparency and accountability.

### Conclusion

- The low disbursement of unemployment allowance undermines the very purpose of MGNREGA. As we

strive for inclusive growth and rural development, addressing this chronic issue should be a priority.

- States must take proactive measures to ensure timely employment and fair compensation for workers who rely on this vital safety net.

Source: TH

## VIRAASAT: HANDLOOM EXPO

### In News

- National Handloom Development Corporation Ltd (NHDC) is organising the handloom expo under the aegis of the Ministry of Textiles, Government of India which will conclude on 16th August, 2024.

### About VIRAASAT

- The series "VIRAASAT"- the "Exclusive Handloom Expo" is a continuation of celebrations held during previous years around the National Handloom Day.
- It focuses on the glorious tradition of Handloom and Handicrafts.
- It also provides a market connection to the handloom weavers and artisans.

### About sector

- The **Indian handloom and textile sector** encompasses a wide range of activities, including the production of yarn, fabric, and finished garments.
- Handloom weavers across the country produce a diverse range of fabrics and garments using traditional techniques.
- Textile Industry includes both the organized and unorganized segments.
  - The industry is categorized into spinning, weaving, and garment manufacturing.
- Handloom sector contributes substantially to the country's GDP and employs a significant portion of the workforce.
- The uniqueness of products** such as Banarasi, Jamdani, Baluchari, Madhubani, Kosa, Ikkat, Patola, Tussar Silk, Maheshwari, Moirang Phee, Baluchari, Phulkari, Laheriya, Khandua and Tangaliya to name a few attracts customers across the globe with exclusives weaves, designs, and traditional motifs.

### Importance

- **Livelihoods opportunities and economic development** : It provides livelihoods to millions and also plays a vital role in preserving traditional crafts and fostering economic development.
  - ♦ The Handloom sector **employs 35 lakh persons directly or indirectly** which is next only to the agricultural sector in the country.
- **Cultural Heritage**: Handloom weaving is deeply intertwined with India's cultural fabric.
  - ♦ It represents centuries-old traditions, regional diversity, and intricate designs passed down through generations.
- **Empowering Women**: Handloom weaving provides women with economic independence and empowerment.
- **Eco-Friendly**: Handloom products are less capital-intensive, use minimal power, and are environmentally friendly.
- **Authenticity** : They offer authenticity and uniqueness that machine-made fabrics may not replicate.
- **Other benefits** : Handloom sector having the advantage of flexibility of small production run, uniqueness, innovation and adaptability to the exports requirement.
  - ♦ This sector can contribute towards export earnings.

### Challenges

- **Unorganised Structure**: Most handloom weavers work independently or in small clusters.
  - ♦ Lack of systemized production hampers their ability to fulfill large orders with consistent quality and timely delivery.
- **Market Access and lack of modernity** : Weavers struggle to access markets directly.
  - ♦ Many handloom units still rely on traditional techniques, which can be less efficient compared to modern machinery.
- **Infrastructure gaps**, skill limitations, and design constraints hinder their ability to cater to market demands effectively.

### Steps

- The Government of India has launched the various schemes for Handloom for branding of high-quality products with zero defects and zero effect on the environment to encourage and to give a distinct identity to the products, apart from highlighting the uniqueness of the products.

- **Swadeshi Movement** which was launched on **7th August, 1905** had encouraged indigenous industries and in particular handloom weavers.
- **In 2015**, the Government of India decided to commemorate the **7th of August every year as the National Handloom Day**.
- The "**Handloom Mark**" scheme was introduced to certify and promote handloom products.
- The Ministry of Textiles has also launched various schemes such as the "Comprehensive Handloom Development Scheme" to support weavers with financial aid, skill development, and market access.
- **The National Handloom Development Programme (NHDP)** is being implemented in the country. Main components of NHDP are Concessional Credit, Handloom Marketing Assistance, and Block Level Clusters.

### Conclusion and Way Forward

- India's handloom and textile sector is a dynamic and integral part of the country's economy, blending tradition with modernity.
- With ongoing support from the government and a growing emphasis on sustainability and innovation, the sector is well-positioned to thrive in the future.
- The Government endeavours to ensure sustainable development of the handloom sector thereby empowering our handloom weavers and workers financially and instilling pride in their exquisite craftsmanship.
- Still, There is a need for technological upgradation to improve productivity and quality.
- Local supply chains need to be strengthened and greater emphasis is required for 3S - skill, speed and scale, to fulfil the vision of a 'Viksit Bharat' and robust supply chains will enable India to achieve a production target of \$250 billion along with exports worth \$100 billion by 2030.

Source: PIB

## TECHNOLOGY TO KILL WEEDS IN RICE AND WHEAT FIELDS

### Context

- **The Indian Agricultural Research Institute (IARI)** has developed rice varieties that enable farmers to spray **Imazethapyr (herbicide)** for controlling weeds in rice.

- Also a joint venture has developed Imazethapyr-tolerant **Direct seeded rice (DSR)** and '**FreeHit zero-tillage (ZT)** wheat technologies to farmers for making this cropping system "more climate-smart and sustainable".

### About

- IARI has developed two basmati varieties (**Pusa Basmati 1979 and Pusa Basmati 1985**) and two non-basmati rice hybrids (**Sava 134 and Sava 127**).
- These contain a **mutated acetolactate synthase (ALS) gene** that enables farmers to spray Imazethapyr for controlling weeds in rice.
  - ♦ This **gene is already present in rice and wheat** – not introduced from soil bacteria or other unrelated species, like in the case of Bt cotton.
- The weed varieties are **Echinochloa colona** (commonly called jangli chawal), *Cyperus rotundus* (motha) and **Trianthema portulacastrum** (patthar-chatta).

### Traditional method of rice cultivation

- Normal rice cultivation involves preparing nurseries, where the paddy seeds are raised into young plants that are uprooted and replanted around **30 days** later in the main field.
- After transplanting, the field has to be irrigated every **1-2 days** to maintain a water depth of **4-5 cm**.
  - ♦ Water acts like a **natural herbicide**, preventing the weed seeds from germinating and killing the already emerged seedlings. However the method consumes a lot of water.

### Herbicide-tolerant solutions

- DSR and ZT wheat basically **replace water and repeated field plows with a chemical herbicide (Imazethapyr)** to take care of weeds.
- DSR dispenses with the need for any paddy nursery, puddling, transplanting and flooding of fields. The paddy seeds can be sown directly, just like wheat.
  - ♦ There is roughly 30% saving of water, apart from labor in transplanting and weed management, and fuel used for puddling.
- 'FreeHit' ZT technology makes it possible to sow wheat directly without any paddy stubble burning or even land preparation.

- ♦ Alternatively, they can use a **Happy Seeder** without a rotavator that only cuts and leaves the crop residue on the field.

### How does the mutated ALS gene work?

- The ALS gene codes for an enzyme (protein) that helps synthesize essential amino acids for plant growth and development.
- Imazethapyr sprayed on normal paddy and wheat **binds itself to the ALS enzymes**, inhibiting their production of the amino acids.
  - ♦ The herbicide will, then, kill the crop along with the weeds, as it cannot distinguish between the two.
- However the **new technology contains a mutated ALS gene**, whose DNA sequence has been altered using a chemical mutant or radiation.
- As a result, the **ALS enzymes no longer have binding sites for Imazethapyr** and the amino acid synthesis isn't inhibited.
  - ♦ The plants can now "tolerate" the herbicide, which only kills the weeds.

### Concluding Remark

- The adoption of Direct Seeded Rice (DSR) and Zero Tillage (ZT) farming practices, which **offer benefits such as reduced water and fuel consumption and eliminate the environmental pollution** associated with crop residue burning, is likely to improve with the integration of herbicide-tolerant technologies.
- As these technologies **are not genetically modified (GM)**, it could further facilitate their acceptance and adoption among farmers and stakeholders.

Source: IE

## NEWS IN SHORT

### YAMINI KRISHNAMURTHY

#### Context

- Veteran Bharatanatyam dancer Yamini Krishnamurthy died at the age of 83.

#### Awards and Honors

- She received the **Padma Shri** at the young age of 28 in **1968**, **Padma Bhushan** in **2001** and **Padma Vibhushan** in **2016**.

- She was also conferred the **Sangeet Natak Akademi Award in 1977**.

### Bharatanatyam

- Bharatanatyam is an Indian classical dance form that originated in **Tamil Nadu**. It is considered to be over 2000 years old.
  - ♦ Several texts beginning with **Bharata Muni's Natya Shastra** provide information about it.
- In the early 19th century, the famous **Tanjore Quartette**, under the patronage of **Raja Serfoji**, is said to have been responsible for the repertoire of Bharatanatyam dance as we see it today.
- The style was kept alive by the **devadasis**, who were young girls 'gifted' by their parents to the temples and who were married to the gods.
- The dance is known to be **ekaharya**, where one dancer takes on many roles in a single performance.
- The accompanying orchestra consists of a vocalist, a **mridangam** player, violinist or **veena** player, a flutist and a **cymbal** player.
  - ♦ The person who conducts the dance recitation is the **Nattuvanar**.

Source: TH

### AMRUT 2.0

#### Context

- **Under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0**, cities are likely to initiate projects as a part of the **100-day agenda** of the **National Democratic Alliance (NDA) government**, during its third term.

#### About

- **AMRUT scheme was** launched by the government in 2015, with its 2.0 version launched in 2021.
- The mission was drawn to **cover 500 cities and towns** with a population of over one lakh with notified municipalities.
- The purpose of the AMRUT mission was to:
  - ♦ ensure that every household has access to a tap with assured supply of water and a sewerage connection;
  - ♦ increase the value of cities by developing greenery and well-maintained open spaces such as parks and;

- ♦ reduce pollution by switching to public transport or constructing facilities for non-motorised transport.
- **AMRUT 2.0**: Aimed at making cities '**water secure**' and providing functional water tap connections to all households in all statutory towns.
  - ♦ Ambitious targets were set up such as providing 100% sewage management in 500 AMRUT cities.
- **Other components of AMRUT 2.0 are:**
  - ♦ **Pey Jal Survekshan** to ascertain equitable distribution of water, reuse of wastewater, mapping of water bodies and promote healthy competition among the cities /towns.
  - ♦ **Technology Sub-Mission** for water to leverage latest global technologies in the field of water.
  - ♦ **Information, Education and Communication (IEC)** campaign to spread awareness among masses about conservation of water.

Source: IE

### RUSSIA CONTINUES TO DOMINATE INDIA'S OIL IMPORTS

#### Context

- India's Russian oil imports in July accounted for as much as **43 percent** of India's total oil imports of **4.82 million barrels per day (bpd)**.

#### About

- India is the world's third-largest consumer of crude oil with a high import dependency level of over **85 percent**.
- **Russia's share** is almost as much as the cumulative market share of the next four large suppliers—**Iraq, Saudi Arabia, the United Arab Emirates (UAE)**, and **the United States (US)**.
- India's second and third largest source for crude oil is Iraq and Saudi Arabia.

Source: IE

### ASEAN-INDIA TRADE IN GOODS AGREEMENT (AITIGA)

#### In News

- The 5th AITIGA Joint Committee and related meetings for review of the ASEAN-India Trade in Goods Agreement (AITIGA) were held in the ASEAN Secretariat, Jakarta.



## About

- AITIGA Joint Committee had initiated discussions for review of AITIGA in May 2023 and after finalising its Terms of Reference and Negotiating Structure, AITIGA JC and its Sub-Committees started negotiations in February 2024.
- The first 2 rounds of negotiations were held in February 2024 in New Delhi and in May 2024 in Putrajaya, Malaysia.

## Background

- The **Framework Agreement on Comprehensive Economic Cooperation** between ASEAN and India was signed in October 2003 and served as legal basis to conclude further agreements, including Trade in Goods Agreement, Trade in Services Agreement, and Investment Agreement that form the ASEAN-India Free Trade Area (AIFTA).

## About the agreements

- **The ASEAN-India Trade in Goods Agreement** was signed and entered into force on 1 January 2010.
  - ♦ Under the Agreement, ASEAN Member States and India have agreed to open their respective markets by progressively reducing and eliminating duties on 76.4% coverage of goods.
- **The ASEAN-India Trade in Services Agreement** was signed in November 2014.
  - ♦ It contains provisions on transparency, domestic regulations, recognition, market access, national treatment and dispute settlement.
- **The ASEAN-India Investment Agreement** was also signed in November 2014. The Investment Agreement stipulates protection of investment to ensure fair and equitable treatment for investors, non-discriminatory treatment in expropriation or nationalisation as well as fair compensation

### Do you know ?

- **The Association of Southeast Asian Nations (ASEAN)** was established on 8 August 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration) by the Founding Fathers of ASEAN: Indonesia, Malaysia, Philippines, Singapore and Thailand.
  - ♦ Brunei Darussalam joined ASEAN on 7 January 1984, followed by Viet Nam on 28 July 1995, Lao PDR and Myanmar on 23

July 1997, and Cambodia on 30 April 1999, making up what is today the ten Member States of ASEAN.

- ASEAN is an important trade partner of India with about 11% share in India's global trade.

Source:TH

## 72% OF INCOME TAX ASSESSEES OPTED FOR NEW REGIME IN 2023-24

### Context

- The Central Board of Direct Taxes says that out of the total I-T returns of 7.28 crore filed for assessment year 2024-25, 5.27 crore have been filed in the new tax regime.

### About

- The New Tax Regime is a scheme of Income tax in India **first proposed in Union Budget 2020–21**.
- The Union Budget 2024-25 has put emphasis on the adoption of the new income tax regime by incentivizing its adoption by taxpayers.
  - ♦ The Finance Ministry had slashed the tax rate slabs to five from six and **raised the tax-free income limit to ₹3 lakh from ₹2.5 lakh**.
- The Budget 2023-24 had also granted a hike in the tax rebate limit from **₹5 lakh to ₹7 lakh** a year under the new tax regime, compared with **₹5 lakh** a year applicable for the old tax regime.

Source: TH

## 'NATIONAL DISASTER' TAG FOR LANDSLIDE

### Context

- Recently, Kerala has requested the Centre to declare Wayanad landslide a 'National Disaster' underscores the urgency of addressing natural calamities and their impact on vulnerable populations.

### About the National Disasters

- There is **no official or defined category** of 'national disasters', however, these are significant events that can cause **widespread damage, loss of life, and disruption to communities**.
- In India, the management of such disasters is overseen by the **National Disaster Management Authority (NDMA)**, a government body responsible for disaster **preparedness, mitigation, response, and recovery**.

### National Disaster Management Authority (NDMA)

- It is the **apex body** in India, **headed by the Prime Minister**, for disaster management. It was established in **2005** under the **Disaster Management Act**, and the further establishment of the **National Disaster Response Force (NDRF)**.
- Its **primary role** is to formulate policies, plans, and guidelines related to disaster risk reduction and management.
- It publishes **annual reports** that provide insights into disaster management efforts across the country.

### Role of State and Centre

- One of NDMA's **annual reports highlights** *'the state government is primarily responsible for undertaking rescue, relief and rehabilitation measures in the event of a disaster'*. But these can be **supplemented with Central Assistance**.
- In the event of a **calamity of a severe nature**, where the requirement of funds for relief operations is beyond the funds available in the **State's Disaster Response Fund (SDRF)** account, additional Central assistance is provided from the National Disaster Response Fund, after following the laid down procedure.
- The **Disaster Management Division** of the **Ministry of Home Affairs** will provide support and monitor the utilisation of funds.
  - ♦ A **Calamity Relief Fund (CRF)** is set up, with the corpus **shared 3:1 between Centre and State**.
  - ♦ When resources in the CRF are inadequate, additional assistance is considered from the **National Calamity Contingency Fund (NCCF)**, funded **100% by the Centre**.
- The annual Central contribution is released in two equal installments as per the recommendation of the Finance Commission.

Source: TH

## BAILEY BRIDGE

### In News

- The Indian Army's Madras Engineer Group constructed a 190-foot Bailey bridge at Chooralmala to reach Mundakkai village due to Deadly landslides in Kerala's Wayanad district

### About Bailey Bridge:

- It is a modular, prefabricated bridge designed for quick assembly with minimal construction work.
- It was Invented by Donald Coleman Bailey during World War II.
- **Historical Linkages** : Originated in 1941, used extensively by Allied armies in WWII.
  - ♦ Praised by British Field Marshal Lord Montgomery as crucial to the war effort.
- **How It Works**: It consists of pre-fabricated steel panels linked by pins.
  - ♦ Beams form the deck, locking into the guardrails for stability.
    - These help establish the guardrails of the bridge.
  - ♦ Components are light and mobile, allowing quick assembly and transport.
- **Usage in India**: Indian armed forces inherited Bailey bridges from the British legacy.
  - ♦ Used in the 1971 war with Pakistan and later supplemented with additional bridging equipment from the Soviet Union.
- **Importance in the context of Kerala** : The 190-foot Bailey bridge has been crucial in facilitating the movement of men, heavy machinery and ambulances.
  - ♦ It has a weight-carrying capacity of 24 tonnes and will remain in use until a permanent bridge is built.

Source: IE

## EXERCISE PITCH BLACK

### Context

- Recently **Exercise Pitch Black 2024** concluded in Darwin, Australia.

### Exercise 'Pitch Black'

- It is a **biennial, multi-national exercise** hosted by the **Royal Australian Air Force (RAAF)**.
- The name 'Pitch Black' was derived from the emphasis on night time flying over large unpopulated areas.
- The 2024 edition is the largest in the 43 year long history of Ex Pitch Black, which includes participation by 20 countries, with over 140 aircraft and 4400 military personnel of various air forces.
- **The Indian Air Force (IAF)** also participated in the exercise.

- It has previously participated in the **2018** and **2022** editions of this exercise.

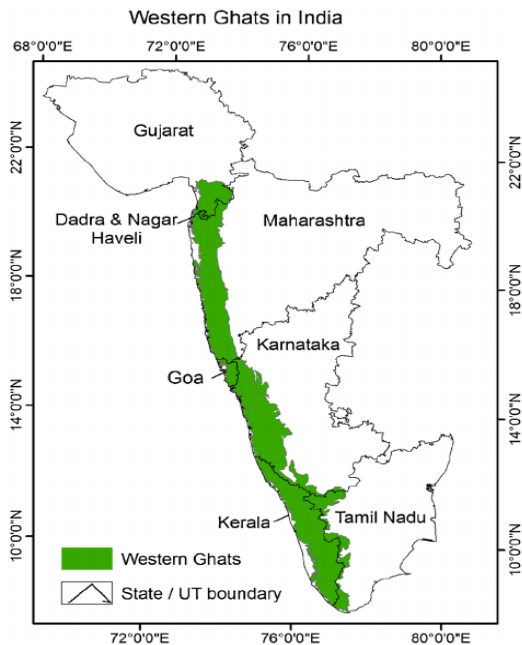
Source: IE

## WESTERN GHATS AS ECOLOGICALLY SENSITIVE AREAS (ESAs)

### Context

- Recently, the Union government has re-issued — for the sixth time in a decade — a **draft notification** classifying parts of the **Western Ghats in six States** as **Ecologically Sensitive Areas (ESAs)**.

### About the Western Ghats (aka Sahyadri Range)



- It spans approximately 1,600 kilometres from **Gujarat in the north to Kerala in the south**, including **Maharashtra, Goa, Karnataka, and Tamil Nadu**.
- It's a **UNESCO World Heritage Site** and one of the eight **'hottest hotspots'** of biological diversity globally.

### Ecologically Sensitive Areas (ESAs)

- Gadgil Report (WGEEP):** The Western Ghats Ecology Expert Panel (WGEEP) designated the **entire Ghats as an ESA** and classified it into **three Ecologically Sensitive Zones (ESZs)**. It recommended stringent conservation measures, including restrictions on mining, quarrying, and large-scale infrastructure projects.

- Kasturirangan Report:** The High-Level Working Group proposed a more flexible approach, **identifying specific areas within the Ghats as ESAs**. Its recommendations aimed to balance conservation with development needs.

### Draft Notifications and State Objections

- Based on the HLWG report, the MoEFCC issued **draft notifications in 2014, 2018, and 2022** that sought to declare **certain regions within the Ghats as ESAs**.
- However, objections from the **six affected states (Kerala, Karnataka, Goa, Maharashtra, Gujarat, and Tamil Nadu)** led to prolonged discussions. States raised concerns about livelihoods, hydroelectric projects, and agricultural activities.

Source: TH

## CERAMIC OBJECTS

### Context

- There is a record of humans **having made and used ceramic objects** for more than 25,000 years.

### About

- When the **nonmetallic, inorganic material** is heated to a **high temperature** ceramic is created.
- The word comes from the **Greek 'keramos' or 'potter's clay'**, speaking to a common application of ceramics in ancient times.
- The science of preparing and studying ceramics' microscopic properties is called **ceramography**.
- Discovery:** Archaeologists have discovered ceramic pottery and figurines in the ruins of various ancient civilisations, including those in the **Indus Valley and in Keezhadi in Tamil Nadu**.



- **Properties:** Ceramics can typically withstand **very hot or acidic environments**, many forms of **chemical erosion**, and are hard and difficult to compress.
  - ♦ But they are **also brittle** — i.e. can shatter — and don't handle shear, or sliding, stress well.
- **Uses:** The discovery of **high-temperature superconductivity** in some ceramic materials won **two scientists the 1987 physics Nobel Prize**.
- ♦ Scientists have used ceramics on **space shuttles** (as part of the heat shield during atmospheric reentry), to produce heat in **microwave furnaces**, **as abrasives**, in the **production of varistors** and **semiconductors**, as **nuclear fuel**, in **fighter aircrafts' windows**, and in **tomographic scanners**, among other settings.

Source: TH

