

Deep Ocean Mission



❖ Context

- Recently, the Union Minister of State (Independent Charge) Earth Sciences chaired the first-ever high-level Steering Committee meeting of Deep Ocean Mission.

❖ Key Highlights:

- Deep Ocean Mission is part of Government of India's Blue Economy initiative.
- **The Mission Steering Committee (MSC)** is the highest Policy making body constituted under the Deep Ocean Mission (DOM).
- The design and development of subsystems of the manned submersible to carry three humans has been completed and integration is in progress.
- **National Institute of Ocean Technology (NIOT)**, has been developing a **manned submersible (Matsya 6000)** with a capacity to carry three human beings to **6000 m ocean depth**.
 - NIOT is an autonomous institute under the Ministry of Earth Sciences.
- **The Vikram Sarabhai Space Center (VSSC)** of ISRO is involved in **developing a titanium alloy human sphere** of 2.1 m diameter for the manned submersible.
- The overall estimated cost of the Deep Ocean Mission is Rs. 4077 crores for a period of five years (2021 to 2026).
- The development of the mission has been going on **since 2018**.

❖ About The Mission:

- **Aim** : The focus of the mission will be on **deep-sea mining, ocean climate change advisory services, underwater vehicles and underwater robotics related technologies**.
- **Nodal Ministry** : Ministry of Earth Sciences.
- **Components of the Mission** : The mission focuses on the following six thematic areas.
 - Development of Technologies for Deep Sea Mining, Manned Submersible, and Underwater Robotics
 - Development of Ocean Climate Change Advisory Services
 - Technological innovations for exploration and conservation of deep-sea biodiversity
 - Deep Ocean Survey and Exploration
 - Energy and freshwater from the Ocean and
 - Advanced Marine Station for Ocean Biology which will be implemented by the institutions of MoES and its partner institutions.
- **Significance:**
 - The mission will give a **boost to efforts to explore India's vast Exclusive Economic Zone and Continental Shelf**.
 - The plan will enable India to develop capabilities to **exploit resources in the Central Indian Ocean Basin (CIOB)**.
 - It will pave the way for further studies and research into **deep-sea biodiversity**.
 - As the ocean will be monitored continuously, **every slight change in climate will be noted**, leading to better data collections and hence improved actions.

Coco Islands

❖ Context

- Amid recent reports of suspicious infrastructure upgrades at **Myanmar's Coco Islands**, a MQ-9 drone leased by the Indian Navy was seen reconnoitering the nearby areas of Andaman and Nicobar Islands.

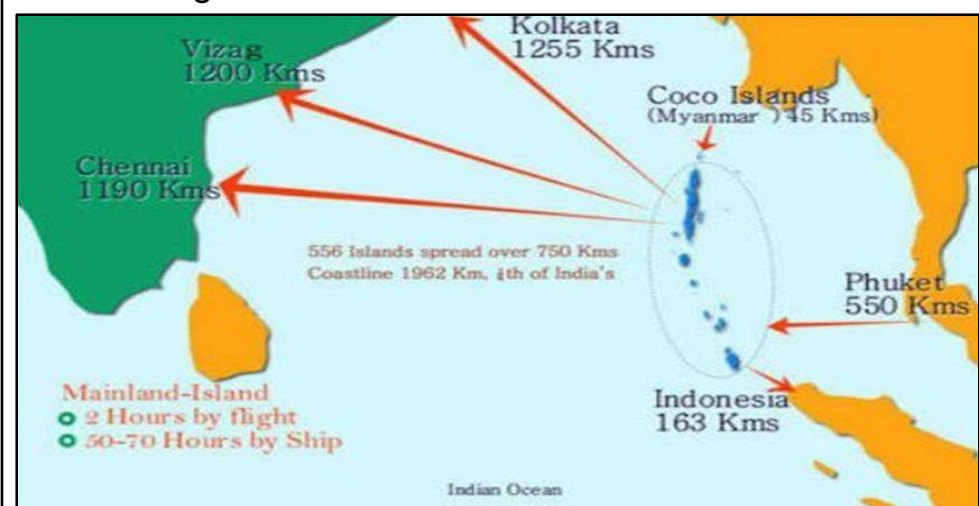
❖ Key Highlights:

- The Great Coco island, held by Myanmar, has seen **increased building activity recently**, according to a report by a U.K.-based think tank group.
- This island has long been believed to be **China's eyes and ears in the area**.
- The islands are only about **55 km away from India's strategically important Andaman and Nicobar Islands**.

❖ About Coco Island:

- The Coco Islands are a **small group of islands in the northeastern Bay of Bengal**.
- They are **part of the Yangon Region of Myanmar**.
- The islands are **located 414 km (257 mi) south of the city of Yangon**.
- Coco Island group consists of five islands: four on Great Coco Reef and one on the Little Coco Reef.
- To the **north** of this island group lies Preparis Island, belonging to Myanmar.
- To the **south** lies the Landfall Island, belonging to India.

- The Coco Islands consist of three main islands -
 - Great Coco Island and the smaller Little Coco Island, separated by the Alexandra Channel.
 - Table Island, a third small island located near Great Coco Island.
- Geographically, they are a **part of the Andaman and Nicobar Islands archipelago**, most of which belongs to India.



Face to Face Centres



Saantinketan

❖ Context

- Saantinketan the home of Nobel laureate Rabindra Nath Tagore has been recently recommended for inclusion in UNESCO's World Heritage List.



❖ Key Highlights:

- The recommendation was made by the **International Council on Monuments and Sites (ICOMOS)**, which is the advisory body to the UNESCO World Heritage Centre, based on a file moved by the Indian government.
- ICOMOS, a France-based International culture body, comprises of professionals, experts, representatives from local authorities, companies and heritage organizations.
- It is dedicated to the conservation and enhancement of global architectural and landscape heritage.
- Santiniketan, if selected would be the second cultural symbol from West Bengal, to make it to the UNESCO list.
- In 2021, UNESCO included 'Durga Puja in Kolkata' in its list of Intangible Cultural Heritage of Humanity.

- To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of **ten selection criteria mentioned** in the UNESCO list.
 - Represents a masterpiece of human creative genius.
 - Exhibits an important interchange of human values.
 - Represents a unique or exceptional testimony to a cultural tradition or civilization.
 - Represents an outstanding example of a type of building, architectural or technological ensemble or landscape that illustrates a significant stage in human history.
 - Represents an outstanding example of a traditional human settlement, land use, or sea use.
 - Represents a unique or exceptional natural phenomenon.
 - Contains superlative natural beauty and aesthetic importance.
 - Represents exceptional examples of ongoing ecological and biological processes.
 - Represents outstanding examples of significant stages of Earth's history.
 - Contains the most important and significant natural habitats for the conservation of biological diversity.

ISRO Tests Semi-Cryogenic Engine

❖ Context

- The Indian Space Research Organisation recently successfully carried out the first test of a semi-cryogenic engine.



❖ Key Highlights:

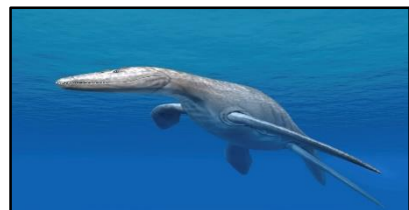
- The test was done at the newly commissioned semi-cryogenic integrated engine and stage test facility at the **Isro propulsion complex (IPRC)** in Mahendragiri, Tirunelveli district.
- It was the first integrated test on an **intermediate configuration** of the 2000kN semi-cryogenic engine.
- The tested semi-cryogenic engine employs a propellant combination of Liquid Oxygen (LOX) and Kerosene, which provides an efficient and powerful fuel source, ensuring optimal performance during launch missions.

- During the testing phase, an intermediate configuration known as the **Power Head Test Article (PHTA)** is utilized. This configuration includes all engine systems except the thrust chamber.
- The PHTA setup enables a comprehensive evaluation of the propellant feed system and control components, allowing for a **thorough assessment** of their functionality and performance.
- ❖ **Significance:**
 - The recent test carried out at IPRC is a notable milestone in the advancement of semi-cryogenic engines, signifying significant progress.
 - The successful validation of the propellant feed system and control components during the test has opened doors for **the integration and qualification of the complete engine.**

Pliosaur

❖ Context

- A recent discovery in England revealed fossil remains of a giant pliosaur, making it a significant finding due to its enormous estimated size.



❖ Key Highlights:

- Pliosaur, ancient marine reptiles, roamed the prehistoric seas of Europe between 220 and 70 million years ago.
- They were well-adapted for aquatic life and were known for their speed compared to their long-necked counterparts, the plesiosaurs.

- Despite their association with dinosaurs, pliosaurs are not classified as dinosaurs themselves but are **distant relatives of modern turtles.**
- They possessed unique characteristics that set them apart from other marine creatures of their time.
- As apex predators, pliosaurs were formidable hunters with four flipper-like limbs, large heads resembling crocodiles, and massive teeth.

Face to Face Centres

FluHorse

❖ Context

- Recently, a new **Android malware known as 'FluHorse'** has been discovered.



❖ FluHorse:

- It targets users in Eastern Asia with malicious apps that look like legitimate versions with over 1,00,000 installs.
- It is typically **distributed via email**.
- These malicious apps are designed to extract sensitive information, including user credentials and Two-Factor Authentication (2FA) codes.



- In some cases, high-profile entities such as government officials were targeted at the initial stages of the phishing email attack.

- One of the most concerning aspects of FluHorse is **its ability to go undetected for long periods of time**, making it a persistent and dangerous threat that is difficult to detect.

❖ Two-Factor Authentication (2FA) Codes:

- Two-factor authentication (2FA) is a **security system** that requires **two separate, distinct forms of identification in order to access something**.
- The first factor is a password and the second commonly includes a text with a code sent to your smartphone, or biometrics using your fingerprint, face, or retina. **While 2FA does improve security, it is not foolproof**

National Technology Day

❖ Context

- National Technology Day is celebrated every year on **May 11**.
- On this day, different government organisations, institutes, schools, and colleges hold programmes in **honour of India's scientists and their achievements**



❖ Quasars:

• Background:

- The **first Nuclear test was conducted in May 1974**.
- In 1998, India became the **world's sixth nuclear test**.
- Under the leadership of the then Prime Minister Atal Bihari Vajpayee, India conducted a series of five nuclear bomb tests (**Pokhran-II**) in May 1998.
- The country was put under **heavy sanctions by the US government** following the nuclear test.

- However, India didn't back down under the influence of western powers and went ahead with the test.
- Since then, May 11 is being celebrated as National Technology Day to acknowledge the contribution of scientists and engineers in the development of the country.

• Theme:

- For 2023, the theme is **'School to Startups- Igniting Young Minds to Innovate.'**

News in Between the Lines

State Visits



❖ Context

- **Prime Minister of India will travel to the US** for an official state visit from June 21 to 24, 2023 where he will be hosted by US President Joe Biden at the White House.
- The **last state visit to the US by an Indian** was by the then Prime Minister in **2009**.

❖ About State Visits:

- State visits are visits to foreign countries **led by a head of state/government, acting in their sovereign capacity**.
- They are, therefore, officially described as a **“visit of [name of state]”** rather than **“visit of [name of leader]”**.
- State visits to the US only occur on the invitation of the president of the United States, acting in their capacity as the head of state.
- **State visits are typically a few days long** and comprise a number of elaborate ceremonies, subject to the schedule of the visiting head of state.
- State visits are the **highest-ranked category of foreign visits** and are considered to be the highest expression of friendly bilateral relations.
- Less important visits are classified (in descending order of magnitude, according to US diplomatic policy) as
 - Official visits, official working visits, working visits, guest-of-government visits, and private visits.
- Each of these visits have different protocols to be followed.

Face to Face Centres



Right To Walk



❖ Context

➤ Amid a **consistent rise in deaths of pedestrians and cyclists**, Punjab has taken the lead among the states and UTs to implement the 'right to walk'.

❖ Key Highlights:

- The state government has issued these directions following two court orders after PILs were filed at Punjab and Haryana HC and another in the Supreme Court.
- It has been made mandatory for all road-owning agencies, **including the NHAI**, to provide footpaths and cycle tracks in all future expansion of roads and construction of new ones.

"Buddham Saranam Gacchami" Exhibition

❖ Context

➤ The **National Gallery of Modern Arts in Delhi** recently hosted the "Buddham Saranam Gacchami" exhibition, showcasing artistic works depicting the **life and teachings of Lord Buddha**.

❖ Key Highlights:

- The exhibition, which will run until June 10 2023, provided visitors with a profound understanding of Lord Buddha's **journey towards enlightenment**.
- The **exhibition attracted** the participation of countries with significant Buddhist populations, including **Nepal, Myanmar, Mongolia, South Korea, Thailand, and Bhutan**.



❖ Context

➤ The **National Tiger Conservation Authority (NTCA)** has approved shifting three tigresses from **Ranthambore Tiger Reserve (RTR)** to two other state reserves.

❖ Key Highlights:

- Ranthambore Tiger Reserve is situated in the **Sawai Madhopur district** of Rajasthan.
- It covers an area of approximately **1,334 square kilometres (515 square miles)**.



- It is known for its significant tiger population and is one of the best places in India to spot these **majestic big cats in their natural habitat**.
- It encompasses a variety of ecosystems, including **dry deciduous forests, lakes, and rocky terrain**.
- Apart from tigers, the **reserve is home to several other wildlife species** such as leopards, sloth bears, striped hyenas, sambar deer, chital (spotted deer), and numerous bird species.
- IUCN Red List Status of Tigers: **Endangered**

Ranthambore Tiger Reserve (RTR)



Telangana's Robotics Policy Framework



❖ Context

➤ Telangana has become the first state in the country to launch a **state robotics framework** with a vision to **create a sustainable robotics ecosystem**.

❖ Key Highlights:

- This is aimed at **promoting innovation, entrepreneurship, and research and development** to position Telangana as a leader in the field of robotics.
- It has been developed by the **Emerging Technologies Wing** in **collaboration with the All-India Robotics Association** and inputs from **academia, industry experts and stakeholders**.
- The framework focuses on leveraging robotics technology to drive growth and development across **identified four key domains** – agriculture, healthcare, industrial automation and consumer robotics.
- In order to achieve the vision of the framework, the government has **identified five key pillars**: infrastructure access, business enablement, fostering research & innovation, human capital enhancement and responsible deployment.
- The state will set up a separate body called the **Telangana Robotics Innovation Center (TRIC)** which will be responsible for the implementation of this framework and will be the nodal point to implement the key pillars of the framework.

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