SEA DEFENDERS-2024

The United States Coast Guard's (USCG) Bertholf ship reached Port Blair ahead of the 'Sea Defenders-2024' joint exercise.

- It is a **joint exercise** between the **Indian Coast Guard and the United States Coast Guard**.
- **Location**: **Off the coast of Port Blair**, Andaman and Nicobar Islands.
- The **two-day exercise** will **focus on maritime piracy and asymmetric threats**, including simulated drone attacks on commercial merchant traffic, joint maritime search and rescue operations, major firefighting, marine pollution response, and counter-drug interdiction exercises.
- The event will also **witness a simulated medical evacuation** to enhance readiness in emergency situations.

Key Facts about Indian Coast Guard (ICG):

- It is an **armed force** that **protects India's maritime interests** and enforces maritime law, with jurisdiction over the territorial waters of India, including its contiguous zone and exclusive economic zone.
- The ICG, **working in coordination with other Union agencies**, institutions and authorities, safeguards the maritime interests and security of India, **assists vessels and fisherman in distress** and **protects the maritime environment.**
- **History**: It was **formally established** in 1978 **by the Coast Guard Act, 1978,** as an independent Armed force of India.
- **Parent ministry:** It operates under the **Ministry of Defence.**
- **Administration**: The organization is **headed by the Director General Indian Coast Guard (DGICG).**
- **HQ: New Delhi.**

WHAT IS NATIONAL COOPERATIVE DATABASE (NCD)?

Union Minister of Cooperation will launch the National Cooperative Database (NCD) to foster a cooperative-centric economic model.

राष्ट्रीय सहकारी डेटाबेस
National Cooperative
Database

- It is an initiative of the **Ministry of Cooperation** which had recognized the imperative need for a robust database to capture vital **information about India's vast cooperative sector**.

- NCD has been **developed in collaboration with State Governments, National Federations** and stakeholders, and aims to foster a cooperative-centric economic model.

- It is **a web-based digital dashboard** wherein data of cooperative societies, including National/State Federations have been captured.

- The data of cooperative societies has been **entered and validated by States/ UTs nodal officials** at RCS/ DRCS offices, and the data of federations has been provided by various national/state federations.

- The **information collected** from cooperative societies are on various parameters, such as their registered name, date, location, number of members, sectoral information, area of operation, economic activities, financial statements, status of audit etc.

- NCD serves as a crucial tool for **efficient communication between** the **Central Ministry, States/UTs, and Cooperative Societies**, benefiting all stakeholders in the cooperative sector.

- NCD offers a myriad of **benefits, including:**
  - **Single-point access**
  - comprehensive and **updated data**
  - user-friendly interface
  - vertical and horizontal linkages
  - **query-based reports** and graphs
  - **Management Information System** (MIS) reports
  - **data analytics**
  - **Geographical Mapping.**

SCHOOL SOIL HEALTH PROGRAMME

Recently, the Union Minister for Agriculture & Farmers' Welfare and Union Minister for Rural Development inaugurated School Soil Health Programme.

- **Department of Agriculture and Farmers welfare** in collaboration with Department of School Education and Literacy has undertaken a pilot project on school soil health programme.
    - Under the project, 20 soil labs were set up in 20 schools of **Kendriya and Navodaya Vidylaya of rural areas.** Study modules were developed and training was given to students and teachers.
    - **Kendriya Vidyalya, Navodaya Vidyalya and Eklavya Model Schools** have been taken under this programme. Schools are being onboarded on the portal and online batches are being created.
    - **Department of Agriculture and Farmers welfare** (DA&FW) through **National Bank for Agriculture and Rural Development** (NABARD) will setup soil labs in these schools.
    - School students will collect soil samples, test in the labs set up in schools and generate Soil health Card.
    - After generating Soil Health Card, they will go to the farmers and educate them about recommendation of Soil health Card.

Significance
- It will provide students with the chance to conduct experiments, analyze soil samples, and explore the fascinating biodiversity within the soil.
- By engaging in practical activities, students will develop critical thinking skills, problem-solving abilities and a holistic understanding of the **interconnectedness of ecosystems.**

WHAT IS HAIPER?

Recently, former members of Google's DeepMind team, have introduced Haiper, a cutting-edge AI-powered video generation tool.

About Haiper:

- It is an **all-in-one visual foundation** model that allows everyone, with or without technical training, to generate high-quality video content with ease.
- According to Haiper, its model is a powerful perceptual foundation model-driven AI that has been designed for a "**new path towards AGI**" (artificial general intelligence, an AI software with human-like intelligence and the ability to self-learn).
- It offers tools such as **text-to-video**, **animated static images**, **video repainting tools**, etc. Users can go on to the website, log in with their email addresses, and start generating videos for free by typing in text prompts.
- At present, users can only generate HD video spanning 2 seconds, and a slightly lower-quality video could go up to four seconds.

WHAT IS INDIAAI MISSION?

Recently, the Cabinet has approved the comprehensive national-level IndiaAI mission.

- It will establish a comprehensive ecosystem **catalyzing AI innovation** through strategic programs and partnerships across the public and private sectors.
- It will be implemented by **'IndiaAI' Independent Business Division** (IBD) under Digital India Corporation (DIC).
- It has the following components:
  - **IndiaAI Compute Capacity:** It will build a high-end scalable AI computing ecosystem to cater to the increasing demands from India's rapidly expanding AI start-ups and research ecosystem. It will comprise AI compute infrastructure of 10,000 or more Graphics Processing Units (GPUs), built through public-private

partnership. It will act as a one-stop solution for resources critical for AI innovation.

o **IndiaAI Innovation Centre:** It will undertake the **development and deployment** of indigenous **Large Multimodal Models** (LMMs) and domain-specific foundational models in critical sectors.

o **IndiaAI Datasets Platform**: It will streamline access to quality non-personal datasets for AI Innovation. A unified data platform will be developed to provide a one-stop solution for seamless access to non-personal datasets to Indian Startups and Researchers.

o **IndiaAI Application Development Initiative**: It will promote the AI applications in critical sectors for the problem statements sourced from Central Ministries, State Departments, and other institutions.

o **IndiaAI FutureSkills**: It is conceptualized to mitigate barriers to entry into AI programs and will increase AI courses in undergraduate, masters-level, and Ph.D. programs. Further, Data and AI Labs will be set-up in Tier 2 and Tier 3 cities across India to impart foundational level courses.

o **IndiaAI Startup Financing:** It is conceptualized to support and accelerate deep-tech AI startups and provide them streamlined access to funding to enable futuristic AI Projects.

o **Safe & Trusted AI**: It will enable the implementation of Responsible AI projects including the development of indigenous tools and frameworks, self-assessment checklists for innovators and other guidelines and governance frameworks.

- The IndiaAI Mission will propel innovation and build domestic capacities to ensure the tech sovereignty of India.
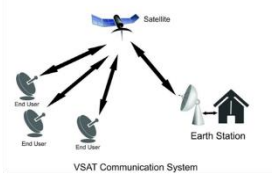
ISRO TO PROVIDE INTERNET SERVICES IN 80 REMOTE TRIBAL VILLAGES

- The Ministry of Tribal Affairs is planning to collaborate with ISRO to deploy V-SAT stations on a pilot basis for around 80 tribal villages.

About Very Small Aperture Terminal (VSAT):

- A very small aperture terminal is a **two-way ground station that transmits and receives data from satellites**.
- A VSAT is less than three meters tall and is capable of both narrow and broadband data to satellites in orbit in real-time.
- The data can then be redirected to other remote terminals or hubs around the planet.

How a VSAT Works?

- VSAT networks have a number of commercial applications, including, perhaps most notably, **Enterprise Resource Planning** (ERP).
  - For example, the use of VSAT to track inventory was one of the many innovations **Walmart** (US-based retail store) pioneered in retail to effectively manage its vast inventory in real-time and reduce delivery costs between the warehouse and stores.
  - Combined with the hub system of inventory storage, VSAT allowed Walmart to stock its stores more precisely and reduce how many times a product had to move between locations before being sold.
- Other manufacturers use VSAT to relay orders, check production figures in real-time as well as other functions that are otherwise handled over a wired network.
- The **National Stock Exchange** (NSE) in India has one of the largest VSAT networks in the world and offers it as one of its connectivity options.
  - VSAT provided the NSE with a way to offer access in areas where wired options are limited.
- With the exception of the occasional sun outage due to solar radiation distorting signals from the satellite, the VSAT network has held up.

Advantages/Disadvantages of VSAT:

- **Advantages**:

- o VSAT networks have a big advantage when it comes to deployment.
    - ▪ Because the ground station is communicating with satellites, there is less infrastructure required to service remote locations.
- o This has made VSAT networks an ideal choice for providing connectivity to remote work sites, such as exploratory drilling sites that need to relay daily drill logs back to headquarters.
- o VSAT is also independent of local telecommunications networks, making it an ideal system to back up wired systems and reduce business recovery risk.
- o If the wired network goes down, a business can still go on using the VSAT network.

- **Disadvantages**:
    - o However, VSAT does have limitations.
    - o The most obvious is **latency**, as it takes time for information to reach the dish and the station due to one part of the system being way up in geosynchronous orbit above the earth.
    - o In other words, protocols that require a lot of back-and-forth communication rather than one-way data transfer experience lag.
    - o The signal quality can also be affected by the weather and other buildings getting in the way.
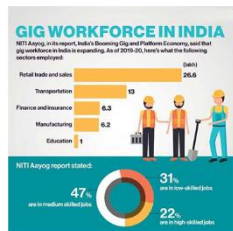

GIG WORKERS IN INDIA

What is Gig Economy?
- A gig economy is a free market system in which organisations hire or contract workers for a short span of time.
- Simply put, the positions are temporary to meet the company's requirements by having short-term engagements.
- Startups like Ola, Uber, Zomato, and Swiggy have established themselves as the main source of the gig economy in India.

Who is a Gig Worker?

- According to the Code on Social Security, 2020 (India), "**A gig worker is a person who performs work or participates in work arrangements and earns from such activities, outside of the traditional employer-employee relationship**."

- They are independent contractors, online platform workers, contract firm workers, on-call workers and temporary workers.

What is the Size of Gig Economy in India?

- A NITI Aayog study on "India's Booming Gig and Platform Economy" has estimated that at present, about 47 per cent of the gig work is in medium-skilled jobs, about 22 per cent in high skilled, and about 31 per cent in low-skilled jobs.

- These figures clearly indicate the importance of the gig working community in the Indian economy.

- Ensuring the comfort and security of this community is investing in a more progressive and prosperous future.

- Research studies by Boston Consulting Group (BCG) have indicated that participation in the gig economy is higher in developing countries(5-12 percent) versus developed economies(1-4 percent).
  - Most of these jobs are in lower-income job-types such as deliveries, ridesharing, microtasks, care and wellness.

- These studies further estimate that in 2020-21, **77 lakh workers were engaged in the gig economy**.

- The gig workforce is expected to **expand to 2.35 crore workers by 2029-30**.

WHAT ARE ORANS?

Communities, particularly those in western Rajasthan, are concerned about the State's proposal to classify orans (sacred groves) as deemed forests.

About Orans:

- Orans are traditional **sacred groves** found **in Rajasthan.** These are community forests, preserved and managed by rural communities through institutions and codes that mark such forests as sacred.

- There are **often local deities associated** with Oran. They are **rich in biodiversity** and usually include a water body.

- Communities in Rajasthan have been conserving these Orans for centuries, and their lives have been intricately linked around these spaces.

- Orans are also spaces where herders take their **livestock for grazing** and are **places for communal congregations, festivals** and other social events, the performance of which is linked to agrarian rhythms and the continued commitment of the communities towards environmental conservation.

- Orans also form the **natural habitat** for India's most critically endangered bird, **the Great Indian Bustard (GIB),** a protected species under the Wildlife Protection Act, which is also the State bird of Rajasthan.

What are Sacred Groves?

- Sacred Groves are **relic forest patches** traditionally **protected by communities in reverence of a deity.** They form important repositories of forest biodiversity and provide refuge to many plant and animal species of conservation significance.

- Sacred groves are found all over India, especially in states like **Maharashtra, Karnataka, Kerala and Tamil Nadu.**

- These are known as Kavu/Sarpa Kavu in Kerala, Devarakadu/Devkad in Karnataka, Deorai/Devrai in Maharashtra, Jahera/Thakuramma in Odisha, etc.