



## **DAILY CURRENT AFFAIRS 07-08-2025**

### **GS-1**

1. Sahel Region

### **GS-2**

2. India Electric Mobility Index (IEMI)

### **GS-3**

3. National Highways & Infrastructure Development Corporation Limited (NHIDCL)
4. LEAP-1 Mission
5. National Green Hydrogen Mission

## Sahel Region

Syllabus: GS-1; Geography

### Context

**Russia's growing influence:** Signed a **nuclear agreement with Niger**, expanding its footprint in the region.

### About



➤ **Location:**

- A **5,000 km belt** stretching from the **Atlantic Ocean (West Africa)** to the **Red Sea (East Africa)**.
- Lies between the **Sahara Desert (north)** and the **Sudanian Savanna (south)**.

➤ **Countries:**

Includes parts of **Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, and Eritrea**.

➤ **Climate & Vegetation:**

- **Semiarid steppe** (dry grasslands) with erratic rainfall.
- **Vegetation:** Sparse savanna—grasses, thorny shrubs, and scattered trees like **acacia and baobab**.
- **Security & Migration:**
  - Hotspot for **violent extremism** due to weak governance, poverty, and climate change.
  - Major **transit route** for migrants from sub-Saharan Africa to Europe.

### Challenges in the Sahel

1. **Climate Change:**

- a. Increasing desertification and droughts threaten livelihoods (e.g., farming, herding).

2. **Political Instability:**

- a. History of coups (e.g., Mali, Burkina Faso, Niger) and jihadist insurgencies (e.g., Boko Haram, Al-Qaeda affiliates).

3. **Humanitarian Crisis:**

- a. Over **30 million people** face food insecurity (UN estimates).

### Why is the Sahel Important?

- **Geopolitical:** Gateway between North and Sub-Saharan Africa; strategic for global powers (e.g., Russia, France, EU).
- **Ecological:** Buffer against Sahara's southward expansion.
- **Migration Hub:** Critical route for African migrants heading to Europe.

## **India Electric Mobility Index (IEMI)**

**Syllabus: GS-2\_ Government Initiatives, GS-3: Sustainable Development.**

### **Context:**

- NITI Aayog on 4<sup>th</sup> August 2025 launched the India Electric Mobility Index (IEMI).

### **India Electric Mobility Index (IEMI) 2024 – UPSC Notes**

#### **What is IEMI?**

- A **national benchmarking tool** to track and rank **States/UTs** on progress in **electric vehicle (EV)** transition.
- **Launched by:** NITI Aayog (2024).
- **Purpose:** To monitor and accelerate India's sub-national EV adoption aligned with **Net-Zero by 2070**.

#### **Objectives**

- Evaluate **EV adoption, infrastructure readiness, and R&D ecosystem** across states.
- Promote **healthy federal competition** and **peer learning**.
- Provide **policy guidance** and **investment prioritisation**.

#### **Evaluation Framework**

Assesses States/UTs on **16 indicators** across 3 core themes:

- **Transport Electrification Progress**
  - EV adoption in **passenger, freight, and public transport**.
- **Charging Infrastructure Readiness**
  - Public/private **charging station deployment**, policy support.
- **EV Research & Innovation Ecosystem**
  - Manufacturing, R&D capabilities, tech innovations in EV.



#### **Key Features**

- **0–100 Comparative Scoring** of all States/UTs.

100% 100% 100% 100% 100%

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Area	Highlights
EVs in 2024	12 lakh EVs registered
Charging Stations	25,000+ installed by Oct 2024
Top Infra State	Karnataka – most charging installations
Policy Coverage	29 states/UTs have EV policies; 4 in draft

### Significance

- Aids **Green Mobility** under climate targets.
- Enhances **EV infrastructure rollouts**.
- Promotes **Make in India** via local EV manufacturing.
- Supports **inter-ministerial coordination** and capacity building.

## **National Highways & Infrastructure Development Corporation Limited (NHIDCL)**

**Syllabus: GS-3: Indian Economy – Public Sector Undertakings (PSU)**

### Context:

The traffic from Sikkim and Kalimpong to Siliguri and vice versa on NH10 remained suspended because of repairs by the National Highways & Infrastructure Development Corporation Limited on a 30 km-long stretch following a landslide and cave-ins.

**About National Highways & Infrastructure Development Corporation Ltd (NHIDCL)**



### Basic Information

- **Type:** Central Public Sector Undertaking (CPSU)
- **Parent Ministry:** Ministry of Road Transport & Highways, Government of India.
- **Incorporated on:** 18 July 2014
- **Under:** Companies Act, 2013
- **Ownership:** Wholly owned by the Government of India.

### Mandate & Functions

- **Primary Objective:** Construction, upgradation, and widening of **National Highways and Infrastructure** in:
  - Border areas
  - Remote and strategic regions
- **Key Goals:**
  - Strengthening **regional connectivity**
  - Supporting **economic development** in less accessible areas
  - Enhancing **geopolitical and security interests** via infrastructure

### Geographical Jurisdiction

- **Union Territories:**
  - Jammu & Kashmir
  - Ladakh
  - Andaman & Nicobar Islands
- **States:**
  - Entire **Northeastern Region (NER)**
  - Uttarakhand

### Infrastructure Focus

- National Highways
- Tunnels
- Interstate & International road linkages
- Logistics hubs
- Advanced mobility facilities

### Strategic Role



- **Nodal Agency** for implementing India's **Act East Policy** in the Northeast.
- Facilitates **inter-country connectivity** (e.g., with Bhutan, Nepal, Myanmar, Bangladesh).
- Supports India's **strategic outreach** to ASEAN and East Asia.

## **LEAP-1 Mission**

**Syllabus: GS-3; Science & Technology**

### **Context**

- The **LEAP-1 Mission** marks a significant milestone for **Dhruva Space**, an emerging Indian space tech startup, as its **first commercial satellite mission**.
- Developed in collaboration with **Australia-based Akula Tech and Esper Satellites**, the mission showcases India's growing prowess in the private space sector.

### **Key Highlights of LEAP-1 Mission:**

- **Satellite Platform:** Uses Dhruva Space's indigenously developed **P-30 platform**, which was successfully tested in the **LEAP-TD mission** aboard ISRO's **PSLV-C58 (January 2024)**.
- **Payloads:**
  - **Nexus-01:** Features an **AI module** for real-time data processing, enabling applications like **fire detection, spectral analysis, and continuous learning** from live sensor data.
  - **Esper Satellites' OTR-2:** Equipped with a **hyperspectral imager** for advanced Earth observation, providing rich spectral data via their **EarthTones API**.
- **Applications:** Enhances capabilities in **defense, disaster management, agriculture, mining, and environmental monitoring**.

### **Significance:**

- Demonstrates **India's private sector advancements in space technology**.
- Strengthens **global collaborations** (with Australian partners).
- Expands **AI-driven and hyperspectral imaging** applications for commercial and strategic use.



**DHRUVA  
SPACE**

**TO LAUNCH FIRST  
COMMERCIAL  
MISSION**

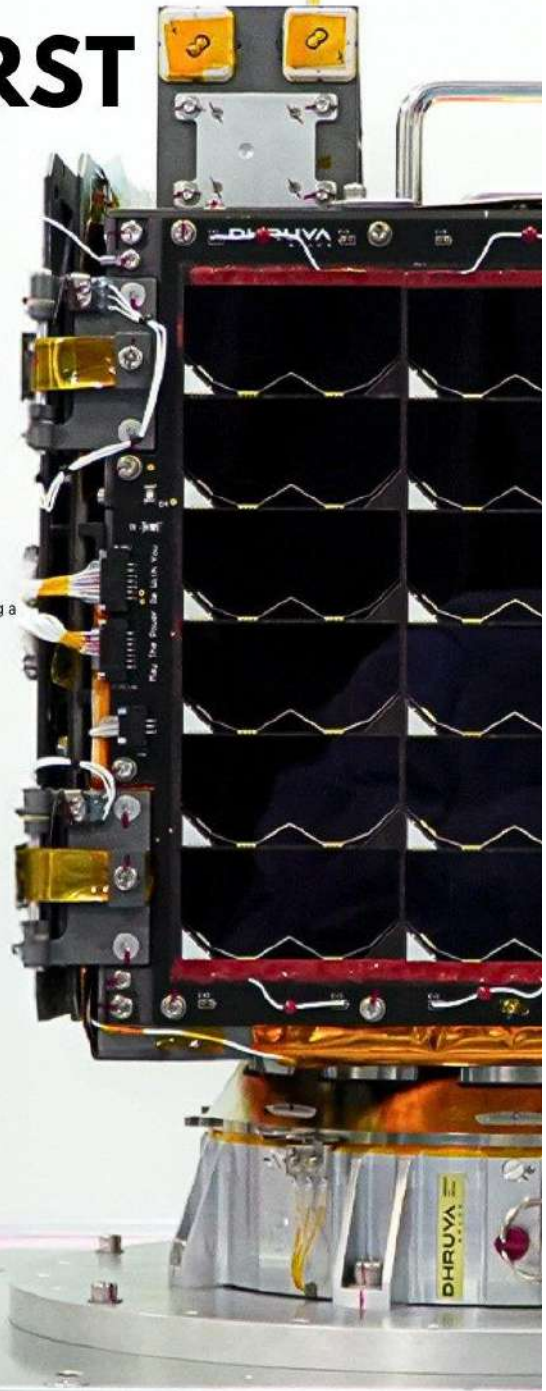
**LEAP-1**

**ABOARD SPACEX  
FALCON 9**

Dhruva Space, a full-stack Space Engineering solutions provider, is set to launch its first commercial mission, LEAP-1, on the indigenously-developed P-30 satellite platform. The mission will fly two distinct missions: Akula Tech's Nexus-01 mission, which features an advanced Artificial Intelligence (AI) module, and Esper Satellites' OTR-2 mission featuring a hyperspectral imager. The LEAP-1 mission is officially slated to launch aboard SpaceX's Falcon 9 in Q3 2025, marking a significant milestone in the company's journey from successful technology demonstrations to customer-driven satellite deployments.

Source: [dhruvospace.com](https://dhruvospace.com)

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@Arslanshaikh\_ 



## **National Green Hydrogen Mission**

**Syllabus: GS-3; Science & Technology**

### **Context**

- The Indian Government has introduced a new initiative through the Ministry of New and Renewable Energy to support special pilot projects for green hydrogen.

### **About**

- **Primary Aim:** To establish India as a **global hub** for the production, utilization, and export of **Green Hydrogen (GH2)** and its derivatives.

### **Key Components**

1. **Strategic Interventions for Green Hydrogen Transition (SIGHT)**
  - a. Two financial incentive mechanisms:
    - i. **Domestic electrolyser manufacturing**
    - ii. **Green Hydrogen production**
2. **Pilot Projects**
  - a. Supports emerging end-use sectors and innovative production methods.
3. **Green Hydrogen Hubs**
  - a. Identification and development of regions for large-scale GH2 production/utilization.
4. **R&D (Strategic Hydrogen Innovation Partnership – SHIP)**
  - a. Public-private collaboration for research and development.
5. **Skill Development**
  - a. Training programs to build a skilled workforce for the GH2 ecosystem.

### **Latest Developments**

- **Funding for Testing Facilities:**
  - ₹200 crore allocated till **2025-26** for setting up quality and performance testing facilities.
  - **Implementing Agency:** National Institute of Solar Energy (NISE).

## Significance

- Aims to reduce fossil fuel dependence and cut carbon emissions.
- Positions India as a leader in the global green hydrogen market.
- Supports **Atmanirbhar Bharat** by boosting domestic electrolyser manufacturing.

