

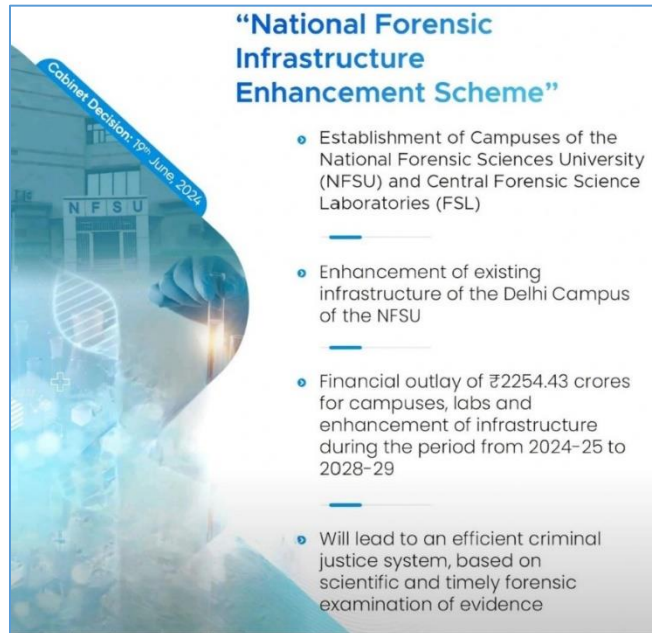
June - 24

TNPSC BITS

- ❖ Sankara Eye Foundation has launched the country's first-of-its-kind innovation lab focused on advancing eye care through cutting-edge research, development, and training at Coimbatore.
- ❖ Academician, dancer, musician, choreographer and mentor — C.V. Chandra Sekhar (fondly referred to as CVC or Chandru anna) passed away recently.
- ❖ The National Yoga Olympiad 2024 was inaugurated in Mysuru, Karnataka.
- ❖ The United Kingdom (UK) has overtaken China to become India's fourth-largest export market.
- ❖ Indian-American Suhas Subramanyam has clinched the Democratic primary for a Congressional seat in Virginia.
 - He became the first Indian-American, South Asian, and Hindu elected to the Virginia General Assembly in 2019.

NATIONAL

National Forensic Infrastructure Enhancement Scheme



“National Forensic Infrastructure Enhancement Scheme”

Cabinet Decision for June 2024

- Establishment of Campuses of the National Forensic Sciences University (NFSU) and Central Forensic Science Laboratories (FSL)
- Enhancement of existing infrastructure of the Delhi Campus of the NFSU
- Financial outlay of ₹2254.43 crores for campuses, labs and enhancement of infrastructure during the period from 2024-25 to 2028-29
- Will lead to an efficient criminal justice system, based on scientific and timely forensic examination of evidence

- ❖ The Union Cabinet has approved the proposal of Ministry of Home Affairs for Central Sector Scheme “National Forensic Infrastructure Enhancement Scheme (NFIES).

- ❖ The Cabinet has approved the following components under this Scheme:
 - Establishment of Campuses of the National Forensic Sciences University (NFSU) in the country.
 - Establishment of Central Forensic Science Laboratories in the country.
 - Enhancement of existing infrastructure of the Delhi Campus of the NFSU.

Unified Cyberspace Doctrine



- ❖ The Chief of Defence Staff (CDS) General Anil Chauhan released the 'Joint Doctrine' for cyberspace operations.
- ❖ This doctrine provides a cohesive framework for executing and understanding cyberspace operations across the Indian Army, Navy, and Air Force.
- ❖ It aims to equip military commanders with the necessary guidance to navigate the complexities of modern cyber warfare, ensuring well-coordinated and effective operations.

Krishi Sakhi Convergence Program

- ❖ The centre has granted certificates to over 30,000 women from Self Help Groups (SHGs) as 'Krishi Sakhis' under the Krishi Sakhi Convergence Programme (KSCP).
- ❖ KSCP aims to transform rural India through the empowerment of rural women as Krishi Sakhi.

- ❖ This certification course also aligns with the objectives of the “Lakhpati Didi” Program.



What is the Krishi Sakhi Convergence Program (KSCP)?

- KSCP aims to transform rural India by empowering women as Krishi Sakhis under the 'Lakhpati Didi Yojana'
- This Program imparts training and certification of Krishi Sakhis as Para-extension Workers, aligning with the goal of creating **3 crore Lakhpati Didis**

Post Office Act 2023



**INDIA ENACTS
POST OFFICE ACT 2023,
REPLACING 185 YEAR
OLD LEGISLATION**

Indian Post
भारतीय डाक

- ❖ The Post Office Bill, 2023 was introduced in Rajya Sabha on August 10, 2023 and was passed in Rajya Sabha on December 4, 2023.
- ❖ The Act aims to create a simple legislative framework for delivery of citizen centric services, banking services and benefits of Government schemes at the last mile.
- ❖ The Act, for the first time, regulates private courier services by bringing it under its ambit.

- ❖ The Indian Post Office Act, 1898, was superseded by the Act.
- ❖ Section 9 of the Act allows the Centre to, by notification, empower any officer to “intercept, open or detain any item” in the interest of state security.

INTERNATIONAL

Wartsila engine power plant



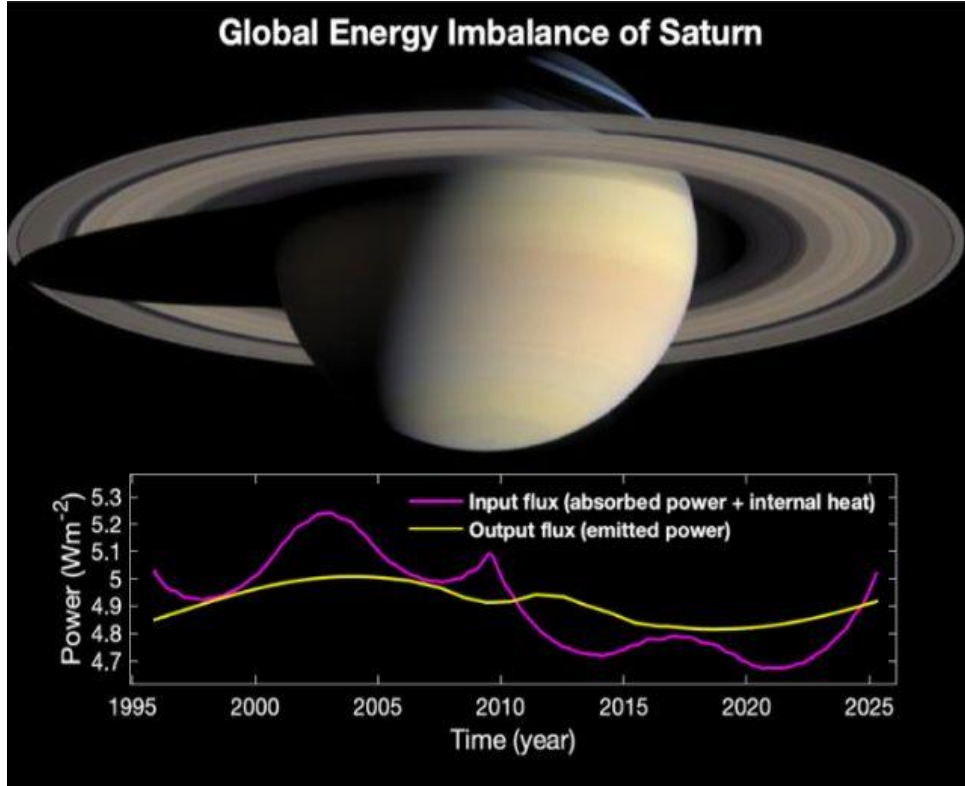
- ❖ Wartsila has launched the world's first large-scale 100% hydrogen-ready engine power plant in Australia.
- ❖ The new engine power plant can run on natural gas and 25 vol% hydrogen blends.
- ❖ The Wartsila 31 engine platform, which the hydrogen-ready power plant is based on, is the most efficient in the world.
- ❖ The 100% hydrogen-ready engine is expected to be available for orders in 2025, and available for delivery from 2026.

SCIENCE AND TECHNOLOGY

Saturn's Energy Imbalance

- ❖ The Researchers discovered Saturn's energy dynamics by revealing a seasonal imbalance that could reshape our understanding of planetary climates.
- ❖ This is the first time that a global energy imbalance on a seasonal scale has been observed on a gas giant.
- ❖ Saturn, like other gas giants, receives the energy from both solar radiation and internal heat.
- ❖ However, its large orbital eccentricity causes dramatic shifts in absorbed solar energy throughout its orbit.

- ❖ This imbalance differs greatly from Earth, which experiences minimal seasonal energy variations due to its nearly circular orbit.
- ❖ The findings suggested that Saturn's irregular energy budget plays a crucial role in the formation of its intense storms.



Double Sun halo



- ❖ A rare celestial phenomenon known as a "double sun halo" was witnessed in the skies over Ladakh recently.

- ❖ This optical illusion occurs when light from the sun refracts through ice crystals suspended in cirrus clouds.
- ❖ This is creating a stunning display of concentric rings around the sun.
- ❖ Sun halos have been a common occurrence in several parts of India; however, a double halo has been a rare phenomenon.

ASMI Submachine Gun



- ❖ Hyderabad-based Lokesh Machines Ltd introduces the ASMI submachine gun, developed in collaboration with ARDE and the Army.
- ❖ The ASMI weighs under 2.4 kg, making it 10-15% lighter than international competitors.
- ❖ It's also lighter on the pocket as it is nearly 30% cheaper at under Rs 1 lakh when compared to imported ones costing over Rs 1 lakh.
- ❖ It fires at the rate of 800 rounds per minute and has a magazine capacity of 32 rounds.

ENVIRONMENT

Pigment purpurogallin

- ❖ Scientists have traced the evolution of purple algae back hundreds of millions of years.
- ❖ And the findings challenge a key idea about how evolution works.
- ❖ Though small, these algae are having a dramatic effect on the glaciers they live on.

- ❖ During the summer melt season as liquid water forms on glaciers, blooms of purple algae darken the surface of the ice, accelerating the rate of melt.
- ❖ The purple colour of glacier algae, which acts like a sunscreen, was generated by new genes involved in pigment production.
- ❖ This pigment, purpurogallin, protects algal cells from damage of ultraviolet (UV) and visible light.



STATES

Vadhavan Port project

- ❖ The Union Cabinet has approved the development of an all-weather deep-water port at Vadhavan near Dahanu in Maharashtra.
- ❖ This port is designed to accommodate large container vessels.
- ❖ It will be jointly constructed by the Jawaharlal Nehru Port Authority (JNPA) and the Maharashtra Maritime Board (MMB).
- ❖ The total project cost is approximately ₹76,220 crore.
- ❖ It will be developed in two phases, with the first phase expected to be operational by 2029 and the second by 2037.
- ❖ The port will have the capacity to handle 23 million TEUs (20-foot equivalent units).
- ❖ This is a capability unmatched by any other port in India due to the natural limitations.

- ❖ It will feature nine container terminals, each about 1000 meters long, enabling it to harbour the world's largest vessels, which carry about 24,000 TEUs.

19th June, 2024
CABINET DECISION

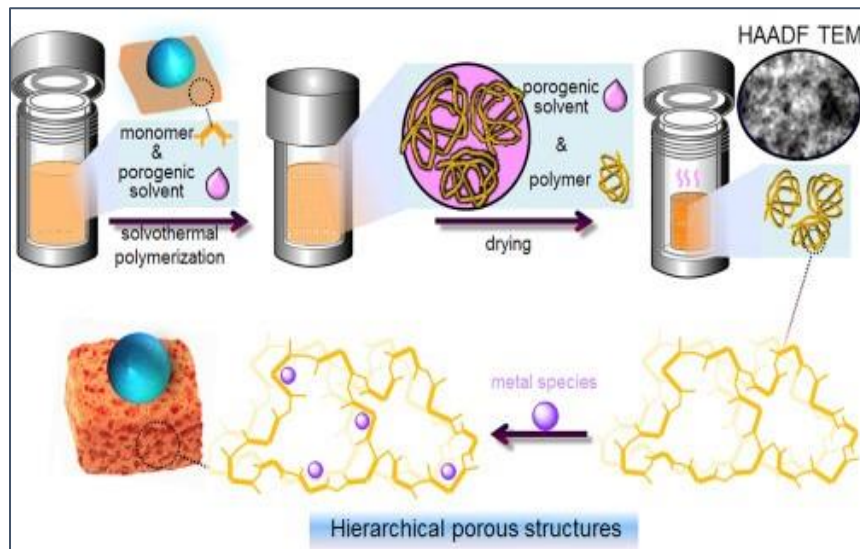
Major Port at VadHAVAN, Maharashtra



- ▶ Cabinet approves 'Development of an all-Weather Greenfield deepdraft Major Port at VadHAVAN in Maharashtra'
- ▶ The total project cost, including the land acquisition component is Rs.76,220 Crore
- ▶ Will create a cumulative capacity of 298 million metric tons (MMT) per annum
- ▶ Potential of 10 lakh direct and indirect employment opportunities

MISCELLANEOUS

Superhydrophobic catalyst



- ❖ A team of scientists from Assam, Odisha, China, and the United Kingdom have developed a water-repellent catalyst.



- ❖ It can cut the cost of producing “environmentally benign” biodiesel substantially from the current levels.
- ❖ The process of arriving at the “spherical superhydrophobic activated carbon catalyst” to withstand water by-product during the production of biodiesel.
- ❖ Superhydrophobic catalysts are imitating the anti-wetting or water-repulsing properties of natural surfaces such as lotus leaves.
- ❖ The catalyst remains highly effective and can be reused multiple times, making the catalytic process more efficient and cost-effective

