DAILY CURRENT AFFAIRS 05-11-2025

GS-1

1. **UNESCO's Creative Cities Network (UCCN)**

GS-2

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UNESCO's Creative Cities Network (UCCN)

Syllabus: GS-1; Art & Culture

Context

- **Lucknow** has officially joined the **UNESCO Creative Cities Network (UCCN)** under the **Gastronomy category** during the **43rd Session of the UNESCO General Conference (2025)**.
- This recognition celebrates Lucknow's rich culinary heritage rooted in **Awadhi cuisine**.

About UNESCO Creative Cities Network (UCCN)

- **Established:** 2004
- **Objective:** To promote cooperation among cities that see **creativity as a driver of sustainable urban development**.
- **Launched by:** UNESCO
- **Creative Fields (7):**
  - Crafts and Folk Arts
  - Media Arts
  - Film
  - Design

- Gastronomy
- Literature
- Music

Aims and Objectives

- Promote **cultural diversity** and strengthen resilience against **climate change, inequality, and rapid urbanisation**.
- Encourage cities to recognise **creativity** as an integral part of development through **public-private-civil partnerships**.
- Create **hubs of innovation** and expand opportunities for creators in the **cultural sector**.
- Align urban creativity initiatives with the **UN Sustainable Development Goals (SDGs)**.

Indian Cities in UNESCO Creative Cities Network (UCCN)

City	Category	Year of Designation
Jaipur	Crafts and Folk Art	2015
Varanasi	Music	2015
Chennai	Music	2017
Mumbai	Film	2019
Hyderabad	Gastronomy	2019
Srinagar	Crafts and Folk Art	2021
Gwalior	Music	2023
Kozhikode	Literature	2023
Lucknow	Gastronomy	2025

Significance:

- Strengthens India's global cultural presence.
- Boosts **tourism, local economy, and creative industries**.
- Encourages **sustainable urban development through culture**.

Leprosy

Syllabus: GS-2; Health, Government Policies and Intervention

Context

- The **Maharashtra government** has recently declared **leprosy** as a *notifiable disease* once again.
- This means all diagnosed cases must be **reported to health authorities** for proper monitoring and control.

About Leprosy

- **Also known as:** *Hansen's disease*
- **Causative Agent:** *Mycobacterium leprae*
- **Type:** *Infectious bacterial disease* and a **Neglected Tropical Disease (NTD)**
- **Affected Areas:** Skin, peripheral nerves, eyes, and mucosa of the upper respiratory tract
- **Global Status:** Still present in **120+ countries**, with about **200,000 new cases** every year.
- **National Status:** Declared *notifiable in 2005* under the **National Leprosy Eradication Programme (NLEP)**, Ministry of Health & Family Welfare.

Transmission

- Spread through **droplets** from the **nose and mouth** of **untreated patients**, after **prolonged close contact**.
- **Not transmitted** by casual contact (e.g., handshake, sharing meals, or sitting nearby).

- Becomes **non-infectious once treatment starts**.

Symptoms

- **Incubation Period:** 3–5 years (can be longer)
- **Common signs:**
  - Disfiguring **skin lesions**, lumps, or bumps that don't heal
  - **Loss of sensation** (touch, pain) in affected areas → risk of injuries, burns, or infections

Treatment

- **Completely curable** with **Multi-Drug Therapy (MDT)**:
  - **Dapsone**, **Rifampicin**, and **Clofazimine**
- MDT is provided **free of cost** under NLEP (supported by WHO).

Significance of Notifiable Status

- Ensures **early detection**, **prompt treatment**, and **accurate surveillance**.
- Helps in **preventing disability** and **reducing stigma** associated with the disease.

Alfvén Waves

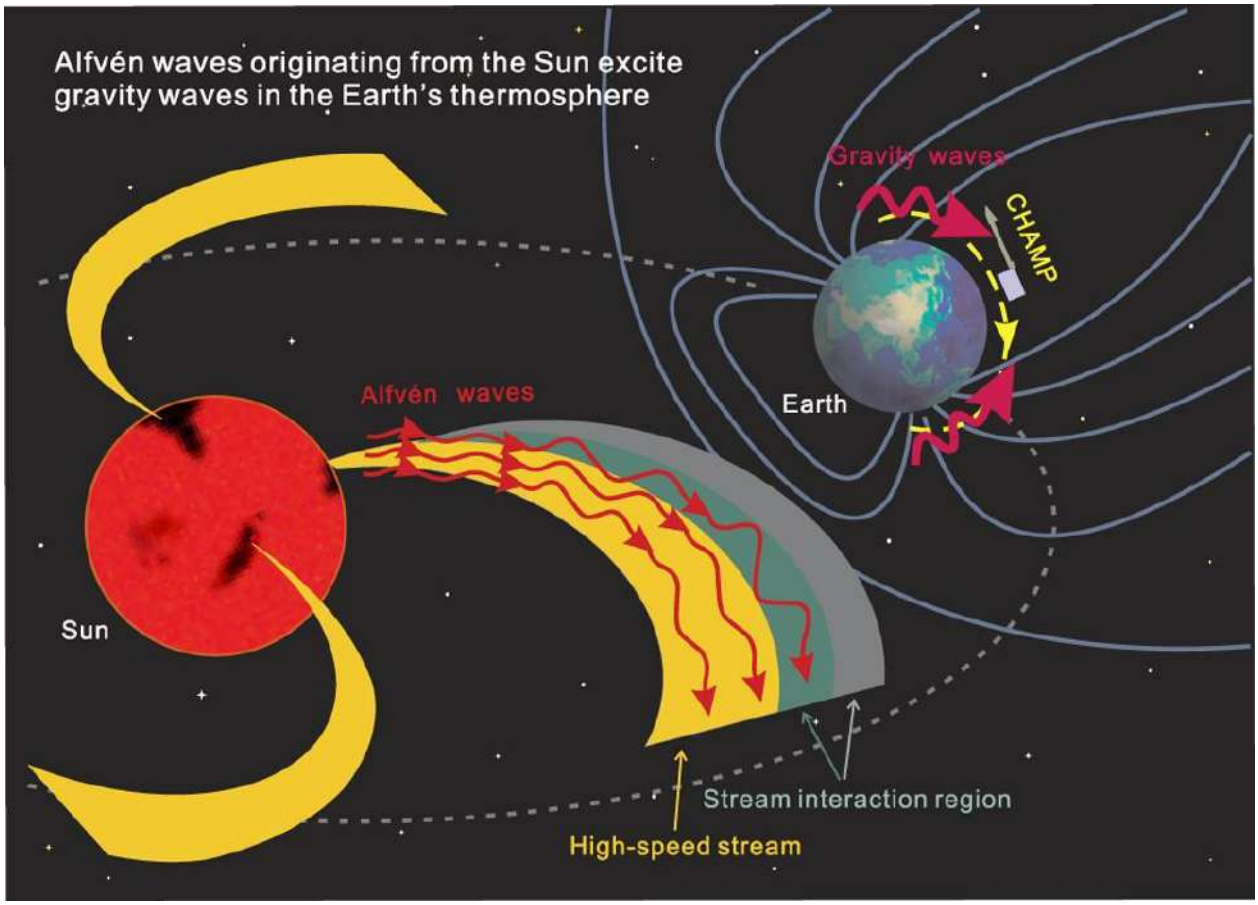
Syllabus: GS-3; Space Science

Context

- Researchers have captured the **first direct evidence of small-scale torsional Alfvén waves** in the Sun's outer atmosphere (**corona**), marking a major milestone in solar physics.

About Alfvén Waves:

- **Nature:** Low-frequency, transverse **electromagnetic waves** that propagate along magnetic field lines in a **plasma**.
- **Cause:** Result from the interaction of **magnetic fields and electric currents** in conducting fluids like the solar plasma.
- **Proposed by:** *Hannes Alfvén (1942)* – Nobel Laureate in Physics (1970).
- **Significance:** These waves are key to transferring **energy through plasma** and are believed to play a role in **coronal heating**.



What's New?

- The discovery was enabled by the **Daniel K. Inouye Solar Telescope's** *Cryogenic Near Infrared Spectropolarimeter (Cryo-NIRSP)*.
- For the **first time**, scientists have **directly confirmed small, constant twisting (torsional) Alfvén waves** in the corona.
- **Implication:** These waves may supply **at least 50% of the energy** required to heat the solar corona — solving part of the long-standing *"coronal heating problem."*

Heavy Metals

Syllabus: GS-3; Science & Technology, Environmental Pollution

Context

- Researchers from Tamil Nadu have reported that **heavy metals are contaminating the Cauvery River and its fish**, posing serious health and ecological risks.

About Heavy Metals

- **Definition:** Metallic elements with **high density** that are **toxic even at low concentrations**.
- **Examples:** Mercury (Hg), Cadmium (Cd), Arsenic (As), Chromium (Cr), Thallium (Tl), Lead (Pb).
- **Sources:**
  - Industrial effluents
  - Consumer waste
  - Mining activities
  - Acid rain breaking down soils and releasing metals into water bodies

Environmental & Health Concerns

- **Bioaccumulation:** Heavy metals accumulate in organisms faster than they are excreted.
- **Biomagnification:** Concentration increases along the food chain — fish → humans.
- **Health Effects:**
  - **Mercury:** Neurological damage
  - **Lead:** Brain and kidney damage
  - **Cadmium:** Bone and liver toxicity

Key Concepts

- **Essential trace metals:** Copper, selenium, and zinc — needed in small amounts.
- **Toxic metals:** Lead, mercury, cadmium — harmful even at low levels.
- **Main concern:** Long-range atmospheric transport and persistence in ecosystems.

Mahuadanr Wolf Sanctuary

Syllabus: GS-3; Biodiversity

Context

- Hidden deep in the Latehar district of **Jharkhand**, the **Mahuadanr Wolf Sanctuary**—India's **first and only wolf sanctuary**—continues to attract attention for its unique ecosystem and conservation challenges.

- The sanctuary, though lesser-known, plays a crucial role in protecting the **Indian grey wolf (*Canis lupus pallipes*)**, one of the most elusive and endangered predators of the Indian grasslands.

About Mahuadanr Wolf Sanctuary

- **Location:** Latehar district, Jharkhand
- **Area:** ~63 sq km
- **Declared:** 1976
- **Part of:** Palamau Tiger Reserve
- **River System:** Drained by the **Burha River**, which meets the **Aksi River** and later joins the **North Koel River** near Kujrum.
- **Core Zone:** The **Chechari (Mahuadanr) Valley**

The landscape comprises **sal forests, rocky plateaus, scrublands, and river valleys**, forming ideal habitats for wolves, leopards, sloth bears, hyenas, and deer.

Indian Grey Wolf (Canis lupus pallipes)

- One of the **smallest wolf subspecies** globally.
- Prefers **semi-arid and scrubland ecosystems**.

- Hunts mainly **at dusk and night**; forms smaller packs.
- Estimated population in India: **2,000–3,000** individuals.

Conservation Status:

- *IUCN Red List:* Endangered (Indian population)
- *Wildlife (Protection) Act, 1972:* Schedule I species

Significance:

- The Mahuadanr Wolf Sanctuary remains a **symbol of India's grassland conservation efforts** and a reminder that **predator protection is not limited to tigers and lions**, but also includes species adapted to dry, open habitats crucial for ecological balance.