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A Weekly Current Affairs Initiative

**KAS, FDA/SDA/PDO/ GROUP C,
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ಕನ್ನಡ & English

By- Nandan Sir

September 2nd & 3rd Week 2026

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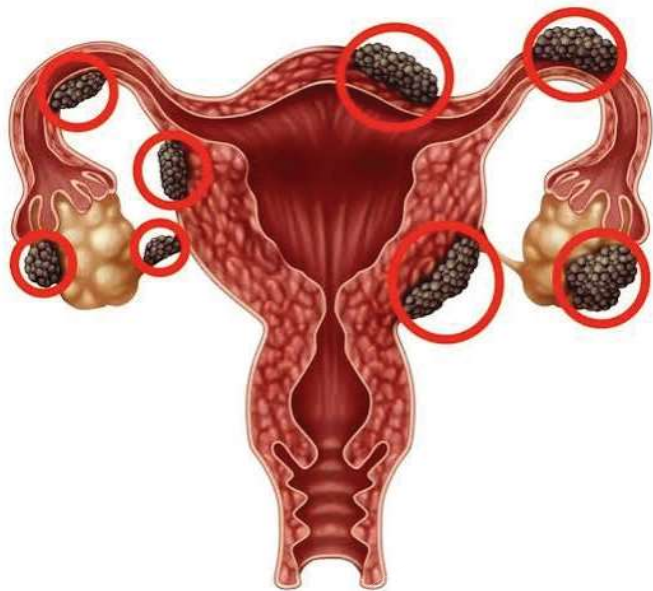
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INSTA ವಿದ್ಯಮಾನ
WEEKLY CURRENT AFFAIRS
SEPTEMBER 2nd and 3rd WEEK 2026

Endometriosis
Health



Lesions can appear on your ovaries, fallopian tubes, and the lining of your pelvis. wildpixel/Getty Images

Context

- A first-of-its-kind Indian study has identified 21 genetic regions linked to endometriosis, offering new clues to why some women may be more prone to the disease.

Endometriosis

- **Prevalence:** ~10% (190 million) women of reproductive age globally.
- **Definition:** Growth of endometrium-like tissue outside the uterus, causing inflammation and scar formation.
- **Symptoms:** Severe menstrual pain, heavy bleeding, chronic pelvic pain, infertility, bloating and nausea.
- **Other impacts:** Can affect sexual intercourse, bowel movements, urination and mental health.
- **Cause:** Unknown; linked in emerging research to immune-system dysregulation.
- **Treatment:** No cure currently; treatment focuses on symptom control and limiting long-term effects.

Orangutan
Environment



Context

- The Odisha Forest Department rescued five young orangutans after they were found abandoned in a casuarina plantation in the Udayapur-Talsari forest area of Balasore district.

Orangutan

- **Largest arboreal mammal;** spends most of its life in trees.
- **Species:** 3 — Bornean, Sumatran & Tapanuli orangutans.
- **Genetic similarity:** Share about 96.4% of genes with humans; highly intelligent.
- **Diet:** Mainly fruits (figs, mangoes, lychees), plus leaves, flowers, insects & small mammals.
- **Habitat:** Tropical forests, especially lowland forests, river valleys & floodplains; can occur up to 1,500 m altitude.
- **Distribution:** Found in the wild only on Borneo and Sumatra.
- **IUCN Status:** Critically Endangered — all three species.

Anti-smog Guns Environment



News

- The Delhi government has approved spending ₹100 crore for 1,000 truck-mounted “anti-smog” guns to be operated across the city in the winter months over three years.

Anti-smog gun

- What are they? Devices that spray fine nebulised water droplets to suppress airborne dust and particulate matter.
- Effect: Water droplets bind with PM_{2.5}, PM₁₀ and dust, causing particles to settle to the ground.

Applications:

- Urban dust and air-pollution control.
- Industrial dust suppression in mining, coal handling, grinding and stone crushing.
- Mechanism: Creates a “canopy/rain effect”, bringing suspended particles down.

Central Consumer Protection Authority (CCPA) Governance

Context

- The Central Consumer Protection Authority (CCPA) has taken action against food companies using “100%” claims, holding that such claims can create a misleading impression of absolute purity or complete composition.

Central Consumer Protection Authority

(ಕೇಂದ್ರೀಯಗ್ರಾಹಕಸಂರಕ್ಷಣಾಪ್ರಾಧಿಕಾರ)

- Legal basis: Established under Section 10 of

Consumer Protection Act, 2019.

- Objective: Promote, protect & enforce consumer rights as a class.

Key Powers:

- Investigate consumer-rights violations and initiate complaints/prosecution.
- Order recall of unsafe goods/services.
- Stop unfair trade practices.
- Order discontinuation/modification of misleading advertisements.
- Impose penalties on manufacturers, endorsers & publishers of misleading ads.

Consumer Protection Act, 2019

- Replaced: Consumer Protection Act, 1986.
- Came into force: July 2020.
- Expanded protection against issues such as false information on quality/quantity and misleading advertisements.
- Section 21: Empowers CCPA to order discontinuation or modification of false/misleading advertisements.

Sagar Manthan Vessel Science and Technology



News

- Kolkata-based Garden Reach Shipbuilders and Engineers (GRSE) Ltd launched the ‘Sagar Manthan’ vessel.

‘Sagar Manthan’ vessel

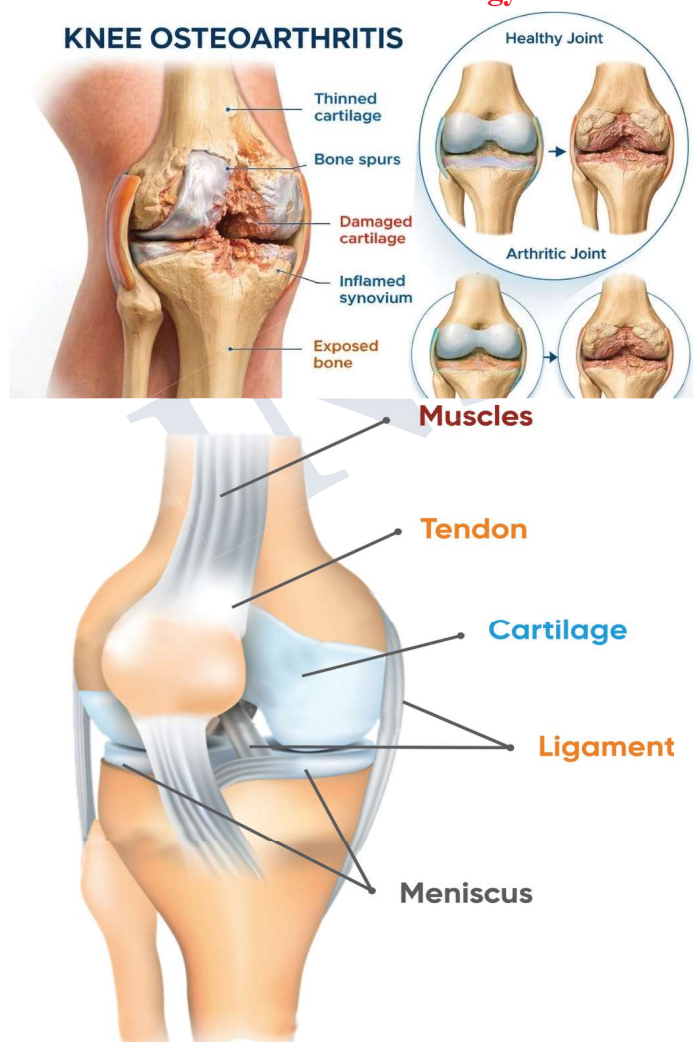
- Type: Indigenous Ocean Research Vessel (ORV) being built for NCPOR.
- Mission: Part of Deep Ocean Mission (DOM), under Vertical-4: Deep Ocean Survey & Exploration.
- Cost: About ₹840 crore.
- Commissioning: Expected by 2028, after sea trials.
- Features: All-weather, multi-disciplinary research platform; speed of 14 knots; operational lifespan of about 30 years.

- **Significance:** Strengthens India's capacity to explore marine mineral resources such as:
 1. Polymetallic/manganese nodules
 2. Polymetallic sulphides
- **Region:** Focus on the Indian Ocean Region.

Deep Ocean Mission

- **Launched:** 2021 by the Government of India.
- **Objective:** Sustainable exploration of deep-ocean resources and strengthening India's Blue Economy.
- **Key component:** Samudrayaan Project.
- **MATSYA 6000:** India's first manned deep-sea submersible, being developed under Samudrayaan.
- **Focus:** Deep-sea exploration, marine resources, biodiversity and advanced ocean technologies.

Osteoarthritis Science and Technology



In News

- Scientists are developing a cell-free regenerative therapy for osteoarthritis using extracellular vesicles derived from mesenchymal stromal cells found in menstrual blood.

Osteoarthritis

- **What is it?** A degenerative joint disease involving breakdown of cartilage and changes in underlying bone.
- **Commonly affected:** Knees, hips, hands and spine.
- **Risk factors:** Age, obesity, previous joint injury, repetitive joint stress and genetic factors.
- **Symptoms:** Joint pain, stiffness, swelling and reduced range of motion.
- **Nature:** Usually chronic and progressive; unlike rheumatoid arthritis, it is primarily a degenerative/mechanical condition.
- **Management:** Exercise/physiotherapy, weight management, pain relief and, in severe cases, joint replacement surgery.

Bakhira Lake Geography

News

- Researchers have reconstructed variability in the Indian Summer Monsoon (ISM) based on magnetic minerals, grain size, geochemical and clay-mineral records from sediments of Bakhira Lake, Uttar Pradesh.

About

- **Location:** Uttar Pradesh; part of the Ghaghara-Rapti alluvial system.
- **Formation:** Perennial oxbow/floodplain wetland, formed by migration and cut-off of the Rapti River.
- **Ramsar Site:** Designated in 2022; one of the largest wetlands of Uttar Pradesh.
- **Significance:** Lake sediments preserve a long-term palaeoclimate record of the Central Ganga Plain.
- **Latest Study:** Reconstructed changes in monsoon rainfall, weathering, erosion, sediment transport and lake processes.
- **Importance:** Helps understand past monsoon variability, improve climate models, and support water-resource & agricultural planning.

India-Russia Bilateral Meet Syllabus: GS2/IR

Context

- Russian President Vladimir Putin arrived in New Delhi for the BRICS Summit and held a bilateral meeting with Prime Minister Modi.

Major Highlights

- **Trade:** Focus on implementing the Programme for

Economic Cooperation 2030 and raising bilateral trade to \$100 billion by 2030.



- **Civil Nuclear Cooperation:** Discussions on **nuclear fuel cycle**, life-cycle support for Russian-designed reactors and a possible **second reactor site**.
- **Critical Minerals:** Cooperation being explored in **exploration, processing and recycling**.
- **Cultural Diplomacy:** PM Modi gifted Putin a Russian translation of **Thirukkural**, authored by **Thiruvalluvar**.

Additional Information - India - Russia bilateral relations

- **Strategic Partnership:** India–Russia relationship upgraded to “**Special and Privileged Strategic Partnership**” in 2010.
- **Defence:** Major cooperation in **BrahMos**, **Su-30MKI**, **T-90 tanks**, **AK-203 rifles** and military-technical cooperation.
- **Nuclear Energy:** Russia is involved in **Kudankulam Nuclear Power Plant**; cooperation covers reactors, fuel cycle and life-cycle support.
- **Space:** Cooperation through **ISRO–Roscosmos**, including **satellite navigation and human spaceflight**.
- **Energy:** Russia is an important source of **crude oil, coal and other energy resources** for India.
- **Trade & Investment:** Both sides aim to expand trade and diversify beyond hydrocarbons.
- **Critical Minerals:** Emerging cooperation in **exploration, processing and recycling**.
- **Connectivity:** **International North-South Transport Corridor (INSTC)** connects India with Russia via Iran and Central Asia.
- **Multilateral Platforms:** Cooperation through **BRICS, SCO, G20 and UN**.

Red Sea International



Context

- The Iran-backed Houthis seized control of Yemen's entire Red Sea coast and captured three strategic islands, in a lightning offensive that cemented their hold on a vital shipping corridor.

About

- **Location:** Seawater inlet of the **Indian Ocean**, between **Northeast Africa** and the **Arabian Peninsula**.
- **Western Coast:** Egypt, Sudan, Eritrea
- **Eastern Coast:** Saudi Arabia, Yemen
- **Southern Gateway:** Bab-el-Mandeb Strait → Gulf of Aden → Indian Ocean
- **Northern End:** Gulf of Suez, Gulf of Aqaba & Sinai Peninsula; Gulf of Suez connects to the Suez Canal.
- **Strategic Importance:** Major global **shipping and energy corridor**, linking the **Indian Ocean** with the **Mediterranean** via **Suez Canal**.
- **Trade:** Carries roughly **15% of global trade** and nearly **30% of global container traffic**.

7 Years of Pradhan Mantri Kisan Maandhan Yojana (PM-KMY) Government Schemes

Context

- The Pradhan Mantri Kisan Maandhan Yojana (PM-KMY) has completed seven years.

About

- **Launched:** 2019; completed 7 years.
- **Ministry:** Ministry of Agriculture & Farmers Welfare; implemented with LIC.
- **Type:** Central Sector Scheme; voluntary & contributory pension scheme.
- **Objective:** Old-age social security for Small & Marginal Farmers (SMFs).
- **Eligibility:** Farmers aged 18–40 years with cultivable landholding ≤ 2 hectares.
- **Pension:** Assured ₹3,000/month after 60 years.
- **Family Pension:** After death, spouse gets 50% of pension = ₹1,500/month, subject to conditions.
- **Pre-60 Death:** Spouse can either continue the scheme by contributing or exit as per withdrawal rules.
- **Land Record Condition:** Name must be in State/UT land records as of 1 August 2019.

India's Push for Overseas Lithium and Critical Minerals Economy

Context

- The Ministry of Mines is in talks with Australia and Chile to acquire lithium blocks, while it is also seeking five additional blocks in Argentina, as India steps up its efforts to secure supplies of the critical mineral.

Lithium

- **Symbol:** Li | **Atomic No.:** 3 | **Type:** Soft, silvery-white alkali metal.
- **Key Property:** Highly reactive and flammable; stored under inert conditions/mineral oil.
- **Major Uses:** Essential for Lithium-ion batteries → EVs, energy storage & electronic devices.

Global Distribution

- Major reserves: Chile, Australia, Argentina, Bolivia & China.
- **Lithium Triangle:** Argentina–Bolivia–Chile, containing a major share of global lithium reserves.

India

- **J&K:** GSI identified 5.9 million tonnes of inferred lithium resources in 2023.
- **Potential brine sources:** Sambhar & Pachpadra (Rajasthan) and Rann of Kutch (Gujarat).

Copper Economy

News

- **Copper prices have climbed to a record high of \$14,708 a tonne** amid uncertainty about global economic growth due to trade tensions and the conflict in West Asia.

Copper

- **Symbol - Cu**
- **Properties:** Reddish, highly ductile metal; excellent electrical & thermal conductor; corrosion-resistant.
- **Occurrence:** Found naturally in metallic form and in ores such as **chalcopryite, chalcocite & bornite**.
- **Extraction:** Mainly through **smelting/leaching**, followed by **electrorefining/electrodeposition**.
- **Historical Significance:** One of the earliest metals used by humans; important since the dawn of civilisation.

Uses

- **Electrical & electronics:** Wiring, cables, motors and electrical equipment.
- **Construction:** Water pipes due to corrosion resistance.
- **Alloys:**
 - **Brass** = Copper + Zinc
 - **Bronze** = Copper + Tin
 - **Nickel silver** = Copper + Nickel + Zinc
- Also used in **coins, utensils, ornaments and mirrors**.
- **US copper-product imports (2025): \$16.2 billion**
- Major sources: **China (20%), Mexico (17%), EU (14%), Canada (10%), Vietnam (8%)**.

Lipulekh Pass Geography

News

- India-Tibet border trade through Lipulekh Pass has resumed.

Lipulekh Pass

- **Location:** Pithoragarh district, Uttarakhand, in the Kumaon Himalayas.



- **Altitude:** ~5,334 m.
- **Strategic Location:** Situated near the India–China–Nepal tri-junction.
- **Connectivity:** Traditional route linking India with Tibet.
- **Religious Significance:** Important route for the Kailash Mansarovar Yatra.
- **Strategic Importance:** Important for border security, connectivity and India–China–Nepal geopolitics.

18th BRICS Summit: New Delhi Declaration International Relations



Context

- The 18th BRICS Summit, hosted by India in New Delhi recently, adopted the New Delhi Declaration, reaffirming reformed multilateralism amid wars, protectionism and unilateral actions by major powers.

18th BRICS Summit – New Delhi Declaration

- **Host:** India, New Delhi; adopted the **New Delhi Declaration**.
- **Reformed Multilateralism:** Called for a more democratic, representative and effective global order, with the UN at the centre.
- **UNSC Reform:** Supported comprehensive reform and greater representation of **developing countries**; China & Russia backed **India and Brazil** for a greater role.
- **Global South:** BRICS reaffirmed its role as a voice of **Emerging Markets & Developing Countries (EMDCs)** and LDCs.
- **Trade & Finance:** Opposed **unilateral tariffs, non-tariff barriers and coercive sanctions**; supported **WTO reform** and greater EMDC representation in **IMF & World Bank**.
- **Intra-BRICS Trade:** Focus on **local-currency settlements, cross-border payments and resilient supply chains**.
- **Conflicts:** Emphasised **dialogue, preventive diplomacy and peaceful dispute settlement**.
- **West Asia:** Strong position on **Palestine and Lebanon**; supported humanitarian access, Palestinian self-determination and the **two-state solution**.
- **Terrorism:** Condemned the **22 April 2025 J&K terror attack** and called for **zero tolerance towards terrorism** and its financing.
- **Geopolitical Consensus:** Despite differences among members, BRICS demonstrated capacity for **consensus-building**.

Additional Information - BRICS

- **Founded in** - 2009
- **HeadQuarters** - Shanghai
- It is an acronym for the grouping of the world's leading emerging economies, namely **Brazil, Russia, India, China, and South Africa (included in 2010)**
- **Origin** - The term “BRIC” was coined by the **British Economist Jim O'Neill** in 2001 to describe the four emerging economies of **Brazil, Russia, India, and China**.
- **Recent Expansion (BRICS+):** In 2024–2025, the bloc expanded to include **Egypt, Ethiopia, Iran, the UAE, and Indonesia**. Saudi Arabia has received an invitation but has not yet formalized its membership.
- **Share of BRICS** - BRICS brings together five of the largest developing countries, representing **41% of the global population, 24% of the global GDP, and 16% of the global trade** (By 2028, BRICS is expected to make up 35 percent of the global economy)

- **Chairmanship** - The chairmanship of the forum is rotated annually among the members.

Initiatives of BRICS

1. New Development Bank (NDB)
2. Contingent Reserve Arrangement (CRA)
3. BRICS Payment System
4. Customs Agreements
5. Constellation of Remote Sensing Satellites

India-Africa Forum Summit IR



Context

- India restarted discussion on the next **India-Africa Forum Summit on the sidelines of the BRICS Summit.**

India-Africa Forum

- **Established: 2008**; premier institutional platform for India-Africa cooperation.
- **Summits: 2008, 2011, 2015**; 4th Summit expected in 2026.
- **Key Areas:** Political dialogue, trade & investment, technology transfer, capacity building and people-to-people ties.
- **Underlying Principles:** South-South cooperation, inclusive development, multilateralism & sustainable partnerships.

African Union

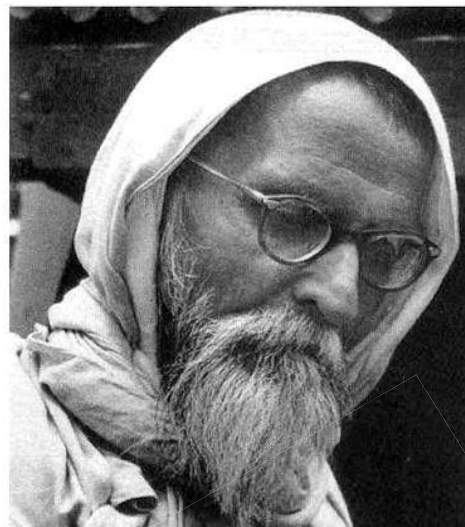
- **Established: 2002**; successor to the Organisation of African Unity (OAU).
- **Members: 55 African countries.**
- **Objective:** Promote African integration, cooperation, peace, growth and economic development.
- **Vision:** Realise Africa's potential through greater regional cooperation and integration.

Acharya Vinoba Bhave History

News

- The Prime Minister paid tributes to Acharya

Vinoba Bhave on his Jayanti.



Vinayak Narahar Bhave

- **Born: 11 September 1895**; regarded as Gandhi's spiritual successor and a leading advocate of non-violence.
- **Association with Gandhi:** Inspired by Gandhi in 1916; joined his constructive programmes—Khadi, village industries, Nai Talim, sanitation etc.
- **Bhoodan Movement:** Launched the land-gift movement to encourage voluntary redistribution of land to the landless.
- **Geetai:** Translated the Bhagavad Gita into Marathi.
- **Social Philosophy:** Non-violence, social equality, voluntary service and rural upliftment.
- **Vaikom:** In 1925, Gandhi entrusted him with work related to temple entry for Harijans at Vaikom, Kerala.
- **Legacy:** Freedom fighter, spiritual leader and social reformer associated with land reforms and Sarvodaya.

Perim Island (Mayun) Places In News

Houthi advance toward Bab el-Mandeb

Iran-aligned Houthi forces have taken control of Perim Island (Mayun) and reached the town of Dhubab, after capturing the Red Sea port of Mocha, according to Reuters and AP reports.



In News

- Iran-aligned Houthi forces took control of Perim

Island, also known as Mayun, in the Bab el-Mandeb Strait.

- **Location:** Small volcanic island ~3.5 km off Yemen's western coast.
- **Strategic Location:** Lies near the Bab-el-Mandeb Strait, the gateway between the Red Sea and Gulf of Aden.
- **Geopolitical Importance:** Control of the island can provide strategic leverage over **shipping** through the Red Sea and towards the Suez Canal.
- **Regional Significance:** Its location makes it important amid disruptions to other major **global energy-shipping** routes.

New Development Bank (NDB) IR

News

- Recently, **BRICS** nations affirmed the New Development Bank's vital role in promoting sustainable development, reducing inequality, and supporting emerging economies globally.

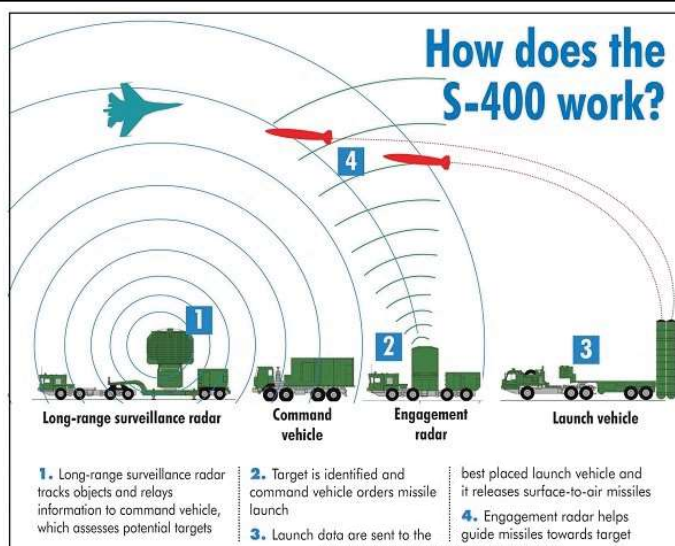
New Development Bank (NDB) (Hq: Shanghai, China)

- **Established:** 2015 by BRICS (Brazil, Russia, India, China & South Africa).
- **HQ:** Shanghai, China.
- **Members:** 11 — 5 founding + Bangladesh, UAE, Egypt, Algeria, Colombia & Uzbekistan.
- **Membership:** Open to UN members, including borrowing and non-borrowing members (**Article 2**).
- **Capital:** Initial authorised capital **\$100 billion**; founding members subscribed equally, **\$10 billion** each.
- **Mandate:** Finance **infrastructure & sustainable development** projects in Emerging Markets & Developing Countries (EMDCs).
- **Aligns projects with SDGs** and the **Paris Agreement**, focusing on climate-smart, disaster-resilient, technology-driven and socially inclusive development.

S-400 Triumf Defence

Context

- The Defence Ministry's Annual Report 2025–26 has highlighted the **operational role of India's S-400** air-defence system during Operation Sindoor.



S-400 Triumf

- **Origin:** Russian long-range Surface-to-Air Missile (SAM) system.
- **Role:** Provides **layered air defence** against aircraft, cruise missiles, UAVs and some ballistic-missile threats.
- **Interceptors:** Different missiles offer ranges of roughly 40, 120, 250 and up to 400 km.
- **Mobility:** Fully mobile system with **command centre, radar/tracking systems, launchers and support vehicles**.
- **Key feature:** Simultaneous detection and engagement of multiple aerial targets at different ranges.
- **S-400F:** Reported ship-based variant of the S-400 system.

Hyenas Species in News



Context

- A new study has found that in spotted **hyenas**, **females dominate males** not because they are bigger or stronger but because they have larger networks of social alliances.

Hyenas

- **Family:** Hyaenidae; dog-like **carnivorous mammals** native to Africa and parts of Asia.
- **Species:** 4 — Striped Hyena, Brown Hyena, Spotted Hyena & Aardwolf.
- **India:** Mainly **Striped Hyena (*Hyaena hyaena*)**.
- **Habitat:** Arid/semi-arid **grasslands, scrublands, deserts and open forests**.
- **Adaptations:** Excellent **night vision and hearing**; largely nocturnal.
- **Ecological role:** Scavenges carcasses → **nutrient recycling & disease regulation**.
- **IUCN:** Striped & Brown Hyena — **Near Threatened**; Spotted Hyena & Aardwolf — **Least Concern**.

India–Vietnam Relations

International

Context

- **India and Vietnam** recently agreed to **deepen defence and security cooperation**, including co-production of Indian defence equipment, amid China's growing assertiveness in the Indo-Pacific.

India–Vietnam Relations

- **Diplomatic ties:** Established in **1972**; upgraded to **Comprehensive Strategic Partnership (CSP)** in **2016**.
- **Political:** Strong convergence under **Act East Policy** and **Indo-Pacific** vision; Vietnam is important to India's engagement with **ASEAN**.
- **Defence & Security:** Defence partnership includes **military exchanges, training, capacity building, maritime security and defence industry cooperation**.
- **Maritime:** Cooperation in the **South China Sea**, including respect for **UNCLOS** and freedom of navigation.
- **Economic:** Bilateral trade is around **\$15 billion**, with cooperation in **pharmaceuticals, IT, agriculture, textiles and energy**.
- **Connectivity:** **ASEAN–India** connectivity initiatives strengthen physical, digital and maritime links.
- **Energy:** Indian companies have interests in **Vietnam's oil & gas sector**; cooperation also extends to renewable energy.
- **Cultural:** Shared **Buddhist and civilisational links**; India supports conservation/restoration of **Cham monuments** in Vietnam.
- **Challenges:** South China Sea tensions, trade imbalance, limited connectivity and competition from other major powers.

Hindi Diwas 2026

7Polity

Context

- **Hindi Diwas:** **14 September** — marks the **Constituent Assembly's adoption of Hindi in Devanagari script** as the **Union's official language** in 1949.

About

- **Munshi–Ayyangar Formula:** **Balanced Hindi promotion** with India's linguistic diversity.
- **Article 343:** **Hindi (Devanagari)** as **official language of the Union**; **English** continued for **15 years** initially.
- **Article 344:** **Commission & Parliamentary Committee on progressive use of Hindi**.
- **Article 345:** States can adopt **one or more languages** as their official language.
- **Article 351:** Directive for **development and promotion of Hindi**.

Moth Bean

Economy



News

- **ICAR–Central Arid Zone Research Institute (CAZRI)**, Jodhpur's **Moth Bean Varieties** demonstrated remarkable resilience during the **El Niño Year**.

Moth Bean (*Vigna aconitifolia*)

- **Family:** **Fabaceae**; also called **mat bean/dew bean**.
- **Origin:** **South Asia**; mainly grown in **hot, dry & semi-arid regions**.
- **Major area:** **Thar Desert of western Rajasthan**; also **Gujarat, Haryana & Punjab**.
- **Climate-resilient:** Tolerates **drought and other abiotic/biotic stresses**, making it suitable for **rain-fed farming**.
- **Nutrition:** **Protein-rich pulse**; used as **food and**

fodder.

- **Area:** Cultivated over about 10 lakh hectares, mainly in western Rajasthan.
- **Significance:** Supports food & nutritional security in arid regions; CAZRI varieties showed resilience during El Niño conditions.

Gucchi Mushrooms Environment



In News

- **Gucchi Marmik**, a traditional dish featuring rare Himalayan morel mushrooms, was served at the BRICS Summit 2026 dinner.

Gucchi mushrooms (*Morchella esculenta*)

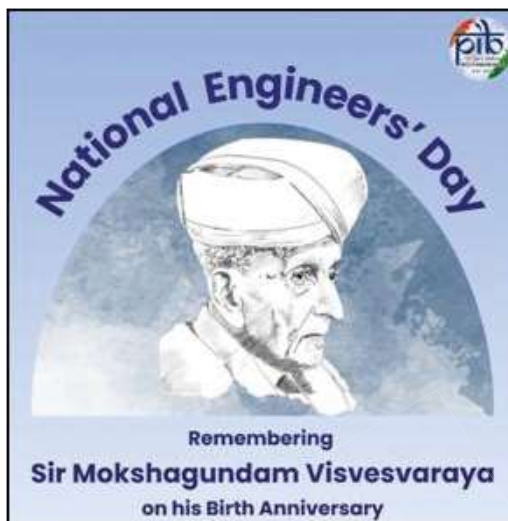
- **Scientific name:** *Morchella esculenta*; commonly called **morel mushroom**.
- **Distribution:** Himalayan regions of J&K, Himachal Pradesh & Uttarakhand.
- **Habitat:** Mountainous coniferous forests; needs specific soil, moisture, temperature fluctuations & snowmelt.
- **Nature:** Rare, wild mushroom; difficult to cultivate commercially.
- **Collection:** Short season + labour-intensive harvesting in rugged terrain → high price.
- **Nutrition:** Rich in protein, fibre & antioxidants; vitamin D varies with conditions/processing.
- **Economics:** Quality dried varieties can fetch ₹15,000–40,000/kg.

National Engineers' Day Miscellaneous

News

- National Engineers' Day is celebrated to honor the birth anniversary of Sir Mokshagundam

Visvesvaraya every year on September 15.



National Engineer's day

- Celebrated on - 15th September
- Objective - To recognise and honour the achievements of the great engineer Mokshagundam Visvesvaraya.
- Note - It is different from the World Engineers' Day celebrated annually by UNESCO on 4th March.

Mokshagundam Visvesvaraya

- **Born in** - Karnataka in 1861
- **Education** - He studied Bachelor of Arts (BA) from the University of Mysore and then studied civil engineering from the College of Science in Pune and went on to become one of the most eminent engineers in the country.
- **Service** - He served as the Chief Engineer of Mysore State in 1909 and as the Diwan of the princely state of Mysore in 1912, a position he held for seven years.
- **Death** - He died in 1962 in Bengaluru, Karnataka.

Contributions

- **Planner of Indian Economy** - He was an Engineer who emphasised on development 'Planned Economy' in India (1934).
- **Krishna Raja Sagara Dam** - He was the chief engineer responsible for the construction of the Krishna Raja Sagara Dam in Mysore.
- **Khadakwasla reservoir** - He was instrumental in designing and patenting a system of automatic weir floodgates in Khadakwasla reservoir in Pune in 1903.
- **Drainage system** - After the devastating floods (Musi River) in Hyderabad in 1908, he designed a drainage system to protect the city from these floods in the future.

- **Road plan** - He is the one who designed a plan for road construction between Tirumala & Tirupati.
- **Railway lines** - He also commissioned several new Railway lines in Mysore state.
- **Waterworks** - He had designed and carried out the waterworks for the Municipality of Sukkur in 1895.
- **Block System** -He is also credited with the development of the **Block System** which would prevent the wasteful flow of water in dams.
- **Founded** - He was responsible for founding the Mysore soap factory, the Mysore Iron & steel works (Bhadravathi), Sri Jayachamarajendra Polytechnic Institute, The Bangalore Agricultural University, and the State Bank of Mysore.

Honours

- **Knight Commander** - He was knighted as a Knight Commander of the British Indian Empire by King George V for his contributions to the public good in 1915.
- He was awarded an **Honorary Membership of London Institution** of Civil Engineers for an unbroken 50 years.
- He was conferred **India's highest honour, the Bharat Ratna in 1955.**

Books written by him

- 'Reconstructing India' and 'Planned Economy of India'

Refugee Convention International

News-

- The 1951 Refugee Convention recently marked its 75th anniversary.

1951 Refugee Convention

- **Adopted:** 1951, Geneva; key international treaty for refugee protection.
- **Refugee:** Person outside their country facing a **well-founded fear of persecution** due to race, religion, nationality, social group or political opinion.
- **Key principle: Non-refoulement** – refugees should not be returned to a place where their life/freedom is threatened.
- **Rights:** Employment, education, housing, courts, religion and movement.
- **1967 Protocol:** Removed the Convention's **temporal and geographical limitations.**
- **India:** Not a party to the 1951 Convention or 1967 Protocol; has **no dedicated refugee law.**

World Ozone Day Environment

News

- **World Ozone Day 2026 was observed on September 16**, commemorating the Montreal Protocol and highlighting 10 years of adoption of the Kigali Amendment.

OZONE LAYER DEPLETION

Basics - Ozone Layer (O₃)

- It is a highly reactive molecule containing three oxygen atoms.
- **Found in** - It is present between 10 and 50 km above the earth's surface, called the stratosphere.
- **Function** - This ozone layer serves as a natural filter for blocking deadly incoming UV radiation from the sun.
- **Significance** - This ozone shield is necessary for the survival of human life on the earth.

OZONE LAYER DEPLETION

- **Definition** - The decrease in ozone concentration in the middle layers of the atmosphere – mainly in the stratosphere is referred to as the depletion of the ozone layer.
- **Caused by** - It is caused by emissions of anthropogenic halogenated hydrocarbons such as **CFCs, HCFCs, Halons, Carbon tetrachloride and Methyl bromide.**

Why is ozone depletion more in Antarctica than the equator?

- The severe depletion of the Antarctic ozone layer known as the "ozone hole" occurs **because of the special weather conditions that exist there and nowhere else on the globe.**
 - The very low temperatures of the Antarctic stratosphere create ice clouds called polar stratospheric clouds (PSCs).

Measures to Prevent Ozone Layer Depletion

Vienna Convention

- **Objective** - To protect human health and the environment from any harmful effects of the depletion of the ozone layer.
- **Held in** - Vienna, Austria
- **Adopted in** - 1985.
- **Came into force** - 1988.

Montreal Protocol

- **Enforcement** - It was agreed upon in 1987 in Montreal, Canada and entered into force in 1989.
- **Objective** - To protect the Ozone layer by reducing



the production of substances that are supposed to be responsible for Ozone layer depletion.

- **Kigali Agreement** - The protocol was further strengthened with the ratification of the legally binding Kigali Agreement in 2016 in Kigali, Rwanda.
- **Significance** - It seeks to phase out the production of hydrofluorocarbons (HFCs) that are potent greenhouse gases by the late 2040s.

State of the World's Birds 2026 Environment

News -

- **BirdLife International published its quadrennial State of the World's Birds report** at the Global Flyways Summit in Nairobi.

About -

- **Released by:** BirdLife International; published **every 4 years**.

Key findings:

1. **45%** of migratory bird species are declining.
 2. **1 in 9** migratory species faces extinction.
 3. **Slender-billed Curlew** declared extinct in **2025**; last recorded in Morocco in **1995**.
- **Major drivers:** Invasive species, agricultural expansion/intensification, **climate change**, unsustainable hunting & trapping.
 - **Flyway:** Geographical route connecting **breeding and wintering grounds**, with stopover sites.
 - **Global flyways:** BirdLife recognises **14 major flyways** — **8 terrestrial + 6 marine**.
 - **Examples:** Central Asian, East Asian–Australasian, African–Eurasian Flyways.
 - **Nairobi Flyways Declaration:** Emphasises **coordinated conservation across entire flyways**, involving multiple countries and stakeholders.

Additional Information - BirdLife International

- **Nature:** Global partnership for **bird and biodiversity conservation**.
- **Founded:** **1922** as International Council for Bird Preservation (ICBP).
- **Headquarters:** **Cambridge, UK**.
- **Key role:** Identifies **Important Bird & Biodiversity Areas (IBAs)** and supports conservation research and policy.
- **Reports:** Publishes the **State of the World's Birds** report.
- **Network:** Works through partner organisations across **120+ countries**.

Ring-tailed Lemur (*Lemur catta*) Environment



News -

- Bangladeshi investigators reportedly traced **two ring-tailed lemurs** stolen from **Gazipur Safari Park** to **Vantara** in **Jamnagar, Gujarat**.

About

- **Scientific name:** *Lemur catta*
- **Distribution:** **Southern & south-western Madagascar**; arid spiny scrub and rocky habitats.
- **Features:** Omnivorous, social **strepsirrhine (wet-nosed) primate**; distinctive **12–14 black-and-white tail rings**.
- **Behaviour:** **Female-led groups**; highly terrestrial among lemurs; males perform scent-based **“stink fights.”**
- **Threats:** Habitat loss, charcoal production, hunting & illegal pet trade.
- **IUCN:** **Endangered (EN)**
- **CITES:** **Appendix I**

Tso Kar Glacier Lake Environment



**News**

- Ladakh has launched a project aimed at reviving and conserving Tso Kar Glacier Lake.

About

- Location:** Rupshu Plateau, Ladakh.
- Part of **Tso Kar Wetland Complex**, comprising Tso Kar + Startsapuk Tso.
- Tso Kar:** Means “white lake”, referring to salt deposits/efflorescence along its margins due to evaporation of saline water.
- Ramsar Site:** Designated in 2020.
- Concern:** Lake has reportedly **shrunk ~70% in a decade**, linked to receding glacial inputs and changing climate patterns.
- Conservation:** Ladakh has launched a project for its revival and conservation.

National Institute of Mental Health and Neuro Sciences (NIMHANS)**Polity****News -**

- New Delhi Declaration adopted during 18th BRICS Summit agrees to support establishment of training hubs and Centres of Excellence for mental health, with NIMHANS being the coordinating centre.

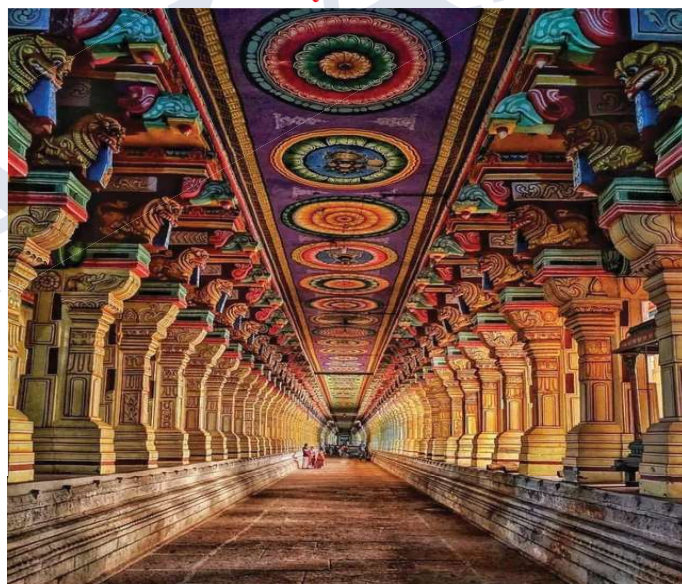
About -

- Full name:** National Institute of Mental Health and Neuro Sciences.
- Location:** Bengaluru, Karnataka.
- Focus:** Mental health, neurosciences and neurosurgical care; patient care, research & training.
- Deemed University:** 1994.
- Institute of National Importance:** 2012, through an Act of Parliament.
- Tele-MANAS:** Designated nodal centre.
- Bellary Model:** NIMHANS' pilot model contributed to the District Mental Health Programme (DMHP).

Additional information - Mental Health Initiatives in India

Initiative	Key point
National Mental Health Programme (NMHP), 1982	Accessible mental health-care; district-level services
District Mental Health Programme (DMHP), 1996	Integrates mental health services at district level

Tele-MANAS, 2022	24×7 tele-mental health support; toll-free 14416
Mental Healthcare Act, 2017	Right to access mental healthcare; decriminalises attempted suicide
KIRAN Helpline, 2020	Mental-health counselling/support helpline
Manodarpan, 2020	Psychological support for students
National Suicide Prevention Strategy, 2022	India's first national framework to reduce suicide mortality

**Ramanathaswamy Temple
History & Culture****News -**

- During the 18th BRICS Summit in New Delhi, PM Narendra Modi welcomed visiting leaders at Bharat Mandapam against a backdrop featuring the iconic Ramanathaswamy Temple of Rameswaram.

About

- Location:** Rameswaram, Pamban Island, Tamil Nadu.
- Deity:** Lord Shiva; one of the 12 Jyotirlingas and one of the Char Dham.
- Architecture:** Dravidian style, famous for elaborate gopurams, carved pillars and long corridors.
- Corridor:** Known for the **longest temple corridor** in India/world.
- History:** Expanded substantially under the **Nayaks and Sethupathi rulers** (15th–18th centuries), with earlier Pandya patronage.

Additional Information- 12 Jyotirlingas

No.	Jyotirlinga	State
1	Somnath	Gujarat
2	Mallikarjuna	Andhra Pradesh
3	Mahakaleshwar	Madhya Pradesh
4	Omkareshwar	Madhya Pradesh
5	Kedarnath	Uttarakhand
6	Bhimashankar	Maharashtra
7	Kashi Vishwanath	Uttar Pradesh
8	Trimbakeshwar	Maharashtra
9	Vaidyanath	Jharkhand
10	Nageshwar	Gujarat
11	Rameshwaram (Ramanathaswamy)	Tamil Nadu
12	Grishneshwar	Maharashtra

Thirukkural History & Culture

News -

- PM Modi gifted a Russian translation of the **Thirukkural to President Putin** ahead of the 18th BRICS Summit in New Delhi.

About

- Author:** Thiruvalluvar; foundational Tamil ethical text.
- Period:** Post-Sangam era; date debated (c. 300 BCE–500 CE).
- Structure:** 1,330 couplets → 133 chapters → 10 couplets/chapter.

Three divisions:

- Aram** – Virtue/ethics
 - Porul** – Polity/statecraft
 - Inbam** – Love
- Nature:** Secular and universal; covers **ethics, governance, justice and social values**.
 - Also known as **Kural, Tamil Marai (Tamil Veda)** and **Divine Book**.

South Asia Wildlife Enforcement Network (SAWEN) Environment

News -

- Member countries adopted the Kathmandu Declaration** at the first General Assembly of the South Asia Wildlife Enforcement Network (SAWEN), held in Kathmandu, Nepal.
- About
- Full form:** South Asia Wildlife Enforcement Network.
- Established:** 2011, **Bhutan**; regional intergovernmental body against **illegal wildlife trafficking**.
- Members:** 8 **SAARC countries** – Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan & Sri Lanka.
- Secretariat:** Kathmandu, Nepal.
- Structure:** General Assembly → Executive Committee → Secretariat headed by Secretary-General.
- Kathmandu Declaration:** Recognises illegal wildlife trade as **transnational organised crime**.
- SAWEN Implementation Plan: 2026–2030** for coordinated enforcement.
- SAWEN Day: 30 January**.

Kathmandu Declaration

- Illegal wildlife trade:** Recognised as **transnational organised crime**.
- Enforcement:** Intelligence-led operations + **anti-money laundering** + financial investigations.
- Implementation Plan: SAWEN Implementation Plan 2026–2030** for coordinated enforcement.
- SAWEN Day: 30 January** to mark SAWEN's foundation and promote biodiversity awareness.

BRICS Photovoltaic Industry Action Plan International

Context (DTE):

- The 18th BRICS Summit (2026), New Delhi, welcomed the **Photovoltaic Industry Action Plan** adopted by BRICS Industry Ministers in Jaipur in August 2026.

About

- Adopted:** BRICS Industry Ministers, **Jaipur, August 2026**; welcomed at **18th BRICS Summit, New Delhi**.
- Aim:** Strengthen **PV industry cooperation** through the **BRICS Photovoltaic Industry Working Group**



under PartNIR.

- **Priority areas:** Technology cooperation, financing & capacity building.
- **Knowledge portals:** Members encouraged to create national portals for sharing PV policies, developments & best practices.

Basics - Photovoltaic

- **PV effect:** Converts sunlight directly into electricity using semiconductor cells.
- **Main material:** Silicon.
- **Process:** Sunlight → DC electricity → inverter → AC.
- **Value chain:** Polysilicon → Ingots → Wafers → Cells → Modules.
- **Advantages:** Renewable, low emissions, scalable.
- **Challenges:** Intermittency, storage, land and raw-material dependence.

Paraguay International



News -

- India and Paraguay commemorated the 65th anniversary of establishment of diplomatic relations.

About

- **Location:** Landlocked country in south-central South America.
- **Capital:** Asunción
- **Borders:** Argentina, Brazil & Bolivia
- **Regions:** Eastern Paraguay + Chaco Boreal (≈ two-thirds of country), part of the Gran Chaco.
- **Climate:** Subtropical (east) and tropical (Chaco).
- **Major Rivers:** Paraguay & Paraná.
- **Mountain ranges:** Amambay & Caaguazú.
- **Membership:** OAS, MERCOSUR & WTO.

Incentive Scheme for Promotion of Domestic PNG Connections Government Schemes

News -

- To expand PNG coverage, the **Incentive Scheme for Promotion of Domestic PNG Connections** was launched on 18 August 2026 and came into effect from 1 September 2026.

About-

- **Launched:** Aug 2026; effective 1 Sept 2026.
- **Aim:** Increase active domestic PNG connections.
- **Duration:** 2 tranches over 6 months.
- **Benefit:** Replaces costlier LNG, reducing CGD sourcing costs.
- **PNGRB:** Statutory regulator under PNGRB Act, 2006; regulates CGD networks.

PNG (Piped Natural Gas) – UPSC

- **Composition:** Mainly methane (CH₄).
- **Supply:** Transported through underground pipelines to households/industries.
- **Properties:** Clean-burning, non-toxic, non-corrosive and highly energy-efficient.
- **Uses:** Cooking, heating and industrial applications.

Badri Cattle Science & technology

News -

- A female Badri calf was born via **Ovum Pick-Up and In Vitro Fertilisation (OPU-IVF)** technology, following the transfer of a Badri embryo to a Sahiwal recipient cow.

About

- **Badri:** Indigenous hill cattle breed of Uttarakhand; found in Kumaon & Garhwal.
- **Features:** Small, long-legged, sure-footed, disease-resistant; low milk yield but high fat & protein; mainly A2 β-casein.
- **Sahiwal:** Indigenous high-yielding dairy breed; heat-tolerant & low-maintenance.

Ovum Pick-Up (OPU) -IVF technology

- **OPU:** Ultrasound-guided collection of oocytes from donor females.
- **IVF:** Oocytes fertilised with selected sperm in laboratory.
- **Embryo Transfer:** Embryo transferred to a synchronised surrogate/recipient.

- **Key point:** Recipient carries the pregnancy but contributes no genetic material.

Colombo Security Conclave International

News -

- **Colombo Security Conclave Table Top Exercise** concluded at Eastern Naval Command in Visakhapatnam.

About -

- **Origin:** Trilateral NSA dialogue of **India–Sri Lanka–Maldives (2011)**; revived/rebranded as CSC in 2020.
- **Members:** India, Sri Lanka, Maldives, Mauritius, Bangladesh & Seychelles.
- **HQ/Secretariat:** Colombo, Sri Lanka.
- **Focus:** Maritime security and **non-traditional security threats** in the Indian Ocean Region.

5 Pillars:

1. Maritime safety & security
2. Counter-terrorism & radicalisation
3. Disaster management
4. Cybersecurity & technology
5. Humanitarian assistance & emergency response

Eravikulam National Park Environment

News -

- A recent survey found **Eravikulam National Park** as a thriving habitat for the endangered **Resplendent Shrub Frog**.

About

- **Established:** 1978; Kerala's first national park.
- **Location:** Idukki district, Kerala, Southern Western Ghats.
- **Altitude:** ~1,600–2,695 m; includes **Anamudi**, highest peak of South India.
- **Vegetation:** Shola forests, grasslands, medicinal plants & high-altitude flora.
- **Neelakurinji:** Famous for its 12-year flowering cycle.
- **Key fauna:** Nilgiri Tahr, Lion-tailed Macaque, Nilgiri Langur.
- **Resplendent Shrub Frog:** *Raorchestes resplendens*; known only from **Eravikulam NP**, especially the Anamudi region; distinctive **short limbs and ground-dwelling/crawling behaviour**.

Addis Ababa Call to Action on Early Warnings in Africa International

News-

- The **Addis Ababa Call to Action on Early Warnings in Africa**, adopted at the Africa Early Warnings Forum held in Addis Ababa, Ethiopia.

About

- **Adopted at:** Africa Early Warnings Forum, Addis Ababa, Ethiopia.
- **Aim:** Strengthen cooperation so African communities can **anticipate hazards, receive timely warnings & take early action**.
- **Focus:** Climate-related hazards and **multi-hazard early warning systems**.
- **EW4All:** Launched by the UN Secretary-General in 2022.
- **Goal:** Protect **every person on Earth by 2027** through multi-hazard early warning systems.