

**PRELIMS EDGE 2025****30-12-2025****PRAGATI PLATFORM**

Context: Underlining the importance of technology in governance, Prime Minister Narendra Modi asked Chief Secretaries to replicate the Centre's PRAGATI platform, which helps in monitoring key infrastructure projects and schemes, at the state-level.

**About PRAGATI (Pro-Active Governance and Timely Implementation) Platform:**

- It is a **multi-purpose and multi-modal platform** that is aimed at **addressing common man's grievances** and simultaneously **monitoring and reviewing important programmes** and projects of the Government of India as well as projects flagged by State Governments.
- It is also a robust system for bringing e-transparency and e-accountability with real-time presence and exchange among the key stakeholders.

- The platform was launched on March 25, 2015.
- The system has been designed in-house by the PMO team with the help of the **National Informatics Center (NIC)**.
- The PRAGATI platform uniquely bundles **three latest technologies:** Digital data management, video conferencing, and geospatial technology.
- It also offers a unique combination in the direction of cooperative federalism since it **brings on one stage the Secretaries of Government of India and the Chief Secretaries of the States**.
- With this, the Prime Minister is able to discuss the issues with the concerned Central and State officials with full information and the latest visuals of the ground-level situation.

Key Features:

- It is a **three-tier system** (PMO, Union Government Secretaries, and Chief Secretaries of the States).
- The Prime Minister will hold a **monthly programme where he will interact with the Government of India Secretaries and Chief Secretaries** through videoconferencing enabled by data and geo-informatics visuals.
- The programme will be held once in every month on the **fourth Wednesday** at 3.30 PM, to be known as **PRAGATI Day**.
- Issues to be flagged before the PM are picked up from the available database regarding

public grievances, ongoing programmes and pending projects.

- It will take into consideration various correspondences to the PM's office by the common people or from high dignitaries of states and/or developers of public projects.
- The issues flagged are uploaded seven days prior to the PRAGATI day (i.e., on the third Wednesday of every month).
- These issues can be viewed by the Union Government Secretaries and Chief Secretaries after entering into the application.
- Union Government Secretaries and Chief Secretaries have to put their comments and updates about the flagged issues within three days (i.e. by next Monday).
- **One day - Tuesday** is available to the PMO team to review the data entered by the Union Government Secretaries and Chief Secretaries.
- The design is such that when PM reviews the issue, he should have on his screen the issue as well as the latest updates and visuals regarding the same.

Source: Replicate PRAGATI in states, set up data strategy units: PM Modi (The Indian Express)

INS VAGSHEER

Context: President Droupadi Murmu recently undertook a submarine sortie in INS Vagsheer.



About INS Vagsheer:

- It is the sixth submarine of the first batch of six **Kalvari-class, or Scorpene-class, submarines** ordered by the Indian Navy under **Project-75**.
- It is named after the **sandfish, a deadly deep-sea predator of the Indian Ocean**.
- It was officially commissioned into the Indian Navy on 15 January 2025.
- It now joins its sister vessels **INS Kalvari, INS Khanderi, INS Karanj, INS Vela, and INS Vagir**.
- These submarines have been completely built by **Mazagon Dock Shipbuilders Limited (MDL)** through **French technology transfer**.

Features:

- It boasts **advanced stealth technologies**, including reduced radiated noise levels and sophisticated hydrodynamic design, making it one of the quietest submarines in the world.
- The 67.5-metre vessel reaches speeds of **20 knots submerged**, dives to **over 350 metres**, and endures **up to 50 days at sea**.
- Armed with **torpedoes, anti-ship missiles, and mine-laying capabilities**, it excels in anti-surface and anti-submarine warfare, intelligence gathering, and surveillance.

- It consists of indigenously developed systems like the air-conditioning plant, internal communication network, and the Ku-Band SATCOM system.
- It can accommodate 8 officers and 35 sailors and is fitted with an **anti-torpedo countermeasure system**.

Project 75

- ✓ Project-75, the precursor to Project-75I, was initiated in 1997 with the aim of building two indigenous SSK (United States diesel-electric) submarines.
- ✓ The **Scorpene** class technology transfer from France enabled the creation of **Kalvari class** submarines.

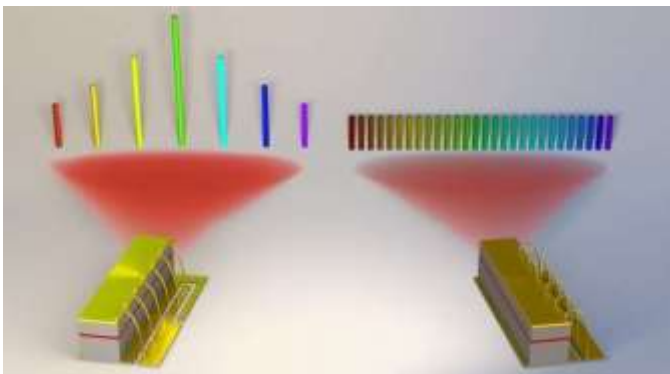
Project 75I

- ✓ Project 75I (a follow-up to Project 75) is an improvement upon the design of Air Independent Propulsion (AIP) technology, along with other features of its predecessor.

Source: Droupadi Murmu becomes second Indian President to undertake submarine sortie (The Indian Express)

TERMS IN NEWS

Frequency Comb



- It is a special kind of **laser light** whose spectrum, or **set of frequencies, resembles the teeth of a comb**.
- Frequency combs are simple and compact tools that phase coherently connecting the radio frequency domain (say below 100GHz) with the optical domain (say above 200THz).

Characteristics:

- Instead of containing just one colour (one frequency), it emits a **large number of evenly spaced frequencies**. The spacing is extremely regular.
- Frequency combs are widely-used, **high-precision tools for measuring and detecting different frequencies colors — of light**.
- It has **high stability and precision**.

Applications:

- It helps scientists **compare an unknown light frequency to a stable reference** with extraordinary precision.
- Frequency combs are an important modern tool to **calibrate atomic clocks** and **measure shifts in light caused by gravity**.
- It is used to **detect exoplanets**.
- It is also used in **high-speed spectroscopy**.

Industrial Hemp



- **Industrial hemp** (*Cannabis sativa* L.) is botanically related to **marijuana**, but with very **different properties**.
- While **marijuana** is rich with **tetrahydrocannabinol (THC)**, the psychoactive component that makes pot a drug of choice by many, **hemp contains only the smallest traces of THC (<0.3%)**,
- It is an **herbaceous, dioecious plant** belonging to the Cannabis genus within the Cannabaceae family.
- It is **high in fiber and low in active tetrahydrocannabinol (THC)**.
- Recently, Himachal Pradesh Chief Minister has launched a policy push to **legalise and regulate the cultivation of industrial hemp**.

Applications of Industrial Hemp:

- It is a versatile crop that can be processed into different products with multiple uses.
- Its stalk can be used to produce **biofuel, auto parts, paper, upholstery, and fiber for cloth and other textile items**.
- Its stem can also be processed into **building materials, industrial products and different kinds of papers**.

- Its seeds can be used to produce **feed or food or the sources of oil** that can be converted into a **lotion or cosmetic products**.

PLACES IN NEWS

Kolleru Lake



- It is one of the largest **freshwater lakes** in India, located in the state of **Andhra Pradesh**.
- It is located in the **inter-deltaic plain of rivers Krishna and Godavari** near the city of Eluru and serves as a natural flood-balancing reservoir for these two rivers.
- It spreads over an area of about 308 sq. km. and expands up to 954 sq.km. at the highest flood level.
- It is the **largest freshwater lake in Andhra Pradesh**.
- Characteristically, it is a **shallow lake**.
- It receives water from **four rivers**, namely **Budameru, Ramileru, Tammileru, and Errakalva**, and 18 drains.
- This lake empties its water into the Bay of Bengal through an outlet called '**upputera**'.
- This lake is also known as the "Peerless Fisherman's Paradise and Bird Heaven".

- The lake was declared as a wildlife sanctuary in November 1999.
- It was designated as a **wetland of international importance** in November 2002 under the **International Ramsar Convention**.
 - It is the only Ramsar site in Andhra Pradesh.
- It supports **over 20 million migratory birds annually**, including grey pelicans, painted storks, and open-billed storks.
- It is a haven for species migrating from Siberia, Central Asia, and the Himalayas, making it one of India's richest avian habitats.
- The lake is deeply intertwined with local livelihoods, sustaining thousands who depend on fishing, duck farming, and paddy cultivation.

Parvati-Arga Bird Sanctuary



- **Location:** It is situated in Gonda district of Uttar Pradesh.
- It is a **permanent freshwater environment** consisting of **two oxbow lakes namely Parvati and Arga**.
- It is designated as **Ramsar site**.
- **Fauna:** The critically endangered **white-rumped vulture** (*Gyps bengalensis*) and **Indian vulture** (*Gyps indicus*), and the

endangered **Egyptian vulture** (*Neophron percnopterus*) have all been recorded.

- Invasive species such as the **common water hyacinth** (*Eichhornia crassipes*) is also found here.
- **Flora:** The Vegetation of the Sanctuary is representative of that of the indo-gangetic ecosystem.
- The Government has declared the Parvati-Arga Bird Sanctuary of Uttar Pradesh as an **Eco sensitive zone**.

Eco-Sensitive Zone

- It is also known as **Ecologically Fragile Areas (EFAs)**.
- These are areas notified and regulated by the **Union Ministry of Environment, Forest and Climate Change (MoEFCC) around Protected Areas, National Parks and Wildlife Sanctuaries**.
- Purpose: To create some kind of shock absorbers to the protected areas by regulating and managing the activities around such areas.
- It acts as a **transition zone** from areas of high protection to areas involving lesser protection.
- **Extent of ESZ:** An ESZ could extend up to 10 km around a protected area.

PRACTICE QUESTIONS

Q1. The PRAGATI portal has been introduced by the Government of India for which of the following purposes?

- Credit dispersal to MSMEs
- Public grievance redressal and project monitoring

- (c) Registration of informal sector workers
- (d) Creation of resolution plans for failing corporates

Q2. The term 'Project 75' relates to which of the following?

- (a) Submarine construction
- (b) ISRO's mission to Uranus
- (c) Finance Ministry's recapitalization scheme
- (d) Small satellite development

Q3. How many of the following are applications of frequency combs recently seen in news?

1. Calibration of atomic clocks
2. Detection of exoplanets
3. Measurements of shifts in light caused by gravity
4. High speed spectroscopy

Select the correct answer using the code given below:

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Q4. How many of the following products can be potentially made from industrial hemp?

1. Paper
2. Cosmetics
3. Building materials
4. Cloth
5. Biofuels

Select the correct answer using the code given below:

- (a) Only two
- (b) Only three
- (c) Only four

(d) All five

Q5. Consider the following statements with respect to Kolleru Lake:

1. Krishna river directly feeds Kolleru Lake.
2. Kolleru Lake is the only Ramsar site in Andhra Pradesh.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answers:

1. B
2. A
3. D
4. D
5. B

