SANSKRITI IAS DAILY CURRENT AFFAIRS

27-10-2026

Greater Flamingo at Veeranam Lake

The Hindu

Unusual sighting of greater flamingos at Veeranam lake

Rare sighting: 18 greater flamingos spotted at Veeranam Lake inland, possibly due to altered rainfall and disrupted coastal habitats.



Why in News

- **Greater flamingos**, usually found in coastal wetlands, were spotted at **Veeranam Lake** in **Cuddalore district, Tamil Nadu**. Researchers link this rare occurrence to **altered rainfall patterns**.

Veeranam Lake: Historical and Geographical Profile

- **Veeranam (Veeranarayanan) Lake** is a **man-made lake** in **Cuddalore district, Tamil Nadu**.
- It is among the **oldest and largest** man-made lakes in Tamil Nadu.
- It was built in the **10th century CE** by **Rajaditya Chola**, son of **Parantaka Chola I**.
- It was built to strengthen **irrigation** in the northern territories of the **Chola kingdom**.
- It is fed by the **Vadavar river** and the **Sengal stream**.

Economic and Cultural Linkages

- The lake supports **agriculture** in the region.
- It supplies **drinking water to Chennai** through the **New Veeranam Water Supply Scheme**.
- It is associated with **Kalki Krishnamurthy's** historical novel **Ponniyin Selvan**.

Habitat and Conservation

- It is found in **Africa, the Middle East, southern Europe and the Indian subcontinent**.
- It prefers **shallow water bodies** such as saline lagoons, salt pans, alkaline or saline lakes and estuaries.

Greater Flamingo (Phoenicopterus roseus)

- It is the **largest and most widespread** species of the **flamingo family**.
- Its plumage is **pale pink**, with more intense shades on the wings and **black wingtips**.
- Its beak is **thick, downward-curved and pink with a black tip**.
- **Juveniles** are gray-brown, with some pink on underparts, tail and wings.
- It is a **highly social** species that nests in **large, dense colonies**.
- It is a **filter feeder** that eats **crustaceans, algae and small invertebrates**.

- Breeding takes place on **sandbanks, mudflats, sandy or rocky islands**, or open beaches.
- It is classified as **Least Concern (LC)** on the **IUCN Red List**.

Hydroseeding

The New Indian Express

Tata Steel introduces hydroseeding to restore mined land in Jharkhand

Mining experts said the initiative is expected to improve slope stability, reduce the risk of landslides and retain soil moisture to support...



Why in News

- **Tata Steel** introduced **hydroseeding** at its **West Bokaro Division in Jharkhand**. It is being used to restore **mining slopes**.

Concept and Aim



- **Hydroseeding** sows seeds by spraying a **slurry of seeds, water, fertilizers, mulch and soil stabilizers** onto the soil.
- It aims to **stabilise dump slopes, prevent soil erosion** and speed up **green restoration**.

Process and Equipment

- The slurry of **seed, mulch, fertiliser and water** is loaded into a **hydroseeder**.
- It is sprayed onto prepared soil using a **hose or cannon**.
- Hydroseeders come in a range of **tank sizes and output capacities**.
- The machine can spray up to **50 metres** and cover dump slopes up to **80 metres**.

Advantages

- It is **faster, cost-effective** and suitable for **large areas** compared to traditional seeding.
- It ensures **uniform seed distribution**, better **seed-to-soil contact** and better **moisture retention**.
- It is especially useful on **mine overburden dumps** and rugged terrain.
- It **controls erosion**, strengthens slopes and **reduces landslide risks**.
- It promotes **faster plant growth** and natural greenery.
- Applications include **lawn development, slope stabilisation, erosion control and ecological restoration**.

Integrated Atmospheric Chemistry and Aerosol Toxicity Analysis Laboratory (AATAL)

DD News

Dr Jitendra Singh Inaugurates Air Pollution Analysis Facility to Identify Pollution Sources in Delhi-NCR

Union Minister of State for Science and Technology Dr Jitendra Singh on Saturday inaugurated the Integrated Atmospheric Chemistry and...



Why in News

- The **Union Minister of State for Science and Technology and Earth Sciences** inaugurated **AATAL**. It is described as the world's first-of-its-kind **air pollution analysis facility** for **Delhi-NCR**.

Institutional Framework

- AATAL identifies the **sources, composition and health impacts** of air pollution in **Delhi-NCR**.
- It is established under **Mission Mausam**.
- It aims to provide **real-time information** on pollution sources and their relative contributions.
- It helps authorities move **beyond AQI readings** to targeted control measures.

Governance Relevance

- It helps the **Commission for Air Quality Management (CAQM)** and other agencies plan **targeted interventions**.
- It also helps assess the **effectiveness** of those interventions.

Analytical Capabilities

- It analyses **atmospheric gases, aerosols, PM2.5, metals and toxic elements**.
- It distinguishes **vehicular, industrial, biomass and crop-residue burning, construction and road dust**, and **transported pollution**.
- It examines the **chemical characteristics** of pollutants to understand their **toxicity**.

Integration with AIRWISE

- AATAL is integrated with **IITM's AIRWISE** (**Air Quality Warning and Integrated Decision Support System for Emissions**).
- AIRWISE combines **observations, forecasts and source-apportionment** information.
- It gives forecasts at **400 metre** spatial resolution for the next **72 hours**.

Infrastructure Investment Trusts (InvITs)

Why in News

- **InvITs** are attracting more investors, offering a way to

The Hindu

InvITs eye bigger share of India's savings

India's infrastructure investment trusts (InvITs) are attracting more investors, creating a potential avenue to channel domestic savings...



channel **domestic savings** into **roads, power transmission** and other income-generating assets.

Regulatory Framework

- InvITs are regulated by the **SEBI (Infrastructure Investment Trusts) Regulations, 2014**.
- They are registered with **SEBI** and set up as a **trust**.
- The **trustee** must be **SEBI-certified** and monitors the InvIT's performance.

Concept and Objective

- An InvIT is a **Collective Investment Scheme** similar to a **mutual fund**.
- It enables **direct investment** from individual and institutional investors in **infrastructure projects**.
- It gives **retail investors** access to opportunities earlier open only to **large institutions**.

Structure and Working

- An InvIT has **four parties**: **Trustee, Sponsor(s), Investment Manager** and **Project Manager**.
- **Sponsors** are typically **infrastructure companies or private equity firms**.
- The sponsor sets up the InvIT and **transfers ownership** of the assets to the trust.
- The trust **issues units** representing an ownership stake in the trust and its assets.

Spinal Muscular Atrophy (SMA)

The Hindu

What is the controversy over the spinal muscular atrophy drug in Keralam? Explained

Kerala's SMA drug switch to a cheaper generic sparks debate over safety, efficacy, and labeling intrigue among parents and lawmakers.



Why in News

- A **Kerala (Keralam) government** initiative to make **SMA treatment** accessible to more patients has courted controversy.

Genetic Basis

- **SMA** is a group of **inherited neuromuscular disorders** that cause muscle weakness and wasting.
- **Motor neurons** in the **spinal cord and lower brain** break down in SMA.
- These neurons need the **SMN (survival motor neuron) protein** to function.
- Most SMA is caused by a mutation in the **SMN1 gene**.
- A mutation in **SMN1** reduces SMN protein, so signals do not reach the muscles.

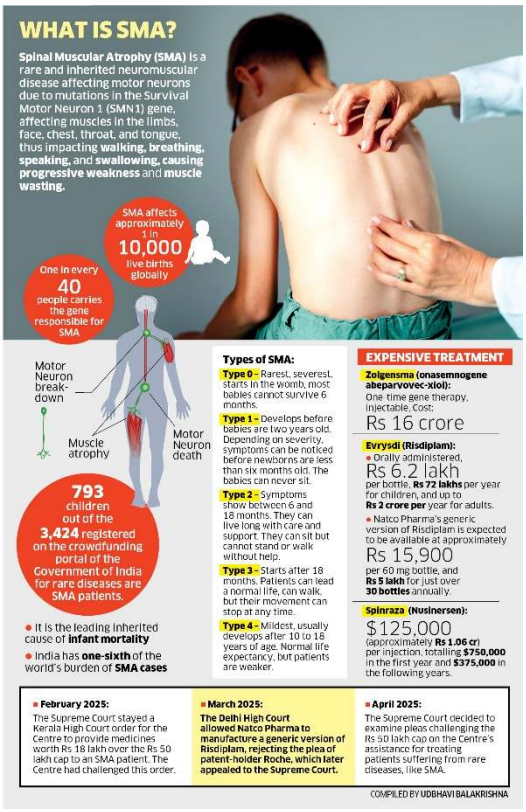
Treatment

- There is **no cure** for SMA.
- Treatment mainly **manages**

- SMA is the **second most common severe hereditary disease** of infancy and childhood after **cystic fibrosis**.

Classification

- It is classified into **types 1 to 4** by **age of onset**.
- **Type 1 (Werdnig-Hoffman disease)** is the **most severe and most common**, with onset before **6 months**.
- **Type 2** is moderate to severe, usually noticed between **6 and 18 months**.
- **Type 3 (Kugelberg-Welander syndrome)** is the **mildest childhood type**, appearing after **18 months**.
- **Type 4 (adult SMA)** is rare and often mild, with symptoms after **21 years**.
- **5q SMA** refers to all four common types.



Clinical Features

- **Proximal muscles** (near the body's centre) are weakened more than **distal muscles**.
- Weakness **worsens with time**.
- Symptoms include **reduced muscle tone, limited mobility, breathing and swallowing problems, delayed motor skills** and **scoliosis**.

Other Important News of the day

Places in News

Phuket Island

The Hindu

Flash floods inundate several areas of Thailand's Phuket island after heavy rain



Flash floods on Monday (October 26, 2026) inundated several areas of the island of Phuket in Thailand, one of the country's major tourist...

Why in News

- **Flash floods** inundated several areas of **Phuket**, a major tourist destination in **Thailand**.

Geographical Focus

- Phuket is **Thailand's largest island**, on the **Andaman Sea** off the country's **western coast**.
- It is known as the **Pearl of the Andaman Sea**.

- It spans **48 km in length** and **21 km at its widest**, with hilly terrain.
- The **Sarasin Bridge** connects it to the mainland across a narrow strait.
- **Phuket city**, in the southeast, is a major **port and commercial centre**.
- The island is also a major **seaside resort**.

Historical Dimensions

- It was settled as early as the **1st century BCE**.
- It lay on **India-China trade routes** and saw foreign influences early.
- It became part of a Thai state in the **13th century**, when **Sukhothai** forces took it from the **Srivijaya Empire** of Sumatra.
- In the **16th century** it became a major source of **tin** for **Ayutthaya**, and the first Europeans arrived.
- The **British** secured a **tin mining concession** and nearly claimed the island.

Demography

- Residents include **Thais from the mainland, ethnic Chinese, Malays** and **Chao Leh (sea-gypsies)**.
- The **Chao Leh** are the original inhabitants of Phuket.

Environment

Raimona National Park, Assam

TT Telegraph India

Buxa tigress enters Assam's Raimona National Park within three weeks of release

A tigress brought from Bihar and released into Bengal's Buxa Tiger Reserve on October 2 has crossed into Assam's Raimona National Park...



Why in News

- A **tigress** translocated from **Bihar** to **Buxa Tiger Reserve (West Bengal)** crossed into **Raimona National Park, Assam**, within three weeks.

Geographical Focus

- It is located in **Assam**, along the **India-Bhutan border**, at the foothills of the **Eastern Himalayas**.
- It is connected with **Phibsoo Wildlife Sanctuary** and **Jigme Singye Wangchuck National Park** in Bhutan.
- The **Sankosh River** flows along the **western boundary**.
- The **Saralbhanga River** lies on the **eastern side**.
- The **Pekua River** forms the **southern boundary**.

	Biodiversity ➢ **Vegetation** includes **moist sal forests, sub-Himalayan semi-evergreen forests, moist mixed deciduous forests, savannah, riverine and khair-sisoo forests**. ➢ **Flora** includes many **orchid species**, riverine grasslands and about **380 plant species**. ➢ It is famous for the **Golden Langur**, **Asian Elephant**, **Bengal Tiger**, **Clouded Leopard**, **Wild Water Buffalo** and **Spotted Deer**. **Landscape Connectivity** ➢ The tigress's movement shows the importance of **transboundary and inter-state wildlife corridors**.
Defence	**Defence Acquisition Council (DAC)** The Hindu DAC clears defence procurement proposals worth ₹2.12 lakh crore DAC approves ₹2.12 lakh crore defence procurements, 82% from domestic industry, boosting Army, Navy, and Air Force capabilities across...  **Why in News** ➢ The **DAC** granted **Acceptance of Necessity (AoN)** for capital acquisition proposals worth about **₹2.12 lakh crore** for the three services. About **82%** of the procurements are to be sourced from **domestic industry**. **Composition** ➢ The **Defence Minister** is the **Chairman** of the DAC. ➢ Members include the **Chief of Defence Staff (CDS)**, the **Army, Navy and Air Force chiefs** and the **Defence Secretary**. ➢ Other senior officials for **finance, production and acquisition** are also members. **Origin and Objective** ➢ It is the **highest decision-making body** of the **Ministry of Defence** on procurement. ➢ It was formed in **2001** after the **Group of Ministers'** recommendations on **Reforming the National Security System**. ➢ That review followed the **Kargil War (1999)**. ➢ Its main objective is **expeditious procurement** of approved requirements, using the **allocated budget** optimally.

Functions

- It gives in-principle approval of the **15-year Long Term Integrated Perspective Plan (LTIPP)**.
- It accords **Acceptance of Necessity (AoN)** to acquisition proposals.
- It categorises proposals as **'Buy', 'Buy & Make'** or **'Make'**.
- It examines **single vendor clearance** issues.
- It decides on **offset provisions** for proposals above **₹300 crore**.
- It decides on **Transfer of Technology** under the **'Buy & Make'** category.
- It oversees **field trial evaluation**.

Strategic Significance

- Its categorisation decisions determine whether contracts go to **Indian or foreign suppliers**.
- Through its approvals, the DAC sets the direction of India's **military modernisation**.
- The **82% domestic sourcing** supports **Aatmanirbharta in defence**.

Science and Technology

SGLT2 Inhibitors

News-Medical

Geriatric chronic kidney disease patients benefit from SGLT2 inhibition

New research uncovers the potential benefits and risks of sodium-glucose cotransporter 2 (SGLT2) inhibitors for adults aged 80 years or...



Why in News

- A new study examined the **benefits and risks of SGLT2 inhibitors** in adults aged **80 years or older** with **chronic kidney disease (CKD)**.

Mechanism of Action

- **SGLT2** stands for **Sodium-Glucose Cotransporter-2**, a protein in the **kidneys** that reabsorbs glucose.
- **SGLT2 inhibitors** block this protein, so glucose is not reabsorbed into the bloodstream.
- The excess glucose is **excreted in urine**, which lowers **blood sugar**.

Therapeutic Uses

- They are mainly used to treat **Type 2 diabetes (T2D)**.
- They improve **kidney and heart health** in people with **CKD or heart failure**.

	➢ They **slow the progression** of kidney disease and reduce the risk of **dialysis**. ➢ They lower the risk of **heart failure flare-ups**. **Common Drugs** ➢ Examples are **Dapagliflozin, Empagliflozin, Canagliflozin** and **Ertugliflozin**. **Side Effects** ➢ They carry a higher risk of **genital and urinary tract infections**. ➢ Other effects are **frequent urination, flu-like symptoms, nausea and joint pain**.

Uttar Pradesh in News

Uttar Pradesh Targets Over 500 Global Capability Centres by 2031

ET Datacenters

Uttar Pradesh targets 500 GCCs by 2031

Uttar Pradesh aims to attract over 500 Global Capability Centres (GCCs) by 2031 to boost technology investment and create high-skilled jobs.



Why in News

- **Uttar Pradesh** aims to establish **over 500 Global Capability Centres (GCCs) by 2031**, promoting investment in AI, startups, research and DeepTech.

Policy and Investment Incentives

- **Existing base:** The state aims to expand its existing **200-plus GCCs** under the **Uttar Pradesh Global Capability Centres Policy 2024**.
- **Capital subsidy:** Up to **25% of eligible capital investment**.
- **Operational subsidy:** Up to **20% of eligible operating expenses**.
- **Land subsidy:** **30–50%** for eligible land acquired through government agencies.
- **Other support:** Incentives cover eligible payroll, skill development, research, startup ideation and academic partnerships, subject to policy conditions.

Geographical and Technological Focus

- **Noida and Greater Noida:** Will leverage corporate presence and National Capital Region connectivity.
- **Lucknow:** Will be promoted as a technology hub supported by educational institutions and digital infrastructure.

- **Proposed UP AI Mission:** Seeks to promote AI in healthcare, education, agriculture, manufacturing and public services through computing resources, data, talent and testing facilities.
- **DeepTech Hubs:** Proposed Centres of Excellence will support **AI, semiconductors, advanced manufacturing, cybersecurity and healthcare technologies**.

India's GCC Ecosystem

- **Definition:** GCCs are offshore units providing parent companies with **IT, research and development, customer support, product engineering and digital transformation** services.
- **Current presence:** India has **over 2,100 GCCs employing more than 23.6 lakh professionals**, concentrated in Bengaluru, Hyderabad, Pune, Chennai, Mumbai and the National Capital Region.
- **2030 projection:** The sector may reach **USD 105 billion**, with nearly **2,400 centres employing over 28 lakh prsofessionals**.
- **Skill development: Skill India, Digital India and FutureSkills Prime** support training in AI, cybersecurity, cloud computing and data analytics.