

INTERNATIONAL MARITIME ORGANISATION (IMO)

Context: Recently, India has been **re-elected** to the International Maritime Organisation Council.

India's re-election falls under the Category of 10 states with "the largest interest in international seaborne trade", alongside Australia, Brazil, Canada, France, Germany, the Netherlands, Spain, Sweden, and the United Arab Emirates (UAE).

About International Maritime Organization (IMO)

- It is a specialized agency of the United Nations.
- **Mandate:** Regulates and standardizes global shipping to ensure safety, security, and environmental protection.
- **Structure:**
 - All 175 member states and three associate members are entitled to attend the Assembly, which is the IMO's highest governing body.
 - **Executive Organ:** IMO Council which is responsible to supervise the work of the organization.
- **Conventions:** Enacts international conventions, such as **SOLAS** (Safety of Life at Sea) and **MARPOL** (International Convention for the Prevention of Pollution from Ships).
- **Major Functions:**
 - **Piracy and Security:** Addresses issues of piracy and maritime security to safeguard international waters.
 - **Technical Assistance:** Provides technical assistance to developing countries for capacity-building in maritime matters.
 - **Environmental Issues:** Addresses environmental issues related to shipping, including pollution prevention.

Source: [PIB](#)

ANTHROBOTS

Context: Recently, researchers have developed miniature robots called anthrobots using human cells.

About

- Constructed from human tracheal cells, these bio-robots exhibit self-assembly capabilities.
 - **Tracheal Cells** are derived from the lining of the bronchi/trachea, which are tubes that convey air to the lungs.
- Capable of movement and healing neurons in a laboratory setting.
- Measure between the width of a human hair and the tip of a sharpened pencil.

Anthrobots vs Xenobots

Features	Xenobots	Anthrobots
Source	Embryonic stem cells of frogs	Human tracheal cells
Self-organization	Capable of self-organizing cells for tasks	Spontaneous fusion to form superbots
Applications	Drug delivery, environmental cleanup, medical procedures	Regenerative medicine, wound healing, disease treatment

Source: [NDTV](#)

PHASE-II OF LEADERSHIP GROUP (LEADIT 2.0)

Syllabus: **GS3/Environment & Conservation**

In News

- Prime Minister Narendra Modi together with Prime Minister of Sweden, co-launched the **Phase-II of the Leadership Group** for Industry Transition (LeadIT 2.0) for the period **2024-26**, at **COP-28 in Dubai**.

About

- **Established:** The Leadership Group for Industry Transition (LeadIT) was launched by the governments of Sweden and India at the **UN Climate Action Summit in 2019** and is supported by the **World Economic Forum**.
- **Aim:** LeadIT members subscribe to the notion that energy-intensive industry can and must progress on low-carbon pathways, aiming to achieve net-zero carbon emissions.
 - It gathers countries and companies that are committed to action to achieve the Paris Agreement.
- **LeadIT 2.0 will focus on the following:**
 - Inclusive & Just Industry Transition,
 - Co-development & transfer of low-carbon technology,
 - Financial support to emerging economies for Industry Transition.
- India and Sweden also launched the **Industry Transition Platform**, which will connect the governments, industries, technology providers, researchers and think tanks of the two countries.

Source: [PIB](#)

HYDROGEN FOR HERITAGE SCHEME

Syllabus: GS3/Environment & Conservation

In News

- India proposes to invite expression of interest from global players to **manufacture hydrogen-powered trains** in the country based on **technology being developed indigenously**.

About

- **Initiation:** Finance Minister Nirmala Sitharaman in her Budget speech 2023, announced the 'Hydrogen for Heritage' scheme, a plan to operate **hydrogen-powered trains** on select heritage and hilly routes that are environmentally sensitive.
- **Technology:** Indian Railways is developing a prototype of a train that will be powered by hydrogen fuel cells—making for a more environment-friendly locomotive than traditional diesel-powered ones.
 - India's plan to develop the technology involves **retrofitment of hydrogen fuel cells on diesel electric multiple unit (DEMU) rakes**. This prototype is expected to run on the Jind-Sonipat section in Haryana initially.
- **Countries Having the Technology:** Currently, **only Germany commercially operates hydrogen-powered trains**, while the US, the UK, France, and Japan are in the testing phase.
- **Initial Proposal:** Indian Railways has proposed to run 35 hydrogen trains at an estimated cost of Rs 80 crore per train, with ground infrastructure costing Rs70 crore per route.
 - Thirty-five train-set rakes (with six coaches each) have been sanctioned for the ongoing financial year for eight sections—Matheran Hill Railway, Darjeeling Himalayan Railway, Kalka-Shimla Railway, Kangra Valley, Bilmora Waghai, Patalpani Kalakund, Nilgiri Mountain Railways, and Marwar-Goram Ghat.

Source: TM

WHITE LUNG SYNDROME

In News: White lung syndrome is emerging as a new health concern among children.

White lung syndrome

- It's a respiratory infection caused by **multiple microorganisms** (influenza, mycoplasma etc) leading to development of pneumonia.
 - The term was coined to describe a mysterious respiratory illness that began to be seen among patients in China primarily with pneumonia-like symptoms.
 - In China, it was found to be due to a **combination of various respiratory illnesses**, including **influenza**, SARS-CoV-2 (Covid-19), Respiratory syncytial (RSV), and mycoplasma pneumoniae.
- **Symptoms:** White patches in the lung are formed all over the organ .

- Patient start having infection, fever, cough, other symptoms, sore throat, watery eye skin rash or symptoms like diarrhoea,
- **Treatment:** The treatment is mainly focused on addressing the symptoms of pneumonia.

Source: [HT](#)

JELLYFISH

In News: Scientists have recently confirmed 'mysterious' jellyfish named **Santjordia pagesi** with 240 tentacles off Japan's coast.

It has distinctive features like a bright red, cross-shaped stomach.

About Jellyfish

- It is a **planktonic marine member** of the class Scyphozoa (phylum Cnidaria), a group of invertebrate animals.
- Jellyfish can be divided into two types, those that are **free-swimming medusae** and those that are **sessile** (animals that are attached to seaweed and other objects by a stalk).
- Most feed on copepods, fish larvae, and other small animals that they catch in their tentacles, which have stinging cells (nematocysts).
- Most of them live for only a few weeks, but some are known to survive a year or longer.
- They can be **bioluminescent**, too, which means they produce their own light.

Source: [Wion](#)

