

SANSKRITI IAS DAILY CURRENT AFFAIRS

13-09-2026

Steel Slag

Moneycontrol.com

Jindal Steel enters Guinness World Records with 1.85-km road built from steel slag

Jindal Steel and CSIR-CRRI used about 2 lakh tonnes of processed steel slag to build the 1.85-km four-lane road in Raigarh, Chhattisgarh.



Why in News: Jindal Steel recorded a **Guinness World Record** for the **world's longest steel slag road** at **Raigarh, Chhattisgarh**.

Origin & Composition

- **Steel slag** is an industrial by-product generated during steel manufacturing.
- It is produced in large quantities during steel-making using **electric arc furnaces** and can also arise from **basic oxygen furnaces**.
- It mainly contains **calcium, magnesium, manganese and aluminium silicates and oxides**.
- Different cooling processes generate different types of slag suited to various end uses.

Infrastructure Applications

- Steel slag can replace **coarse aggregates** because of its high impact and crushing strength and better **anti-skid properties**.

Environmental & Agricultural Uses

- It can act as a **barrier material** for contaminated sites by reducing the leaching of heavy metals into the environment.
- Its high oxide-mineral content can help remove heavy metals from **water runoff** and treat acidic water from abandoned mines.
- Application to soil can increase **pH** and the availability of **calcium, magnesium and silicon**, supporting plant nutrient absorption and crop growth.

Ramanathaswamy Temple

Organiser

Bharat's civilisational pride at BRICS 2026: Rameswaram temple corridor frames world leaders

Backdrop of the Ramanathaswamy Temple showed the world what Bharat's civilisation and society stand for — a living tradition rooted in...

Why in News: The **Ramanathaswamy Temple** at Rameswaram featured prominently in the backdrop while the Prime Minister welcomed BRICS leaders.

Religious & Cultural Significance

- The temple is dedicated to **Lord Shiva** and is located on **Rameswaram Island, Tamil Nadu**.
- It is one of the **12 Jyotirlinga temples**, where Shiva is worshipped as a **Jyotirlingam**, meaning “pillar of light”.
- It is one of the **four Char Dham shrines**, along with **Dwarka, Puri and Badrinath**.
- It is the **only Shiva temple among the four Char Dham shrines**.



Historical Linkages

- According to the **Puranas**, Lord Rama is believed to have consecrated and worshipped the Shivalinga at Rameswaram after defeating Ravana.
- The first stone temple was built by the **Chola kings in the 12th century**, with subsequent additions by the **Pandys and Vijayanagar rulers**.
- **Krishna Deva Raya** visited the temple in **1513**, while the **Sethupati kings of Ramnad** eventually completed the temple complex.

Architectural Features

- The temple is a major example of **Dravidian architecture**, characterised by towering **gopurams** and intricate carvings.
- Its corridor is regarded as the **longest among Hindu temples in India**, measuring about **197 m east–west and 133 m south–north**.
- The temple contains **22 holy wells** used in religious rituals.

South Asia Wildlife Enforcement Network

 News On AIR

South Asian countries pledge stronger action against illegal wildlife trade

South Asian countries have pledged stronger coordinated action to prevent and combat illegal wildlife trade, including through intelligence...



Why in News: Member countries of the **South Asia Wildlife Enforcement Network (SAWEN)** adopted the **Kathmandu Declaration** to strengthen regional cooperation against illegal wildlife trade and associated transnational organised crime.

Regional Composition

- **SAWEN** is an intergovernmental law-enforcement support body dealing with wildlife crime in South Asia.

- Its eight members are **Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka**.
- It was officially launched in **2011 at Paro, Bhutan**, during the second meeting of the South Asia Experts Group on Illegal Wildlife Trade.

Core Mandate

- SAWEN promotes **cooperation, collaboration, coordination, capacity building and communication** to combat wildlife crime.
- It seeks to harmonise and standardise member countries' **laws and policies** concerning conservation of wild fauna and flora.
- It documents trends in **poaching and illegal wildlife trade** and promotes information-sharing and institutional cooperation.
- It encourages members to prepare and implement **National Action Plans** against wildlife crime.

Governance Structure

- The **General Assembly** is the apex body and comprises ministers or senior government representatives of member countries.
- The **Executive Committee** consists of the principal focal persons of member countries.
- The **Secretariat**, headed by a **Secretary General**, manages day-to-day activities.
- The **Secretariat is located in Kathmandu, Nepal**.

Buxa Tiger Reserve

TT Telegraph India

Bengal government to relocate tigress from Bihar to boost tiger population in Buxa

Three teams have been formed for the operation. Two from Bengal will leave for Valmiki National Park and Tiger Reserve on September 14.



Why in News: The **West Bengal Government** plans to relocate a tigress from Bihar to **Buxa Tiger Reserve** in north Bengal to help revive its tiger population.

Geographical Setting

- It is in **Alipurduar district, West Bengal**, within the **Indo-Malayan biodiversity region**.
- Its northern boundary runs along the **international border with Bhutan**.
- Its eastern boundary forms the interstate border with **Assam**, demarcated by the **Sankosh River**.

Landscape & Rivers

- The reserve ranges from about **60 m elevation in the plains to nearly 1,750 m in the Himalayan foothills**.

- It contains **Terai, Bhabar and sub-Himalayan ecosystems** within a single protected landscape.
- Major rivers include **Raidak, Sankosh and Jayanti**, all originating in Bhutan.

Biodiversity Profile

- The vegetation is broadly classified as **Moist Tropical Forest**.
- The reserve supports around **450 tree species, 400 herb species, 250 shrub species and more than 150 orchid species**.
- Important fauna include **elephant, gaur, sambar, spotted deer, barking deer and hog deer**.

Hasdeo River

ThePrint

Chhattisgarh: 3 students swept away in Hasdeo river, body of one recovered

Janjgir, Sep 12 (PTI) One student drowned and two others were swept away in the Hasdeo river while they were on a picnic in Chhattisgarh's...



Why in News: One student drowned and two others were swept away in the **Hasdeo River** while on a picnic in **Janjgir-Champa district, Chhattisgarh**.

River System

- The **Hasdeo River** is a major tributary of the **Mahanadi River** and flows through **Chhattisgarh**.
- It originates from a **small lake near Ambikapur in Surguja district**.
- The river flows through **Surguja, Korea and Bilaspur** before joining the Mahanadi near **Akaltara in Janjgir-Champa district**.



Geographical & Ecological Importance

- The river has a course of approximately **333 km** through forests, valleys, hills and villages.
- Its basin includes the ecologically important **Hasdeo Arand forest**, described in the source as the **largest unfragmented forest landscape in Central India**.
- Important tributaries of the Hasdeo include **Gej and Ahiran**.

Water-Resource Infrastructure

- The **Hasdeo Bango Reservoir** is constructed across the river and supports **irrigation and hydroelectric power generation**.

India at Pickleball World Cup 2026

 The Assam Tribune

India finish fourth in Pickleball World Cup medal tally with 41 medals

New Delhi, Sep 8: India ended their campaign at the Pickleball World Cup in Da Nang, Vietnam, with a fourth-place finish, having secured 41...



Why in News: India secured **4th position among 82 nations** at the **2026 Pickleball World Cup** in **Da Nang, Vietnam**, winning **41 medals**.

Medal Performance

- India won **7 gold, 17 silver and 17 bronze medals**.
- India improved from **7th position in the previous edition to 4th in 2026**.

Key Achievements

- **Veer Shah** led the Kids team to **silver** and was named **Best Captain**.
- **Purvansh Patel** won gold in **Under-18 Boys Singles**.
- **Bhushan Akut** won **three gold medals** in the **60+ categories**.

Participation & Development

- **48 Indian athletes** participated in team events, while **130+ athletes** competed in individual events.
- The **Indian Pickleball Association (IPA)** emphasised **grassroots development** to produce international-level players.

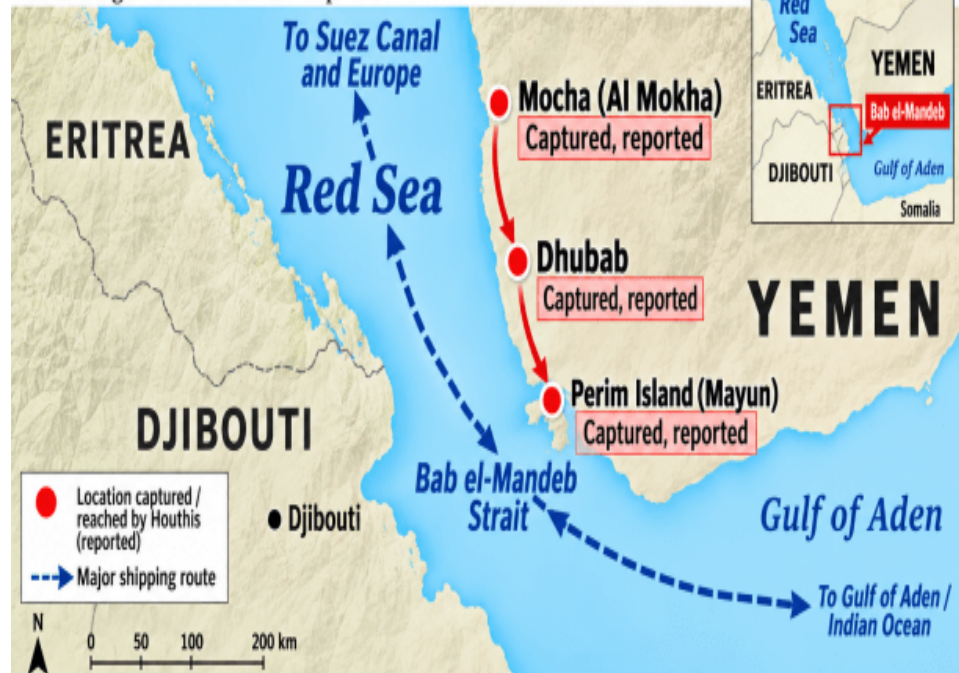
Other Important News of the day

Places in News	Mayun Island
	Why in News: Yemen's Iranian-backed Houthi rebels reportedly captured the strategically located Mayun Island in the Bab el-Mandeb Strait, at the entrance to the Red Sea. Geographical Identity ➤ Mayun Island, also known as Perim Island, is a small volcanic island belonging to Yemen. ➤ It lies in the Bab el-Mandeb Strait, at the southern entrance of the Red Sea. ➤ The island covers only about 13 sq km and rises to approximately 65 m.

- It divides the Bab el-Mandeb into **two smaller channels**.

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.



Strategic Importance

- Bab el-Mandeb is a critical **maritime chokepoint** connecting the Red Sea with the Gulf of Aden and the wider Indian Ocean route.
- The island's location near the narrowest part of the strait, about **26 km wide**, gives strategic significance to control over maritime movement.
- Its importance increased after the opening of the **Suez Canal**, which enabled shipping between the Mediterranean and Arabian Sea through the Red Sea.

Historical & Military Significance

- The **British seized Perim in 1857** and established a coaling station there.
- It remained part of the **British Empire from 1857 to 1967**, after which it became part of independent Yemen.
- The island has a **deep natural harbour on its southwestern side** and a **military airfield in the north**.

Environment	Badri Cattle Why in News: Scientists at ICAR–National Dairy Research Institute (NDRI), Karnal and G.B. Pant University of Agriculture and Technology, Pantnagar produced a Badri cattle calf using Ovum Pick-Up and In Vitro Fertilization (OPU-IVF) technology. Breed Profile ➤ Badri cattle, also called Pahadi, are a small, hardy breed and the state animal of Uttarakhand. ➤ The breed is mainly found in the hilly regions of Uttarakhand and is well adapted to mountainous terrain and climatic conditions. ➤ It is primarily reared for bullock power, milk and manure. Physical & Production Traits ➤ The common coat colours are black, brown and grey, while white colour is rarely seen in females. ➤ Its horns are curved upward and inward, with a straight forehead, prominent poll and medium-to-large hump. ➤ The average milk yield is about 632 kg per lactation, with a reported range of 547–657 kg. Genetic & Ecological Significance ➤ Badri cattle graze mainly on herbs and shrubs available in the mountains, reflecting their adaptation to the Himalayan environment. ➤ Its milk is described as having rich medicinal content and high organic value. ➤ It is the first certified cattle breed of Uttarakhand after recognition by the National Bureau of Animal Genetic Resources (NBAGR).
Defence	Colombo Security Conclave PIB COLOMBO SECURITY CONCLAVE TABLE TOP EXERCISE CONCLUDES AT EASTERN NAVAL COMMAND, VISAKHAPATNAM The three-day Table Top Exercise (TTX) conducted under the aegis of the Colombo Security Conclave (CSC) successfully culminated on 11 Sep... Why in News: A three-day Table Top Exercise (TTX) under the Colombo Security Conclave (CSC) concluded at the Eastern Naval Command, Visakhapatnam.

	Institutional Evolution ➤ The CSC is a regional security framework established in 2020. ➤ It evolved from trilateral maritime-security meetings among India, Maldives and Sri Lanka that began in 2011. ➤ The mechanism became inactive after 2014 and was revived and rebranded as the CSC in 2020. ➤ Mauritius joined in 2022, while Bangladesh joined in 2024, followed by Seychelles as the sixth member. Membership & Institutional Structure ➤ The six members are India, Bangladesh, Sri Lanka, Maldives, Mauritius and Seychelles. ➤ The conclave brings together National Security Advisors (NSAs) and Deputy NSAs of member countries. ➤ Its Permanent Secretariat is located in Colombo, Sri Lanka. Five Cooperation Pillars ➤ Maritime safety and security is a core area of CSC cooperation. ➤ Countering terrorism and radicalisation forms the second pillar. ➤ Combating trafficking and transnational organised crime is another major focus. ➤ Cybersecurity and protection of critical infrastructure constitute a dedicated pillar. ➤ Humanitarian assistance and disaster relief (HADR) is the fifth pillar.
Science and Technology	Fermat's Last Theorem  India Today <u>13 million lines; 29,500 theorems: AI tackles Fermat's Last Theorem in 11 days</u> Fermat's Last Theorem took mathematicians more than 350 years to crack. Andrew Wiles finally proved it in the 1990s after years of work.  Why in News: Anthropic reportedly used its Claude AI to formalise Fermat's Last Theorem using the Lean programming language. Mathematical Proposition ➤ Fermat's Last Theorem states that the equation $x^n + y^n = z^n$ has no positive integer solutions for $n > 2$. ➤ Pierre de Fermat proposed the theorem in 1637 and wrote his famous note in the margin of his copy of <i>Arithmetica</i>.

- Solutions exist for $n = 1$ and $n = 2$, with the latter corresponding to the **Pythagorean equation**.

Proof & Mathematical Significance

- The problem remained unresolved for more than **350 years** before **Andrew Wiles** provided the proof in **1995**.
- Wiles's proof relied crucially on the **modularity theorem for elliptic curves**.
- Earlier contributions by mathematicians such as **Gerhard Frey** and **Ken Ribet** helped establish the connection between Fermat's conjecture and elliptic curves.

Broader Relevance

- The theorem contributed to advances in **algebraic number theory** and the study of **Diophantine equations**.

Uttar Pradesh in News

Jewar Data Centre and AI Hub, Uttar Pradesh

KNN India

Rs 26,910 Crore Data Centre, AI Hub Planned In Uttar Pradesh; Phase 1 To Have 384 MW Capacity

A Rs 26910 crore data centre and artificial intelligence (AI) infrastructure hub is planned in Jewar, Uttar Pradesh, with the first phase...



Why in News: **Jewar** will host a **₹26,910 crore** data centre and AI hub, with **384 MW Phase-I capacity** targeted for **2028**.

Project Details

- The project is located in the **YEIDA area, Jewar, Uttar Pradesh**.
- The overall target is a **1 GW AI and high-performance computing hub by 2030**.
- The project follows a **January 2026 MoU between AM Group and Invest UP**.

AI & Digital Significance

- It will support **hyperscale cloud companies, AI research, enterprises and sovereign AI initiatives**.
- The project will strengthen the **Jewar–Greater Noida region** as a digital infrastructure hub.

Green Energy

- The facility is planned to use **24/7 carbon-free electricity** from **wind and solar**, supported by **pumped-storage projects**.