

# NEWS TODAY

## ISRO SUCCESSFULLY LAUNCHES ADITYA-L1- INDIA'S MAIDEN SOLAR MISSION- USING PSLV-C57

• **Objectives** of Aditya-L1, first space-based observatory-class Indian solar mission, are to understand:

- **Coronal Heating and Solar Wind Acceleration;**
- **Initiation of Coronal Mass Ejection (CME), flares and near-earth space weather;**
- **Solar wind distribution** and temperature anisotropy etc.

• **Spacecraft carry seven payloads** to observe photosphere, chromosphere, and outermost layers of Sun (corona) using electromagnetic and particle detectors.

• **After around four months of journey, Spacecraft will be placed in a halo orbit around Lagrangian point 1 (L1)** of Sun-Earth system, which is **about 1.5 million km from Earth.**

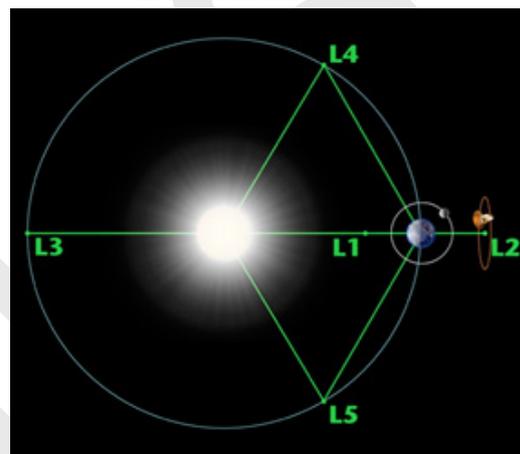
• At Lagrange points, **gravitational pull of two large masses precisely equals the centripetal force** required for a small object to move with them. Thus, **objects sent there tend to remain stationary.**

• Of the **five Lagrange points, three (L1, L2, L3) are unstable** and **two (L4, L5) are stable.**

- However, L1 and L2 are **not so unstable to keep a spacecraft** near them.
- **Unstable Lagrange points** lie along the line connecting two large masses.
- **Stable Lagrange points** form apex of two equilateral triangles and objects such as dust and asteroids tend to accumulate here.

• **Advantage of L1 point:** Continuously viewing Sun without any occultation/eclipses, reduced fuel consumption etc.

### LAGRANGE POINTS



Joint NASA-ESA's **Solar and Heliospheric Observatory Satellite (SOHO)** mission is placed in **L1 point** and NASA's **James Webb Space Telescope** is placed in **L2 point.**

## CENTRE ASKS STATES TO FORMULATE LOGISTICS POLICY

• States/UTs are being encouraged to **formulate State Logistics Policy (SLPs) aligned with National logistics Policy (NLP).** So far, 22 states have notified their logistics policies.

• **Need for SLP**

- To bring **holistic focus on logistics in public policy** at state level.
- **Promote ease of doing business.**
- **Make the logistics industry more efficient** and lower its costs, etc.

• **India's logistics sector** is estimated to **account for about 14.4% of GDP.**

- **Unorganized sector** amounts to over **90% of the logistics sector.**
- India has ranked **38 out of 139 countries in World Bank's Logistics Performance Index 2023.**

• **Challenges before Indian logistics sector**

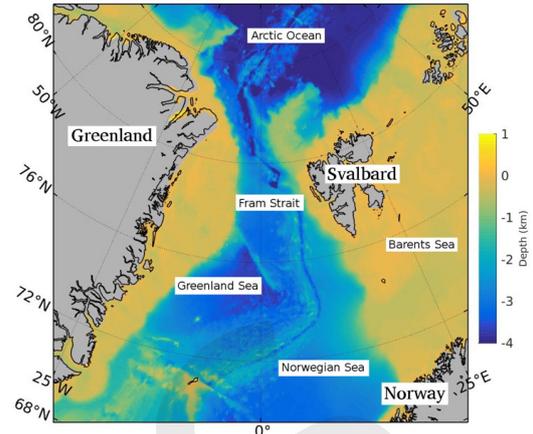
- **High logistics costs** impact the **competitiveness of Indian businesses** in global market.
- **Lack of IT standards and poor integration of technology.**
- **Poor Warehousing and Storage.**

• **Government initiatives in Logistics sector**

- **NLP 2022 to reduce logistics costs from 14-18% of GDP to 8% by 2030.**
- **PM GatiShakti – National Master Plan** to reduce logistics costs and boost economy.
- **Multi-Modal Logistics Parks** to minimise transportation delays.
- **Logistics Efficiency Enhancement Program** and **Vehicle Fleet Modernization Program** to improve logistics efficiency.

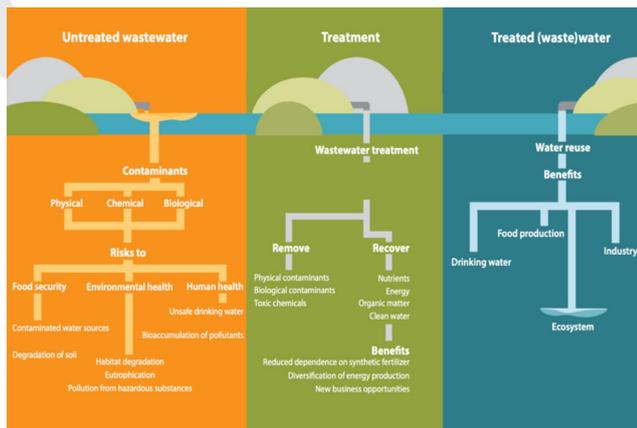
# ATLANTIFICATION IS MAKING THE ARCTIC OCEAN SALTIER AND WARMER

- Atlantification is a process in which **warm water from Atlantic is being advected into Arctic ocean in increasing amounts** thereby making some parts of Barents Sea to more closely resemble the Atlantic.
  - Top of the Arctic Ocean** is typically **covered by sea ice**. Below this is a **layer of cool freshwater**, followed by a **deeper layer of warmer, saltier water** delivered to Arctic from Atlantic.
  - Layers are held in place** as a result of differences in water salinity and thus **protects sea ice from being melted** by incoming **warm water from Atlantic**.
- However, **rapid decline in arctic ice covers** in recent decades is **causing the ocean to mix together** and also **driving Atlantification**.
  - Once sparked, Atlantification **causes further melting of sea ice**, which could, in turn, **lead to more Atlantification**.
- Researchers believe that Atlantification is **driven by a process called Arctic Dipole** which is associated with **anticyclonic winds over North America** and **cyclonic winds over Eurasia** which **alternates in an approximately 15-year cycle**.
  - Positive phase of Arctic Dipole** contributed to **slowing Arctic sea-ice loss** by restricting Atlantic water into the Arctic via the **Fram Strait** and **negative phase accelerate sea-ice decline**.



## “WASTEWATER -TURNING PROBLEM TO SOLUTION” REPORT RELEASED BY UN ENVIRONMENT PROGRAMME (UNEP)

- Report is prepared by **Global Wastewater Initiative (GWWI)**, a global **platform bringing together UN agencies, NGOs, private sector** etc. to tackle wastewater pollution.
- Wastewater is **a combination of one or more of**:
  - Domestic effluent** consisting of **black water** (excreta, urine and faecal sludge) and **grey water** (kitchen and bathing);
  - Water from commercial establishments**, including hospitals;
  - Industrial effluent, stormwater** and other **urban run-off**;
  - Agricultural effluent** or run-off.
- Key highlights of report**
  - Only 11%** of world’s treated **wastewater is reused** and **around 50%** of untreated wastewater **still enters environment**.
  - Wastewater could **provide alternative energy to half a billion people**, offset over **10% of global fertilizer use**, and **irrigate around 40 million hectares**.
  - Other resources from wastewater**: raw material for producing paper, polymers, pesticides, rubber, paint, biodiesel, food preservatives and flavours, fireproofing and waterproofing fabrics, jewellery etc.
- Barriers to Wastewater reuse in India**: Unclear responsibilities between central, state and local government bodies, inadequate technological designs; delays in project execution; lack of adequate financing etc.
- Recommendations :**
  - Target-based regulations** with defined national reuse standards.
  - Detailed guidance on sewage treatment** and reuse technologies.
  - Effective financing mechanisms** that permit sufficient **cost recovery**.



## INDIA IT INDUSTRY IS MOVING TO NEW CITIES FROM 7 MAJOR HUBS: DELOITTE AND NASSCOM REPORT

- As per report titled **“Emerging technology hubs of India”**, India’s **technology industry is decentralising from seven major hubs**, including metropolitan hubs, **to 26 cities with representation from tier-2 and tier-3 towns** (Chandigarh, Kanpur, Ahmedabad, etc.) as well.
- Key findings**
  - Majority of **5.4 million people employed** in technology industry have **clustered around seven major cities** of Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Hyderabad and Pune.
  - 60 percent of graduates come from smaller cities** in key fields and 30 percent of whom relocate to tier-1 cities for employment after graduation.
- Why are IT companies moving operations to emerging hubs?**
  - Rising cost of operations in major hubs** (60-80% increase in real-estate cost).
  - Better access to skilled talent pool** at lower cost. Presently, **11–15 percent of tech talent** is based in **tier 2 and tier 3 cities**.
  - Rapid development** of infrastructure, skill diversity, startup presence, and governmental initiatives such as smart cities, tech parks, and incubation centres.
  - Growing proliferation of start-ups and incubators** in emerging hubs. **39 percent of tech start-ups established** in 2022 are **from emerging hubs**.

### Key Pillars for Establishing Technology Hubs



# 3 YEARS OF PRADHAN MANTRI MATSYA Sampada Yojana (PMMSY)

• PMMSY, launched in 2020 by **Ministry of Fisheries, Animal Husbandry & Dairying**, aims to bring **Blue Revolution through sustainable and responsible development of fisheries sector** in India.

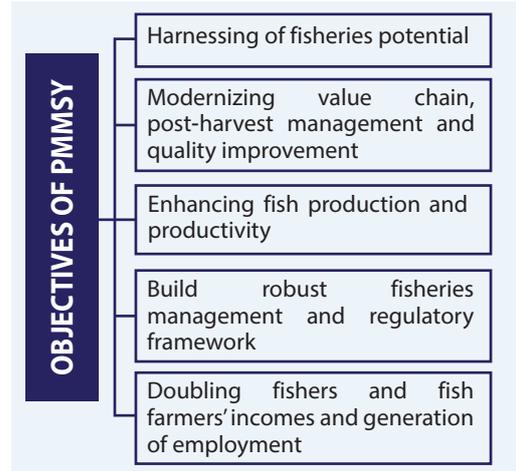
- It is being **implemented in all States and Union Territories for a period of 5 years** from FY 2020-21 to FY 2024-25.
- It was introduced as part of **'Atma Nirbhar Bharat' package** with **highest ever investment** of Rs. 20,050 crores in the sector.
- It has **two components** namely Central Sector Scheme (CS) and Centrally Sponsored Scheme (CSS).

## • PMMSY targets

- **Enhanced fish production** of 22 million metric tons by 2024-25.
- **Increasing contribution of Gross Value Added (GVA) of fisheries sector** to agriculture GVA to 9%.
- **Reduction of post-harvest losses** to about 10%.

## • PMMSY Achievements

- **Fisheries sector** shows impressive growth of **14.3% from 2019-20 to 2021-22**.
- **1.42 lakh Kisan Credit Cards have been issued** to fishers and fish farmers.
- From 2013-14 to 2021-22, annual fish production of India witnessed an **increase of 66.69 lakh tons**.
  - India is **3<sup>rd</sup> largest fish producing country**, contributing 8% to global fish production and ranks **2<sup>nd</sup> in aquaculture production**.



## ALSO IN NEWS

 <b>Urban Infrastructure Development Fund (UIDF)</b>	<ul style="list-style-type: none"> <li>• <b>Ministry of Housing and Urban Affairs</b> will disburse first tranche of loans to fund ongoing projects under UIDF.</li> <li>• <b>Union Budget 2023-24 has announced the setting up of UIDF</b> through priority sector lending shortfall.                     <ul style="list-style-type: none"> <li>➤ It will be <b>managed by the National Housing Bank</b>. It has been operationalised with an initial corpus of Rs. 10, 000 crore.</li> <li>➤ It is used by public agencies <b>to create urban infrastructure in Tier 2 and Tier 3 cities</b>.</li> <li>➤ It is operationalized along the lines of the existing <b>Rural Infrastructure Development Fund</b>.</li> </ul> </li> </ul>
 <b>Agriculture Infrastructure Development Cess (AIDC)</b>	<ul style="list-style-type: none"> <li>• AIDC was <b>proposed in union budget 2021-22</b> to raise funds to finance spending on developing agriculture infrastructure.                     <ul style="list-style-type: none"> <li>➤ It was proposed <b>to be levied on several products</b> including <b>gold, silver, imported apple, imported alcohol</b>, etc.</li> </ul> </li> <li>• Cess is a kind of <b>special-purpose tax</b> that is levied <b>over and above basic tax rates</b>.                     <ul style="list-style-type: none"> <li>➤ <b>Articles 270 and 271</b> of the Constitution <b>empowers the Centre to collect cess</b> and deposit it in Consolidated Fund of India.</li> <li>➤ Money is then supposed to be <b>transferred to a segregated fund</b> to be used for specific purpose.</li> </ul> </li> </ul>
 <b>Impossible Trinity or Trilemma</b>	<ul style="list-style-type: none"> <li>• It refers to the idea that an <b>economy cannot pursue independent monetary policy, maintain a fixed exchange rate, and allow the free flow of capital across its borders at the same time</b>.                     <ul style="list-style-type: none"> <li>➤ Idea was <b>proposed independently by</b> Canadian economist <b>Robert Mundell</b> and British economist <b>Marcus Fleming</b> in the early 1960s.</li> </ul> </li> <li>• According to economists, <b>any economy can choose to pursue only two out of the three policy options</b> simultaneously in the long-run.                     <ul style="list-style-type: none"> <li>➤ For ex: <b>If the exchange rate is fixed</b> but the country is open to cross-border capital flows, <b>it cannot have an independent monetary policy</b>.</li> </ul> </li> </ul>
 <b>Aarogya Maitri Cube under Project BHISHM</b>	<ul style="list-style-type: none"> <li>• India has built the <b>world's first disaster hospital, called Aarogya Maitri Cube which can be airlifted and assembled in 72 cubes</b>.                     <ul style="list-style-type: none"> <li>➤ These cubes contain medical equipment and <b>supplies to support 200 survivors for 48 hours</b>.</li> <li>➤ These medical cubes have been indigenously developed under <b>Project BHISHM (Bharat Health Initiative for Sahyog Hita and Maitri)</b>.</li> <li>➤ India has already <b>donated two Aarogya Maitri Cubes to Myanmar</b> as a goodwill gesture and one is <b>being readied for donation to Sri Lanka</b>.</li> </ul> </li> </ul>

 <p><b>Gramodyog Vikas Yojna (GVY)</b></p>	<ul style="list-style-type: none"> <li>GVY scheme was <b>launched by Ministry of Micro, Small &amp; Medium Enterprises</b> and managed by <b>Khadi and Village Industries Commission</b>.</li> <li>GVY is <b>one of the components of Khadi and Gramodyog Vikas Yojana (KGVY)</b>, which is a Central Sector Scheme.                     <ul style="list-style-type: none"> <li>Other components are Khadi Vikas Yojana and Khadi Grant.</li> </ul> </li> <li><b>Objective:</b> Promotion and development of village industries through common facilities, technological modernization, training etc. &amp; other support and services for promotion of village Industries.</li> <li><b>Activities included:</b> Wellness &amp; Cosmetics Industry, Handmade Paper, etc.</li> </ul>
 <p><b>Digital Infrastructure for Knowledge Sharing (DIKSHA) Platform</b></p>	<ul style="list-style-type: none"> <li>National eGovernance Division (NeGD) under MeitY is set <b>to integrate Personalised Adaptive Learning (PAL) into its existing DIKSHA platform</b>.</li> <li>PAL is a software-based approach that allows <b>each student to have an individualized learning experience</b>.</li> <li>DIKSHA is an <b>initiative of National Council for Education Research and Training (NCERT), Ministry of Education</b>.</li> <li>It provides <b>quality e-content for school education</b> in States/UTs and <b>QR coded Energized Textbooks for all grades</b> (one nation, one digital platform).</li> <li>It <b>enables people with visual impairments to access the website</b> using assistive technologies, such as screen readers.                     <ul style="list-style-type: none"> <li>Special e-content for visually and hearing impaired is developed on Digitally Accessible Information System.</li> </ul> </li> </ul>
 <p><b>Asiatic Wild Dog (Dhole)</b></p>	<ul style="list-style-type: none"> <li><b>A rare sighting of Dhole</b> was encountered in <b>Shivamogga district, Karnataka</b>.</li> <li>About <b>Asiatic Wild Dog (Dhole)</b> <ul style="list-style-type: none"> <li>Dholes play an <b>important role as apex predators</b> in forest ecosystems.</li> <li>It is a <b>carnivore of the dog family</b> found in the forests of <b>central, south, and southeast Asia</b>.</li> <li><b>Most populations</b> found in <b>India, Nepal, Bhutan, and Thailand</b>.</li> <li><b>Protection:</b> IUCN status <b>Endangered</b>; included in <b>Appendix II of CITES</b></li> <li><b>Threats:</b> Habitat loss, reduced prey base, retaliatory killings.</li> <li><b>Initiative taken in India:</b> Dhole conservation breeding program.</li> </ul> </li> </ul>
 <p><b>Hyperloop</b></p>	<ul style="list-style-type: none"> <li><b>Tata Steel and TuTr Hyperloop</b> (deep-tech startup operating from IIT Madras) signed a Memorandum of Agreement <b>to jointly work on development of hyperloop technology</b>.</li> <li>Hyperloop is a <b>proposed ultra-high-speed (at over 700 miles an hour) ground transportation system</b> for passenger and cargo.                     <ul style="list-style-type: none"> <li>Hyperloop concept has been promoted by Musk and SpaceX, and other companies.</li> <li>It has three essential elements: <b>tubes, pods, and terminals</b>.                             <ul style="list-style-type: none"> <li>Tube is a large, <b>sealed low-pressure system or vacuum tubes</b> (usually a long tunnel).</li> <li><b>Pod is a coach pressurized at atmospheric pressure</b> that runs substantially free of air resistance or friction inside this tube <b>using magnetic propulsion</b>.</li> <li>Terminal handles <b>pod arrivals and departures</b>.</li> </ul> </li> </ul> </li> </ul>
 <p><b>Places in News</b></p>	<p><b>Eritrea (Capital: Asmara)</b></p> <ul style="list-style-type: none"> <li><b>Political boundaries</b> <ul style="list-style-type: none"> <li><b>Location:</b> East African country located on <b>Horn of Africa</b> on the <b>Red sea</b>.</li> <li><b>Bordered by:</b> Sudan, Ethiopia, Djibouti.</li> <li><b>Maritime border:</b> Saudi Arabia and Yemen</li> </ul> </li> <li><b>Geographic features</b> <ul style="list-style-type: none"> <li><b>Major Rivers:</b> Gash, Tekezē (Satit), Baraka, and Anseba.</li> <li><b>Highest point:</b> Mount Soira.</li> </ul> </li> </ul> 

**Errata: In News Today Dated 2nd September 2023**, under the 'Government forms a committee on Simultaneous Elections' article Amendment to provisions of Constitution (Articles 83, 84, 172, 174, 356) was incorrectly mentioned. The correct information is Amendment to provisions of the Constitution (Article 83, 85, 172, 174, 356) etc.