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Indigenous rhythms: Kommu Koya tribal dancers perform during the World's Indigenous Peoples Day celebration at Kumram Bheem Adivasi Bhavan in Hyderabad on Sunday. SIDDHANT THAKUR

Indigenous rhythms: **Kommu Koya tribal** dancers perform during the **World's Indigenous Peoples Day** celebration at Kumram Bheem Adivasi Bhavan in Hyderabad on Sunday.

Kommu Koya Tribal Community

- The **Kommu Koya** are associated with the broader **Koya tribal community**, one of the important Adivasi/tribal groups of the Godavari region. Koya communities are found mainly in parts of **Telangana, Andhra Pradesh, Chhattisgarh and adjoining areas**, particularly in forested and riverine belts.
- Their social and cultural life has traditionally been closely connected with **forests, agriculture, local deities, community festivals, oral traditions, music and dance**.
- The term "**Kommu Koya**" is generally used for a cultural subgroup/tradition within the Koya community, especially associated with distinctive performance practices and community identity.
- Koya cultural traditions are particularly visible around major tribal gatherings such as the **Sammakka-Saralamma Medaram Jatara** in Telangana, where Koya history, symbols and Adivasi cultural expression are prominently represented.

International Day of the World's Indigenous Peoples

- The **International Day of the World's Indigenous Peoples** is observed every year on **9 August**.
- The United Nations General Assembly formally established this observance through **Resolution 49/214 on 23 December 1994**. The date **9 August** was chosen because it marks the **first meeting of the UN Working Group on Indigenous Populations, held in Geneva in 1982**.

Why is this day important?

Its major objectives are to promote:

- protection of **Indigenous peoples' rights**;
- preservation of **languages, traditions and cultural heritage**;
- recognition of **traditional knowledge systems**;
- protection of **land and natural resources**;
- participation of Indigenous communities in decisions affecting them;
- improvement in **education, health and livelihood opportunities**.

The United Nations also uses this observance to spread awareness about the need for special measures to preserve the distinctive cultures and ways of life of Indigenous Peoples.

PCS

Podium finish

India's women boxers were the highlight of the Glasgow Commonwealth Games

In the truncated Commonwealth Games in Glasgow, India performed well, exceeding expectations and retaining fourth place behind developed nations such as Australia, England, and Canada, despite a sharp drop in medals from 61 to 39, including 13 gold, 17 silver, and nine bronze. The gold rush on the penultimate day, powered by the spectacular performance of the boxers who won seven gold and three silver medals, improved India's position. While some weight classes had weaker draws, several categories posed strong challenges. Propelled by determination and hard work, five women boxers — Sakshi Chaudhary, Preeti Pawar, Jaismine Lamboria, Priya Ghanghas, and Arundhati Choudhary — and two men, Sachin Siwach and Ankush Panghal, ensured India's best-ever showing of 10 medals, three more than that in the last edition. The women boxers' fearless approach established them as a force to reckon with. India won 16 medals in athletics and para-athletics, with notable contributions from para-athletes Dilip Gavit, Soman Rana, and Sharmila Dhankar. In world-class fields, the country's athletes won 10 medals compared to eight in Birmingham 2022. Neeraj Chopra recovered from injury to take a creditable silver and lead the country to twin-medal glory in javelin along with Yashvir Singh and underlined India's rising status as a javelin powerhouse. Other moments to cherish included triple jumpers Praveen Chithravel and Selva Prabhu's twin podium finishes, Gulveer Singh becoming the first Indian to medal in 5000m and 10000m, Murali Sreeshankar winning his second straight long jump silver, Tejaswin Shankar claiming the country's first-ever decathlon medal, and Sarvesh Kushare pocketing a high jump silver.

Asmita Dey and Harsh Singh sprang a surprise by winning the country's first gold medals in judo, while Mirabai Chanu lived up to her billing to clinch her third successive gold medal. She led Indian lifters to a significant haul of eight medals. The country's strong show, against an expectation of around 30 medals, helped the contingent leave Glasgow on a high as Ahmedabad prepares to host a bigger Games offering more medals in 2030. Indian athletes' praiseworthy performance in Glasgow has raised hopes for the Aichi-Nagoya Asian Games next month, where a bigger haul is expected from a wider range of disciplines. While India is capable of securing impressive medal collections at the Commonwealth and Asian Games, it needs to raise its level manifold to be counted among the best globally. Aspiring to host the 2036 Olympics, it must identify priority sports and invest in them to ensure a higher finish, even while waging a perennial war against doping.

10A8. Podium Finish

पोडियम •निश

In the truncated Commonwealth Games in Glasgow, India performed well, exceeding expectations and retaining fourth place behind developed nations such as **Australia, England, and Canada**, despite a sharp drop in medals from 61 to 39, including 13 gold, 17 silver, and nine bronze.

ग्लासगो में आयोजित संक्षिप्त राष्ट्रमंडल खेलों में भारत ने अपेक्षाओं से बेहतर प्रदर्शन किया और ऑस्ट्रेलिया, इंग्लैंड तथा कनाडा जैसे विकसित देशों के बाद चौथा स्थान बरकरार रखा, हालांकि उसके पदकों की संख्या 61 से घटकर 39 हो गई, जिसमें 13 स्वर्ण, 17 रजत और नौ कांस्य पदक शामिल थे।

The gold rush on the penultimate day, powered by the spectacular performance of the boxers who won seven gold and three silver medals, improved India's position.

अंतिम से एक दिन पहले हुई स्वर्णिम सफलता, जिसे मुक्केबाजों के शानदार प्रदर्शन ने गति प्रदान की और जिन्होंने सात स्वर्ण तथा तीन रजत पदक जीते, ने भारत की स्थिति में सुधार किया।

Propelled by determination and hard work, five women boxers — Sakshi Chaudhary, Preeti Pawar, Jaismine Lamboria, Priya Ghanghas, and Arundhati Choudhary — and two men, Sachin Siwach and Ankush Panghal, ensured India's best-ever showing of 10 medals, three more than that in the last edition.

दृढ़ संकल्प और कड़ी मेहनत से प्रेरित पाँच महिला मुक्केबाजों — साक्षी चौधरी, प्रीति पवार, जैस्मिन लाम्बोरिया, प्रिया घंघास और अरुंधति चौधरी — तथा दो पुरुष मुक्केबाजों, सचिन सिवाच और अंकुश पंगवाल, ने भारत के अब तक के सर्वश्रेष्ठ 10 पदकों के प्रदर्शन को सुनिश्चित किया, जो पिछले संस्करण की तुलना में तीन अधिक थे।

Other moments to cherish included triple jumpers Praveen Chithravel and Selva Prabhu's twin podium finishes, Gulveer Singh becoming the first Indian to medal in 5000m and 10000m, Murali Sreeshankar winning his second straight long jump silver, Tejaswin Shankar claiming the country's first-ever decathlon medal, and Sarvesh Kushare pocketing a high jump silver.

अन्य यादगार क्षणों में ट्रिपल जंप के खिलाड़ियों प्रवीण चित्रवेल और सेल्वा प्रभु का दोहरा पोडियम •निश, गुलवीर सिंह का 5000 मीटर और 10000 मीटर में पदक जीतने वाले पहले भारतीय बनना, मुरली श्रीशंकर का लगातार दूसरा लंबी कूद रजत

पदक जीतना, तेजस्विन शंकर का देश का पहला डेकाथलॉन पदक हासिल करना और सर्वेश कुशारे का ऊँची कूद में रजत पदक जीतना शामिल रहा।

- Asmita Dey and Harsh Singh sprang a surprise by winning the country's first gold medals in judo, while Mirabai Chanu lived up to her billing to clinch her third successive gold medal. अस्मिता डे और हर्ष सिंह ने जुडो में देश के पहले स्वर्ण पदक जीतकर अप्रत्याशित सफलता हासिल की, जबकि मीराबाई चानू ने अपनी प्रतिष्ठा के अनुरूप प्रदर्शन करते हुए लगातार अपना तीसरा स्वर्ण पदक जीता।
- She led Indian lifters to a significant haul of eight medals. उन्होंने भारतीय भारोत्तोलकों को आठ पदकों की महत्वपूर्ण सफलता दिलाई।



- The country's strong show, against an expectation of around **30 medals**, helped the contingent leave Glasgow on a high as Ahmedabad prepares to host a bigger Games offering more medals in **2030**.
 लगभग **30 पदकों की अपेक्षा** के विपरीत देश के मजबूत प्रदर्शन ने भारतीय दल को ग्लासगो से उत्साहपूर्ण उपलब्धि के साथ लौटने में मदद की, जबकि अहमदाबाद **2030** में अधिक पदकों वाले बड़े खेलों की मेजबानी की तैयारी कर रहा है।
- Indian athletes' **praiseworthy performance** in Glasgow has raised hopes for the **Aichi-Nagoya Asian Games** next month, where a bigger haul is expected from a wider range of disciplines.
 ग्लासगो में भारतीय एथलीटों के **प्रशंसनीय प्रदर्शन** ने अगले महीने होने वाले **आइची-नागोया एशियाई खेलों** के लिए उम्मीदें बढ़ा दी हैं, जहाँ विभिन्न खेल विधाओं में अधिक पदक मिलने की उम्मीद है।
- While India is capable of securing impressive medal collections at the **Commonwealth and Asian Games**, it needs to raise its level manifold to be counted among the best globally.
 यद्यपि भारत **राष्ट्रमंडल और एशियाई खेलों** में प्रभावशाली पदक हासिल करने में सक्षम है, फिर भी उसे विश्व स्तर पर सर्वश्रेष्ठ देशों में शामिल होने के लिए अपने प्रदर्शन के स्तर को कई गुना बढ़ाने की आवश्यकता है।
- Aspiring to host the **2036 Olympics**, it must identify priority sports and invest in them to ensure a higher finish, even while waging a perennial war against **doping**.
2036 ओलंपिक की मेजबानी की आकांक्षा रखने वाले भारत को प्राथमिकता वाले खेलों की पहचान करनी होगी और उनमें निवेश करना होगा, ताकि बेहतर स्थान सुनिश्चित किया जा सके, साथ ही **डोपिंग** के विरुद्ध निरंतर संघर्ष भी जारी रखना होगा।

Decathlon

A **decathlon** is one of the toughest athletics competitions because **one athlete has to compete in 10 different track-and-field events**, normally spread over two days.

The ten events are:

Day 1: 100 m, Long Jump, Shot Put, High Jump, 400 m

Day 2: 110 m Hurdles, Discus Throw, Pole Vault, Javelin Throw, 1500 m

The athlete earns **points according to performance in each event**. The points from all 10 events are added together, and the athlete with the highest total wins.

So, unlike a 100-metre race, where only speed matters, a decathlete needs a combination of **speed, strength, jumping ability, throwing ability, endurance and technique**.

Questions and Answers to the previous day's daily quiz: 1. Why was August 7 chosen as the National Handloom Day? **Ans: To commemorate the 'Swadeshi Movement'**

2. After whom is the country's highest recognition for handloom weavers who have demonstrated extraordinary craftsmanship and dedication to the preservation and promotion of India's weaving traditions named? **Ans: Sant Kabir, who was a weaver**

3. Which State is synonymous with the Wangkhei Phee and Shapee Lanphee weaves? **Ans: Manipur**

4. Name the master weaver of the Gods in Hindu mythology from whom the silk weavers of Kanchipuram consider their descent. **Ans: Sage Markanda**

5. What is special about Eri silk, locally called Ryndia, from Meghalaya? **Ans: It is 'Ahimsa' or 'Peace' silk where the yarn is spun after the moth exits the cocoon naturally**

6. Which popular weave from Central India was patronised by Queen Ahilyabai Holkar? **Ans: Maheshwari**

7. Where is Calico Museum of Textiles? **Ans: Ahmedabad**

10A8. Quiz

1. Why was August 7 chosen as National Handloom Day?

- National Handloom Day is observed every year on **7 August** to honour India's handloom-weaving community and highlight the sector's



contribution to the country's cultural and socio-economic development.

- The date commemorates the **Swadeshi Movement**, formally proclaimed at a massive meeting in **Calcutta Town Hall on 7 August 1905**, against the British decision to partition Bengal.
- The movement promoted the **boycott of foreign goods** and revival of indigenous products and production processes, making handloom an important expression of economic nationalism.
- The Government of India designated **7 August as National Handloom Day in 2015**, and the first celebration was held in **Chennai on 7 August 2015**.

2. After whom is the country's highest recognition for distinguished handloom weavers named?

- The prestigious **Sant Kabir Handloom Award** is named after **Sant Kabir**, the celebrated medieval saint-poet who is traditionally associated with the profession of weaving.
- The award recognises outstanding handloom weavers who demonstrate exceptional craftsmanship and contribute to keeping India's traditional handloom heritage alive.
- The award particularly acknowledges the transmission of **traditional skills and designs across generations**, connecting the past, present and future of Indian weaving.
- It has been conferred from **2009 onwards** on distinguished handloom weavers.
- Under the current award system, the **Sant Kabir Handloom Award and National Handloom Awards** operate under the National Handloom Development Programme.

3. Which State is synonymous with Wangkhei Phee and Shaphee Lanphee?

- **Wangkhei Phee and Shaphee Lanphee** are distinctive traditional textile/handicraft traditions associated with **Manipur** in Northeast India.
- Their geographical association with Manipur is formally recognised under India's **Geographical Indications (GI) system**.
- Both applications were filed by the **Department of Commerce & Industries, Government of Manipur**, strengthening their official identification with the State.

4. Who is regarded as the master weaver of the Gods from whom Kanchipuram silk weavers trace their descent?

- According to the **traditional mythology associated with Kanjeevaram/Kanchipuram silk**, its weavers trace their descent to **Sage Markanda**, regarded as a weaver of clothes for the Gods.
- The Development Commissioner (Handlooms), Ministry of Textiles, records this tradition while discussing the heritage of **Kanjeevaram Silk of Tamil Nadu**.
- Historically, the craft is associated with weaving communities such as the **Devangas and Saligars**, who settled in Kanchipuram and developed its celebrated silk-weaving tradition.
- Kanjeevaram silk is renowned for elaborate craftsmanship, rich colours and distinctive weaving.

5. What is special about Meghalaya's Eri silk, locally called Ryndia?

- **Ryndia**, or Eri silk, is an important traditional textile associated with **Meghalaya**, particularly its indigenous weaving traditions.
- Unlike conventional silk production, the **Eri moth is allowed to emerge from the cocoon before the cocoon is processed**, avoiding killing the developing moth.
- Consequently, it is popularly described as **"Ahimsa Silk" or "Peace Silk."**
- Because the moth's emergence breaks the continuous filament, Eri fibres are generally **spun rather than reeled**.
- **Ryndia is soft and woolly and has useful thermal properties**—it can provide warmth in winter while remaining comfortable in warmer conditions.



6. Which Central Indian weave was patronised by Queen Ahilyabai Holkar?

- **Maheshwari sarees and fabrics** originated in **Maheshwar**, an historic town situated on the banks of the **Narmada River in Madhya Pradesh**.
- The weaving tradition received significant royal patronage during the **18th century under Rani Ahilyabai Holkar**, ruler of the **Holkar State**.
- Her patronage helped establish and promote Maheshwar as an important centre of textile craftsmanship.
- Maheshwari textiles are particularly known for combinations of **cotton and silk yarns**, distinctive borders, intricate patterns and lightweight texture.
- A notable characteristic is the **reversible border**, traditionally known as *bugdi*.
- Thus, for examinations, remember the direct association: **Ahilyabai Holkar → Maheshwar → Maheshwari Saree → Madhya Pradesh**.

Ahilyabai Holkar, popularly known as **Lokmata Ahilyabai**, was one of the most celebrated women rulers of 18th-century India. She ruled the **Holkar dominions of Malwa from 1767 to 1795** and became renowned for **good governance, public welfare, religious patronage and construction of temples, ghats, wells and dharamshalas** across India.

1. Early Life

According to traditional accounts, **Malhar Rao Holkar**, an important Maratha commander, noticed the young Ahilyabai and arranged her marriage to his son **Khanderao Holkar** in 1733.

Her life changed dramatically when Khanderao was killed in **1754 during the siege of Kumbher**.

Ahilyabai reportedly wished to commit **sati**, but her father-in-law Malhar Rao Holkar persuaded her not to do so.

2. How did she become ruler?

After a series of family tragedies—including the deaths of her husband, father-in-law and subsequently her son **Male Rao Holkar**—Ahilyabai assumed control of the Holkar state in 1767.

This was remarkable because political authority in 18th-century India was overwhelmingly dominated by men.

She made **Maheshwar**, situated on the banks of the **Narmada River**, an important centre of her administration.

7. Where is the Calico Museum of Textiles?

- The renowned **Calico Museum of Textiles is located at Shahibaug in Ahmedabad, Gujarat**, within the premises of the Sarabhai Foundation.

- The museum was founded in 1949 by Gautam Sarabhai, with assistance from his sister Gira Sarabhai.
- Its establishment was inspired by eminent art historian and philosopher Ananda Coomaraswamy, who suggested creating a textile museum and research institution in Ahmedabad.
- India's first Prime Minister, Jawaharlal Nehru, inaugurated the museum.
- Originally located within the Calico Mills complex, its collections were subsequently shifted to the Sarabhai Foundation's Shahibaug premises.
- Its important holdings include court textiles, trade textiles, shawls, sarees, costumes, embroideries, carpets and tie-and-dye fabrics.

Ashmita stuns Han to bag her maiden BWF Tour title

Coach Park, who has now seen two of his wards win Super 300 tournaments in successive weeks, believes the Assam girl always had the tools to succeed, wants her to be more consistent

BADMINTON
Press Trust of India
ASAN (KOREA)

Ashmita Chaliha produced a gritty show to secure her maiden BWF World tour title with a fighting win over fourth seed Han Qian Xi of China in the women's singles final of the Korea Masters Super 300 badminton tournament on Sunday.

Slow start

The 26-year-old from Assam, who had suffered a career-threatening knee injury two years back in Korea, overcame a slow start and a testing decider to complete a memorable victory, recovering from the loss of the opening game to stun world No. 35 Han 14-21, 21-14, 21-14 in the summit clash that lasted 53 minutes.

"I feel really great and unbelievable. But then I am trying to digest it. Now, I am hungry for more," said Ashmita, who trains under Park Tae-Sang at the National Centre of Excellence in Guwahati.

"In the first game, it was a little bit tricky because of the drift conditions, so I was not able to manage it... But in the second, the other side was more comfortable and there was less drift, so I was able to control it," she said. "And in the third, after 11 points, I changed again, so I was on the good side. I'm glad that I could pull it off."

Ashmita's win marks back-to-back BWF World Tour finals for Indians, with Tanvi Sharma having won the Taipei Open last Sunday.

Park, who has now seen two of his wards win Super 300 titles in successive

weeks, believes Ashmita always had the tools to succeed but needed to become more consistent in her approach.

"Before the injury, Ashmita was already a good player and a very good talent. She has a good smash and nice movement, but unfortunately, at the wrong time, she had to take a break because of the injury," the South Korean told PTI.

"When she joined me, I thought, 'Oh, she is a good player.' But tactically and strategically, and also a little bit mentally, she had some problems."

The World No. 50 Ashmita had to undergo surgery and an extensive rehabilitation period after suffering a medial meniscus tear in her right knee during the Korea Open in 2024. She returned in February next year and played 14 events.

This year she competed in a couple of events but then spent three months building strength. She enjoyed a strong comeback on the BWF Tour with back-to-back quarterfinals at China Masters and Malaysia Masters and then a semifinal appearance at the Macau Open.

Ahead of Sunday's final, Park and Ashmita analysed Han's game on video, with the coach identifying unforced errors as the biggest obstacle.

"Yesterday, we also did a video analysis of her Chinese opponent. I told Ashmita, 'Your biggest problem is your own mistakes. You are making simple mistakes.'"

"But if you can reduce those simple mistakes, 100%, I promise you, you can win the title today," Park said.



On a high: Ashmita celebrates with Park after her memorable triumph. BWF

10A8. Ashmita stuns Han to bag her maiden BWF Tour title

अशमिता ने हान को चौंकाकर अपना पहला BWF टूर खिताब जीता

- Coach Park, who has now seen two of his wards win Super 300 tournaments in successive weeks, believes the Assam girl always had the tools to succeed, wants her to be more consistent.
- कोच पार्क, जिन्होंने अब लगातार दो सप्ताह में अपने दो शिष्यों को सुपर 300 टूर्नामेंट जीतते देखा है, का मानना है कि असम की इस खिलाड़ी में सफल होने की क्षमता हमेशा से थी और वे चाहते हैं कि वह और अधिक निरंतरता बनाए रखे।
- Ashmita Chaliha produced a gritty show to secure her maiden BWF World tour title with a fighting win over fourth seed Han Qian Xi of China in the women's singles final of the Korea Masters Super 300 badminton tournament on Sunday.
- अशमिता चालिहा ने जुझारू प्रदर्शन करते हुए रविवार को कोरिया मास्टर्स सुपर 300 बैडमिंटन टूर्नामेंट के महिला एकल फाइनल में चीन की चौथी वरीयता प्राप्त हान कियान शी पर संघर्षपूर्ण जीत के साथ अपना पहला BWF वर्ल्ड टूर खिताब हासिल किया।

Slow start

धीमी शुरुआत

- The 26-year-old from Assam, who had suffered a career-threatening knee injury two years back in Korea, overcame a slow start and a testing decider to complete a memorable victory, recovering from the loss of the opening game to stun world No. 35 Han 14-21, 21-14, 21-14 in the summit clash that lasted 53 minutes.

- असम की 26 वर्षीय खिलाड़ी, जिन्हें दो वर्ष पहले कोरिया में करियर के लिए खतरा पैदा करने वाली घुटने की चोट लगी थी, ने धीमी शुरुआत और चुनौतीपूर्ण निर्णायक गेम से उबरते हुए यादगार जीत दर्ज की तथा शुरुआती गेम हारने के बाद वापसी करते हुए विश्व नंबर 35 हान को 14-21, 21-14, 21-14 से उस खिताबी मुकाबले में चौका दिया, जो 53 मिनट तक चला।
- "I feel really great and unbelievable.
- "मुझे वास्तव में बहुत अच्छा और अविश्वसनीय महसूस हो रहा है।
- But then I am trying to digest it.
- लेकिन अब मैं इसे आत्मसात करने की कोशिश कर रही हूँ।
- Now, I am **hungry for more**," said Ashmita, who trains under **Park Tae-Sang at the National Centre of Excellence in Guwahati**.
- अब, मैं और अधिक हासिल करने के लिए उत्सुक हूँ," अश्मिता ने कहा, जो गुवाहाटी स्थित नेशनल सेंटर ऑफ एक्सीलेंस में पार्क ताए-सांग के मार्गदर्शन में प्रशिक्षण लेती हैं।
- "In the first game, it was a little bit tricky because of the **drift conditions**, so I was not able to manage it...
- "पहले गेम में ड्रिफ्ट की परिस्थितियों के कारण यह थोड़ा मुश्किल था, इसलिए मैं इसे संभाल नहीं पाई...
- But in the second, the other side was more comfortable and there was less drift, so I was able to control it," she said.
- लेकिन दूसरे गेम में दूसरी तरफ खेलना अधिक सहज था और ड्रिफ्ट कम थी, इसलिए मैं इसे नियंत्रित कर पाई," उन्होंने कहा।
- "And in the third, after **11 points**, I changed again, so I was on the good side.
- "और तीसरे गेम में, 11 अंकों के बाद, मैंने फिर से बदलाव किया, इसलिए मैं अच्छी तरफ थी।
- I'm glad that I could pull it off."
- मुझे खुशी है कि मैं इसे कर सकी।"
- Ashmita's win marks **back-to-back BWF World Tour finals for Indians**, with Tanvi Sharma having won the **Taipei Open** last Sunday.
- अश्मिता की जीत ने भारतीयों के लिए लगातार दो BWF वर्ल्ड टूर फाइनल दर्ज किए हैं, जिसमें तन्वी शर्मा ने पिछले रविवार ताइपे ओपन जीता था।
- Park, who has now seen two of his wards win **Super 300 titles in successive weeks**, believes Ashmita always had the tools to succeed but needed to become more consistent in her approach.
- पार्क, जिन्होंने अब लगातार दो सप्ताह में अपने दो शिष्यों को सुपर 300 खिताब जीतते देखा है, का मानना है कि अश्मिता में सफल होने की क्षमता हमेशा से थी, लेकिन उन्हें अपने दृष्टिकोण में अधिक निरंतर होने की आवश्यकता थी।
- "Before the injury, Ashmita was already a good player and a very good talent.
- "चोट से पहले, अश्मिता पहले से ही एक अच्छी खिलाड़ी और बहुत अच्छी प्रतिभा थीं।
- She has a **good smash and nice movement**, but unfortunately, at the wrong time, she had to take a break because of the injury," the South Korean told PTI.
- उनके पास अच्छा स्मैश और शानदार मूवमेंट है, लेकिन दुर्भाग्य से, गलत समय पर चोट के कारण उन्हें ब्रेक लेना पड़ा," दक्षिण कोरियाई कोच ने PTI को बताया।
- "When she joined me, I thought, 'Oh, she is a good player.'
"जब वह मेरे साथ जुड़ीं, तो मैंने सोचा, 'ओह, वह एक अच्छी खिलाड़ी हैं।'"
- But **tactically and strategically**, and also a little bit **mentally**, she had some problems."
लेकिन रणनीतिक और सामरिक रूप से, और कुछ हद तक मानसिक रूप से भी, उन्हें कुछ समस्याएं थीं।"
- The **World No. 50 Ashmita** had to undergo surgery and an extensive rehabilitation period after suffering a **medial meniscus tear in her right knee** during the **Korea Open in 2024**.
- विश्व नंबर 50 अश्मिता को 2024 के कोरिया ओपन के दौरान अपने दाहिने घुटने में मेडियल मेनिस्कस टियर होने के बाद सर्जरी और लंबे पुनर्वास दौर से गुजरना पड़ा।
- She returned in **February next year** and played **14 events**.

उन्होंने अगले वर्ष फरवरी में वापसी की और 14 प्रतियोगिताओं में हिस्सा लिया।

- This year she competed in a couple of events but then spent **three months building strength**.
 इस वर्ष उन्होंने कुछ प्रतियोगिताओं में हिस्सा लिया, लेकिन उसके बाद तीन महीने अपनी ताकत बढ़ाने में बिताए।
- She enjoyed a strong comeback on the **BWF Tour** with back-to-back quarterfinals at **China Masters and Malaysia Masters** and then a semifinal appearance at the **Macau Open**.
 उन्होंने BWF टूर पर शानदार वापसी करते हुए **चाइना मास्टर्स और मलेशिया मास्टर्स** में लगातार क्वार्टरफाइनल में जगह बनाई और फिर **मकाऊ ओपन** में सेमीफाइनल तक पहुंची।
- Ahead of Sunday's final, **Park and Ashmita analysed Han's game on video**, with the coach identifying **unforced errors** as the biggest obstacle.
 रविवार के फाइनल से पहले, **पार्क और अशमिता ने वीडियो पर हान के खेल का विश्लेषण किया**, जिसमें कोच ने **अनफोर्स्ड एरर्स** को सबसे बड़ी बाधा के रूप में पहचाना।
- "Yesterday, we also did a **video analysis** of her Chinese opponent.
 "कल, हमने उनकी चीनी प्रतिद्वंद्वी का **वीडियो विश्लेषण** भी किया।
- I told Ashmita, 'Your biggest problem is **your own mistakes**.
 मैंने अशमिता से कहा, 'तुम्हारी सबसे बड़ी समस्या **तुम्हारी अपनी गलतियां** हैं।
- You are making **simple mistakes**.
 तुम **साधारण गलतियां** कर रही हो।
- "But if you can reduce those simple mistakes, **100%, I promise you, you can win the title today**," Park said.
 "लेकिन अगर तुम उन साधारण गलतियों को कम कर सकती हो, तो **100%, मैं तुमसे वादा करता हूं, तुम आज खिताब जीत सकती हो**," पार्क ने कहा।

GS Paper 1: Society		10 August 2026
TOPICS COVERED		
10A8	Ladakh preparing the ground for Independent India's first caste census स्वतंत्र भारत की पहली जाति जनगणना के लिए जमीन तैयार कर रहा लद्दाख	

Ladakh preparing the ground for Independent India's first caste census

GS I: Society
Vijaita Singh
NEW DELHI

Ladakh, one of the two youngest Union Territories in the country, is set to lead the way in demonstrating how caste will be enumerated for the first time in Independent India. The second phase of the Census — the Population Enumeration (PE) — which starts on August 17 in Ladakh and other snow-bound areas, is likely to ask questions on 40 parameters and provide an open-ended column for caste enumeration.

While the ongoing exercise is India's first digital Census, officials are making an exception for Ladakh by printing a sufficient number of paper schedules. The move takes into account the presence of large defence establishments in the region bordering China and Pakistan, whose locations cannot be geo-tagged because of security concerns. The digital Census mandatorily requires enumerators to geo-locate the structures



Enumerators interact with residents during an awareness campaign in Birbhum, West Bengal, as part of the Census 2027. PTI

on a mobile App. Respondents who self-enumerate on Census portal are also required to do the same.

As reported by *The Hindu* on July 6, the rehearsal, or the "pre-test", for the PE phase was conducted from July 1 to 20 in 16 States and Union Territories, where respondents, other than those from Scheduled Castes and Scheduled Tribes, recorded their castes in an "open column", or the enumerator noted a resident's caste as declared by them. The methodology is likely to be retained in the final form.

Ladakh's case is peculiar as it was not among these 16 States and Union Territories. Though the questionnaire or the schedule is yet to be notified by the Registrar General and Census Commissioner of India (RG&CCI), preparations have begun in Ladakh and snow-bound areas of Jammu and Kashmir, Himachal Pradesh, and Uttarakhand to conduct PE from August 17 to September 30, ahead of the rest of the country, where the exercise will be conducted in February 2027. The Directorate of

Census Operations, Jammu & Kashmir and Ladakh, has concluded a three-day Master Trainers' Training Programme for Census 2027 population enumeration, marking the next phase of field preparedness.

According to Chief Principal Census Officer, Amit Sharma, the three-day programme provided comprehensive training on all aspects of Census 2027 population enumeration, covering census concepts, and caste and demographic data collection.

A senior government official said that, in the absence of the pre-test in Ladakh, the master-trainers are being trained based on tentative questions, around 40, which are likely to be notified this week. "The broad contours have been conveyed to us. This time the questions are descriptive and will also include caste. The caste column will be open-ended, and enumerators will record the name of the caste as provided by the respondent," said the official.

10A8.

preparing the ground for Independent India's first caste census

Ladakh

स्वतंत्र भारत की पहली जाति जनगणना के लिए जमीन तैयार कर रहा लद्दाख

- Ladakh, one of the two youngest Union Territories in the country, is set to lead the way in demonstrating how caste will be enumerated for the first time in Independent India. लद्दाख, देश के दो सबसे नए केंद्र शासित प्रदेशों में से एक, यह प्रदर्शित करने में अग्रणी बनने जा रहा है कि स्वतंत्र भारत में पहली बार जाति की गणना किस प्रकार की जाएगी।
- The second phase of the Census — the **Population Enumeration (PE)** — which starts on **August 17 in Ladakh and other snow-bound areas, is likely to ask questions on 40 parameters and provide an open-ended column for caste enumeration.** जनगणना का दूसरा चरण — **जनसंख्या गणना (PE)** — जो लद्दाख और अन्य हिमाच्छादित क्षेत्रों में **17 अगस्त** से शुरू होगा, में 40 मानकों पर प्रश्न पूछे जाने और **जाति गणना के लिए एक खुला कॉलम** प्रदान किए जाने की संभावना है।
- While the ongoing exercise is India's first digital Census, officials are making an exception for Ladakh by printing a sufficient number of paper schedules. जबकि वर्तमान अभ्यास भारत की पहली डिजिटल जनगणना है, अधिकारी लद्दाख के लिए पर्याप्त संख्या में **कागजी अनुसूचियाँ** मुद्रित करके अपवाद कर रहे हैं।
- The move takes into account the presence of large defence establishments in the region bordering China and Pakistan, whose locations cannot be geo-tagged because of security concerns. इस कदम में चीन और पाकिस्तान की सीमा से लगे क्षेत्र में बड़े **रक्षा प्रतिष्ठानों** की मौजूदगी को ध्यान में रखा गया है, जिनके स्थानों को सुरक्षा संबंधी चिंताओं के कारण **जियो-टैग** नहीं किया जा सकता।

- The digital Census mandatorily requires enumerators to geo-locate the structures on a mobile App.

डिजिटल जनगणना में गणनाकर्ताओं के लिए मोबाइल ऐप पर संरचनाओं का भौगोलिक स्थान निर्धारित करना अनिवार्य है।

- Respondents who self-enumerate on Census portal are also required to do the same. जनगणना पोर्टल पर स्वयं गणना करने वाले उत्तरदाताओं के लिए भी ऐसा करना आवश्यक है।
- As reported by The Hindu on July 6, the rehearsal, or the “pre-test”, for the PE phase was conducted from July 1 to 20 in 16 States and Union Territories, where respondents, other than those from Scheduled Castes and Scheduled Tribes, recorded their castes in an “open column”, or the enumerator noted a resident’s caste as declared by them. जैसा कि द हिंदू ने 6 जुलाई को रिपोर्ट किया था, PE चरण के लिए प्री-टेस्ट 1 से 20 जुलाई तक 16 राज्यों और केंद्र शासित प्रदेशों में आयोजित किया गया था, जहाँ अनुसूचित जाति और अनुसूचित जनजाति के अलावा अन्य उत्तरदाताओं ने अपनी जाति “खुले कॉलम” में दर्ज की, अथवा गणनाकर्ता ने निवासी द्वारा बताई गई जाति को दर्ज किया।

- The methodology is likely to be retained in the final form. इस पद्धति को अंतिम रूप में बनाए रखने की संभावना है।
- Ladakh’s case is peculiar as it was not among these 16 States and Union Territories. लद्दाख का मामला विशिष्ट है, क्योंकि वह इन 16 राज्यों और केंद्र शासित प्रदेशों में शामिल नहीं था।
- Though the questionnaire or the schedule is yet to be notified by the Registrar General and Census Commissioner of India (RG&CCI), preparations have begun in Ladakh and snow-bound areas of Jammu and Kashmir, Himachal Pradesh, and Uttarakhand to conduct PE from August 17 to September 30, ahead of the rest of the country, where the exercise will be conducted in February 2027.

यद्यपि भारत के रजिस्ट्रार जनरल और जनगणना आयुक्त (RG&CCI) द्वारा प्रश्नावली या अनुसूची को अभी अधिसूचित किया जाना बाकी है, लेकिन लद्दाख तथा जम्मू और कश्मीर, हिमाचल प्रदेश और उत्तराखंड के हिमाच्छादित क्षेत्रों में 17 अगस्त से 30 सितंबर तक PE आयोजित करने की तैयारियाँ शुरू हो गई हैं, जो देश के बाकी हिस्सों से पहले होगा, जहाँ यह अभ्यास फरवरी 2027 में आयोजित किया जाएगा।

- The Directorate of Census Operations, Jammu & Kashmir and Ladakh, has concluded a three-day Master Trainers’ Training Programme for Census 2027 population enumeration, marking the next phase of field preparedness.

जनगणना संचालन निदेशालय, जम्मू-कश्मीर और लद्दाख ने जनगणना 2027 की जनसंख्या गणना के लिए तीन दिवसीय मास्टर ट्रेनर्स प्रशिक्षण कार्यक्रम पूरा कर लिया है, जो क्षेत्रीय तैयारियों के अगले चरण को दर्शाता है।

- According to Chief Principal Census Officer, Amit Sharma, the three-day programme provided comprehensive training on all aspects of Census 2027 population enumeration, covering census concepts, and caste and demographic data collection.

मुख्य प्रधान जनगणना अधिकारी अमित शर्मा के अनुसार, तीन दिवसीय कार्यक्रम में जनगणना 2027 की जनसंख्या गणना के सभी पहलुओं पर व्यापक प्रशिक्षण प्रदान किया गया, जिसमें जनगणना की अवधारणाएँ तथा जाति और जनसांख्यिकीय डेटा का संग्रह शामिल था।

- A senior government official said that, in the absence of the pre-test in Ladakh, the master-trainers are being trained based on tentative questions, around 40, which are likely to be notified this week.

एक वरिष्ठ सरकारी अधिकारी ने कहा कि लद्दाख में प्री-टेस्ट के अभाव में मास्टर-ट्रेनरों को लगभग 40 संभावित प्रश्नों के आधार पर प्रशिक्षित किया जा रहा है, जिन्हें इस सप्ताह अधिसूचित किए जाने की संभावना है।

- “The broad contours have been conveyed to us. This time the questions are descriptive and will also include caste. The caste column will be open-ended, and enumerators will record the name of the caste as provided by the respondent,” said the official. “व्यापक रूपरेखा हमें बता दी गई है। इस बार प्रश्न वर्णनात्मक हैं और इनमें जाति को भी शामिल किया

जाएगा। जाति का कॉलम खुला रहेगा, और गणनाकर्ता उत्तरदाता द्वारा बताई गई जाति का नाम दर्ज करेंगे," अधिकारी ने कहा।

GS Paper 1: Geography		10 August 2026
TOPICS COVERED		
10A8	Chinese authorities issue red alert as Typhoon Dolphin hits eastern coast टाइफून डॉल्फिन के पूर्वी तट से टकराने पर चीनी अधिकारियों ने रेड अलर्ट जारी किया	



People dressed in fancy costumes take part in a stand-up paddle boarding festival on the Yauza River in Moscow, Russia on Sunday.

Rank	River	Approx. Length	Major Countries	Drains Into
1	Volga	3,530 km	Russia	Caspian Sea
2	Danube	2,850 km	Germany, Austria, Slovakia, Hungary, Serbia, Romania etc.	Black Sea
3	Ural	2,428 km	Russia, Kazakhstan	Caspian Sea
4	Dnieper	~2,200 km	Russia, Belarus, Ukraine	Black Sea
5	Don	~1,870 km	Russia	Sea of Azov

Chinese authorities issue red alert as Typhoon Dolphin hits eastern coast

As GS: Geography
BEIJING

Typhoon Dolphin made landfall in densely populated eastern China on Sunday, authorities said, after the storm triggered more than 1,000 flight cancellations, evacuations and a top-level alert.

The centre of the typhoon moved over the coastline near Yuhuan City in Zhejiang Province at about 09:30 GMT, China's National Meteorological Centre said. Maximum wind speeds near the centre were more than 150 kilometres per hour at the time it made landfall, the NMC said.

Nearly 1,400 flights in and out of Shanghai's two



Rain wrestle: A man tries to hold onto his umbrella amid strong wind and downpour in Huangpu district, Shanghai, on Sunday. AP

main passenger airports were cancelled on Sunday, state broadcaster CCTV reported.

The effects were felt as far away as Hong Kong on China's southern coast, where the weather obser-

vatory posted a record high temperature of 36.9 Celsius, caused by warm air pushed over the city by Typhoon Dolphin.

Typhoon Dolphin brought heavy rain and strong winds to Japan's

Okinawa before reaching China. Seven people in Okinawa suffered minor injuries and 5,290 households were left without electricity, according to the island's government.

In Taiwan, dozens of ferry services were suspended and more than 180 flights were cancelled.

China's NMC issued a red typhoon alert on Sunday, forecasting "extraordinary torrential rain" in some areas of central and eastern Zhejiang.

Typhoon Dolphin's arrival in China comes two weeks after Typhoon Noul lashed southern Guangdong province, declared by authorities at the time as the strongest storm to hit China this year.

10A8. Chinese authorities issue red alert as Typhoon Dolphin hits eastern coast

टाइफून डॉल्फिन के पूर्वी तट से टकराने पर चीनी अधिकारियों ने रेड अलर्ट जारी किया

- **Typhoon Dolphin** made landfall in densely populated eastern China on Sunday, authorities said, after the storm triggered more than **1,000 flight cancellations**, evacuations and a top-level alert.
अधिकारियों ने बताया कि टाइफून डॉल्फिन ने रविवार को घनी आबादी वाले पूर्वी चीन में दस्तक दी, जिसके बाद तूफान के कारण **1,000 से अधिक उड़ानें रद्द**, लोगों को निकाला गया और उच्चतम स्तर का अलर्ट जारी किया गया।
- The centre of the typhoon moved over the coastline near **Yuhuan City in Zhejiang Province** at about 09:30 GMT, China's National Meteorological Centre said.
चीन के राष्ट्रीय मौसम विज्ञान केंद्र ने बताया कि टाइफून का केंद्र लगभग 09:30 GMT पर झेजियांग प्रांत के **युहुआन शहर** के निकट तटरेखा से आगे बढ़ा।
- Maximum wind speeds near the centre were more than **150 kilometres per hour** at the time it made landfall, the NMC said.
NMC ने कहा कि इसके तट से टकराने के समय केंद्र के निकट अधिकतम **हवा की गति 150 किलोमीटर प्रति घंटे से अधिक** थी।
- Nearly **1,400 flights** in and out of Shanghai's two main passenger airports were cancelled on Sunday, state broadcaster CCTV reported.
सरकारी प्रसारक CCTV ने बताया कि रविवार को शंघाई के दो प्रमुख यात्री हवाई अड्डों से आने-जाने वाली लगभग **1,400 उड़ानें रद्द** कर दी गईं।
- The effects were felt as far away as **Hong Kong** on China's southern coast, where the weather observatory posted a record high temperature of 36.9 Celsius, caused by warm air pushed over the city by Typhoon Dolphin.
इसका प्रभाव चीन के दक्षिणी तट पर स्थित **हांगकांग** तक महसूस किया गया, जहाँ मौसम वेधशाला ने 36.9 डिग्री सेल्सियस का रिकॉर्ड उच्च तापमान दर्ज किया। इसका कारण टाइफून डॉल्फिन द्वारा शहर की ओर धकेली गई गर्म हवा थी।
- Typhoon Dolphin brought **heavy rain and strong winds** to Japan's Okinawa before reaching China.
चीन पहुँचने से पहले टाइफून डॉल्फिन ने जापान के **ओकिनावा** में भारी वर्षा और तेज हवाएँ पहुँचाईं।
- Seven people in Okinawa suffered minor injuries and **5,290 households** were left without electricity, according to the island's government.
द्वीप की सरकार के अनुसार, ओकिनावा में सात लोग मामूली रूप से घायल हुए और **5,290 घरों** में बिजली आपूर्ति बाधित हो गई।
- In Taiwan, dozens of ferry services were suspended and more than **180 flights** were cancelled.
ताइवान में दर्जनों फेरी सेवाएँ स्थगित कर दी गईं और **180 से अधिक उड़ानें रद्द** कर दी गईं।

- China's NMC issued a **red typhoon alert** on Sunday, forecasting "extraordinary torrential rain" in some areas of central and eastern Zhejiang.
चीन के NMC ने रविवार को **रेड टाइफून अलर्ट** जारी किया और मध्य तथा पूर्वी झेजियांग के कुछ क्षेत्रों में "असाधारण मूसलाधार वर्षा" का पूर्वानुमान व्यक्त किया।
- Typhoon Dolphin's arrival in China comes two weeks after **Typhoon Noul** lashed southern Guangdong province, declared by authorities at the time as the strongest storm to hit China this year.
चीन में टाइफून डॉल्फिन का आगमन **टाइफून नाउल** के दक्षिणी ग्वांगडोंग प्रांत में तबाही मचाने के दो सप्ताह बाद हुआ है। उस समय अधिकारियों ने इसे इस वर्ष चीन में आने वाला **सबसे शक्तिशाली तूफान** घोषित किया था।
- Tropical cyclone areas**-norther Australia, Caribbean sea area, West/East Africa, Indian subcontinent, South China sea.

Name of the county/continent	Name of the tropical cyclone
China/Japan	Typhoon
Philippines	Baguio
Caribbean	Hurricane
Australia	Willy-willies
India	Toofan/Chakrawats

Conditions for formation of tropical cyclones-

- Takes birth only overwater body.
- Needs a good amount of moisture.
- Needs a temperature of 26.5 degrees centigrade.
- Enough Coriolis force is needed (rotational force of earth)
- Pre-existence of very low-pressure area.
- The vertical wind shear should be low.**

GS Paper II: Polity	10 August 2026
TOPICS COVERED	
10A8	Mayawati opposes 'creamy layer' in quotas for SCs, STs मायावती ने SCs, STs के आरक्षण में 'क्रीमी लेयर' का विरोध किया
10A8	SC Collegium names Chief Justices for four High Courts SC कॉलेजियम ने चार उच्च न्यायालयों के मुख्य न्यायाधीशों के नाम प्रस्तावित किए
10A8	The stakes in India's delimitation debate भारत के परिसीमन विवाद में दाँव पर क्या है

Mayawati opposes 'creamy layer' in quotas for SCs, STs

Mayank Kumar

LUCKNOW

GS II: Polity

Bahujan Samaj Party (BSP) chief Mayawati on Sunday opposed the 'creamy layer' concept in reservations for Scheduled Castes (SCs) and Scheduled Tribes (STs), arguing that affirmative action was linked to social transformation, economic emancipation, and self-respect. She also criticised the Rashtriya Swayamsevak Sangh (RSS) for "politicising" the issue.

"For the SC and ST sections, which have been divided, oppressed and marginalised for centuries, it [reservation] becomes a crucial issue, especially when caste-based hatred, exploitation, torture, injustice and atrocities show no signs of abating," wrote Ms. Mayawati on X.

She said creamy layer for SCs and STs is "against the objectives" laid down by the Constitution.

The BSP president questioned RSS chief Mohan Bhagwat over his recent remarks that reservation had been politicised, creating bitterness in society, and that beneficiaries should voluntarily give up the benefits. She described the RSS's position a reflection



BSP president Mayawati

of a "casteist mindset".

'Casteist mindset'

"While the RSS chief recently reiterated his statement that, 'Reservation has been deliberately politicised, leading to bitterness in society, and that beneficiaries of reservation should voluntarily give up its benefits.' In reality, this is a casteist mindset that may serve narrow political interests, but undermines constitutional objectives," she added in the post.

"Reservation is essentially meant to provide the constitutional and legal right to equality on humanitarian grounds to millions of exploited, oppressed, neglected, and despised people who have been victims of the caste system for centuries."

10A8. Mayawati opposes 'creamy layer' in quotas for SCs, STs

मायावती ने SCs, STs के आरक्षण में 'क्रीमी लेयर' का विरोध किया

Bahujan Samaj Party (BSP) chief Mayawati on Sunday opposed the 'creamy layer' concept in reservations for Scheduled Castes (SCs) and Scheduled Tribes (STs), arguing that affirmative action was linked to social transformation, economic emancipation, and self-respect.

बहुजन समाज पार्टी (BSP) प्रमुख मायावती ने रविवार को अनुसूचित जातियों (SCs) और अनुसूचित जनजातियों (STs) के आरक्षण में 'क्रीमी लेयर' की अवधारणा का विरोध किया और तर्क दिया कि सकारात्मक कार्यवाई सामाजिक परिवर्तन, आर्थिक मुक्ति और आत्म-सम्मान से जुड़ी हुई है।

She also criticised the Rashtriya Swayamsevak Sangh (RSS) for "politicising" the issue.

उन्होंने इस मुद्दे का "राजनीतिकरण" करने के लिए राष्ट्रीय स्वयंसेवक संघ (RSS) की भी आलोचना की।

"For the SC and ST sections, which have been divided, oppressed and marginalised for centuries, it [reservation] becomes a crucial issue, especially when caste-based hatred, exploitation, torture, injustice and atrocities show no signs of abating," wrote Ms. Mayawati on X.

मायावती ने X पर लिखा, "SC और ST समुदायों, जो सदियों से विभाजित, उत्पीड़ित और हाशिए पर रहे हैं, के लिए यह [आरक्षण] एक महत्वपूर्ण मुद्दा बन जाता है, विशेष रूप से तब, जब जाति-आधारित घृणा, शोषण, यातना, अन्याय और अत्याचार कम होने के कोई संकेत नहीं दिखा रहे हैं।"

She said creamy layer for SCs and STs is "against the objectives" laid down by the Constitution. उन्होंने कहा कि SCs और STs के लिए क्रीमी लेयर संविधान द्वारा निर्धारित "उद्देश्यों के विरुद्ध" है।

- The BSP president questioned RSS chief Mohan Bhagwat over his recent remarks that reservation had been politicised, creating bitterness in society, and that beneficiaries should voluntarily give up the benefits.

BSP अध्यक्ष ने RSS प्रमुख मोहन भागवत की हालिया टिप्पणियों पर सवाल उठाया, जिसमें उन्होंने कहा था

कि आरक्षण का राजनीतिकरण किया गया है, जिससे समाज में कटुता पैदा हुई है और लाभार्थियों को स्वेच्छा से इसके लाभ छोड़ देने चाहिए।

- She described the RSS's position a reflection of a "casteist mindset".
उन्होंने RSS के रुख को "जातिवादी मानसिकता" का प्रतिबिंब बताया।

'Casteist mindset' 'जातिवादी मानसिकता'

- "While the RSS chief recently reiterated his statement that, 'Reservation has been deliberately politicised, leading to bitterness in society, and that beneficiaries of reservation should voluntarily give up its benefits.'
"जबकि RSS प्रमुख ने हाल ही में अपने इस बयान को दोहराया कि, 'आरक्षण का जानबूझकर राजनीतिकरण किया गया है, जिससे समाज में कटुता पैदा हुई है और आरक्षण के लाभार्थियों को स्वेच्छा से इसके लाभ छोड़ देने चाहिए।'
- In reality, this is a **casteist mindset** that may serve narrow political interests, but undermines **constitutional objectives**," she added in the post.
उन्होंने पोस्ट में आगे कहा, "वास्तव में, यह एक जातिवादी मानसिकता है, जो संकीर्ण राजनीतिक हितों की पूर्ति कर सकती है, लेकिन संवैधानिक उद्देश्यों को कमजोर करती है।"
- "Reservation is essentially meant to provide the **constitutional and legal right to equality** on humanitarian grounds to millions of exploited, oppressed, neglected, and despised people who have been victims of the **caste system** for centuries."
"आरक्षण का मूल उद्देश्य उन करोड़ों शोषित, उत्पीड़ित, उपेक्षित और तिरस्कृत लोगों को मानवीय आधार पर समानता का संवैधानिक और कानूनी अधिकार प्रदान करना है, जो सदियों से जाति व्यवस्था के शिकार रहे हैं।"

SC Collegium names Chief Justices for four High Courts

GS II: Polity
The Hindu Bureau
NEW DELHI

The Supreme Court Collegium headed by Chief Justice of India Surya Kant has recommended Chief Justices to four High Courts.

The Collegium, in a meeting held on August 6, of which the resolution was published on Sunday, has proposed new Chief Justices to the High Courts of Patna, Calcutta, Bombay, and Punjab and Haryana.

Delhi High Court judge, Justice V. Kameswar Rao, has been recommended for elevation as the Chief Justice of Patna High Court. Justice Rao was appointed Additional Judge of the Delhi High Court in April 2013 and became a Permanent Judge in March 2015.

Justice Ravindra V.

Ghugre, a Bombay High Court judge, has been recommended for the Calcutta High Court Chief Justiceship. Justice Ghugre is presently serving as the acting Chief Justice of Bombay High Court after the appointment of Justice Shree Chandrashekhar to the Supreme Court. He was elevated as the judge of the High Court in 2013.

The Collegium has proposed Justice Mahesh Chandra Tripathi, a judge of the Allahabad High Court, for elevation as the Chief Justice of the Bombay High Court.

Justice Ashwani Kumar Mishra, whose parent High Court is Allahabad and currently serving on the Punjab and Haryana High Court Bench, has been recommended for the Chief Justiceship of the Punjab and Haryana High Court.

10A8. SC Collegium names Chief Justices for four High Courts

SC कॉलेजियम ने चार उच्च न्यायालयों के मुख्य

न्यायाधीशों के नाम प्रस्तावित किए

- The Supreme Court Collegium headed by Chief Justice of India Surya Kant has recommended Chief Justices to four High Courts.

भारत के मुख्य न्यायाधीश सूर्यकांत की अध्यक्षता वाले सुप्रीम कोर्ट कॉलेजियम ने चार उच्च न्यायालयों के लिए मुख्य न्यायाधीशों के नामों की सिफारिश की है।

- The Collegium, in a meeting held on August 6, of which the resolution was published on Sunday, has proposed new Chief Justices to the High Courts of Patna, Calcutta, Bombay, and Punjab and Haryana.

6 अगस्त को हुई कॉलेजियम की बैठक में, जिसका प्रस्ताव रविवार को प्रकाशित किया गया, पटना, कलकत्ता, बॉम्बे तथा पंजाब और हरियाणा उच्च न्यायालयों के लिए नए मुख्य न्यायाधीशों के नाम प्रस्तावित किए गए हैं।

- Delhi High Court judge, Justice V. Kameswar Rao, has been recommended for elevation as the Chief Justice of Patna High Court.

दिल्ली उच्च न्यायालय के न्यायाधीश न्यायमूर्ति वी. कामेश्वर राव

10A8. The stakes in India's delimitation debate

भारत के परिसीमन विवाद में दाँव पर क्या है

- The terms for the next delimitation are already written into the Constitution, principally in **Articles 81 and 82**.
अगले परिसीमन के प्रावधान पहले से ही संविधान में, मुख्यतः अनुच्छेद 81 और 82 में, लिखे हुए हैं।
- 2) A Constitutional amendment is required only if the existing constitutional provisions relating to delimitation are to be changed.
2) संवैधानिक संशोधन केवल तभी आवश्यक है जब परिसीमन से संबंधित मौजूदा संवैधानिक प्रावधानों में बदलाव किया जाना हो।
- Articles 81 and 82 mandate that after the data from the first Census conducted after 2026 is published, two things will happen.
अनुच्छेद 81 और 82 यह निर्धारित करते हैं कि 2026 के बाद आयोजित पहली जनगणना के आँकड़े प्रकाशित होने के बाद दो चीजें होंगी।

Can a fresh delimitation be completed before the 2029 Lok Sabha elections?

क्या 2029 के लोकसभा चुनावों से पहले नया परिसीमन पूरा किया जा सकता है?

- The last time **Lok Sabha seats were reallocated among States** was in **1973**, based on the **1971 Census**.
राज्यों के बीच लोकसभा सीटों का पुनर्वितरण आखिरी बार 1973 में 1971 की जनगणना के आधार पर किया गया था।
- If a fresh delimitation is triggered under the existing provisions of **Articles 81 and 82**, the following will happen.
यदि अनुच्छेद 81 और 82 के मौजूदा प्रावधानों के तहत नया परिसीमन शुरू होता है, तो निम्नलिखित होगा।
- At present, the **distribution of the 543 Lok Sabha seats among the States is based on the population figures of the 1971 Census**.
वर्तमान में 543 लोकसभा सीटों का राज्यों के बीच वितरण 1971 की जनगणना के जनसंख्या आँकड़ों पर आधारित है।
- In 1967, an MP across most major States represented roughly four to five lakh electors.
1967 में अधिकांश प्रमुख राज्यों में एक सांसद लगभग चार से पाँच लाख मतदाताओं का प्रतिनिधित्व करता था।
- Today, a MP from Kerala represents about 14 lakh electors, while in Uttar Pradesh and Bihar, the figure is around 19 lakh.
आज केरल का एक सांसद लगभग 14 लाख मतदाताओं का प्रतिनिधित्व करता है, जबकि उत्तर प्रदेश और बिहार में यह संख्या लगभग 19 लाख है।
- This variation is the result of a deliberate decision by all parties, taken on two occasions, in **1976 and 2001**, not to punish States that had stabilised their populations.
यह भिन्नता सभी दलों द्वारा 1976 और 2001 में दो अवसरों पर लिए गए उस जानबूझकर किए गए निर्णय का परिणाम है, जिसके तहत उन राज्यों को दंडित नहीं करने का निर्णय लिया गया था, जिन्होंने अपनी जनसंख्या को स्थिर कर लिया था।
- The **Constitution** gives that leeway.
संविधान इस प्रकार की छूट प्रदान करता है।
- The **size of Lok Sabha constituencies is not necessarily based on a national average, which today would be about 18 lakh voters per constituency**.



लोकसभा निर्वाचन क्षेत्रों का आकार अनिवार्य रूप से राष्ट्रीय औसत पर आधारित नहीं है, जो आज प्रति निर्वाचन क्षेत्र लगभग **18 लाख मतदाता** होता।

- **Article 81** requires seats to be allocated among States “so far as practicable”, on the basis of a national average.

अनुच्छेद 81 राज्यों के बीच सीटों के आवंटन के लिए, “जहाँ तक व्यावहारिक हो”, राष्ट्रीय औसत के आधार पर व्यवस्था करता है।

GS Paper II: Governance	10 August 2026
TOPICS COVERED	
10A8	Two-thirds of nursing staff not listed in national registry: data राष्ट्रीय रजिस्ट्री में दो-तिहाई नर्सिंग कर्मचारी सूचीबद्ध नहीं: आँकड़े

Two-thirds of nursing staff not listed in national registry: data

Only 14.24 lakh of the country's 46.02 lakh registered nursing personnel are enrolled on Nurses Registration and Tracking System, or NRTS, resulting in delays in accessing many basic services

GS II: Governance

Soibam Rocky Singh
NEW DELHI

More than two-thirds of India's registered nursing workforce are yet to be brought under the Nurses Registration and Tracking System (NRTS), despite the digital platform having been introduced over seven years ago to create a national registry and streamline registration-related services.

Government data tabled in the Lok Sabha last month show that only 14.24 lakh of the country's 46.02 lakh registered nursing personnel – comprising Auxiliary Nurse Midwives (ANMs), Registered Nurses and Registered Midwives (RN & RM), and Lady Health Visitors (LHVs) – have been enrolled on the platform, leaving 31.78 lakh outside the national system.

The incomplete rollout has left many nurses waiting months for No Objection Certificates (NOCs) required to change their place of employment, while others seeking overseas employment have encountered delays in credential verification, affecting their career op-

Incomplete registration

State-wise figures point to stark disparities in implementation of the NRTS. A look at the States ranked at the top and bottom

State	Total personnel	Enrolled on NRTS	Yet to be enrolled	Coverage
Bihar	62,591	62,020	571	99.1%
Jharkhand	27,160	24,640	2,520	90.7%
Odisha	98,194	78,244	19,950	79.7%
Nagaland*	6,808	1,024	5,784	15.0%
Karnataka*	5,58,851	82,194	4,76,657	14.7%
Tamil Nadu*	4,76,264	57,084	4,19,180	12.0%

*bottom-ranked States (data tabled in Lok Sabha last month)

portunities and livelihoods.

The State-wise figures point to stark disparities in implementation. Karnataka, which has more than 5.58 lakh registered nursing personnel, has enrolled only around 82,000 on the NRTS. Tamil Nadu, with over 4.76 lakh registered nurses and midwives, has enrolled just 57,000, while Andhra Pradesh has brought only 92,000 of its 4.52 lakh registered personnel onto the platform. Kerala has enrolled about 1.5 lakh of its 4.2 lakh registered personnel. The rollout, however, has been relatively successful in a few States. Bihar has enrolled 62,020 of its 62,591 registered

nursing personnel on the NRTS, making it one of the best-performing States. Jharkhand has brought 24,640 or around 90% of its 27,160 registered personnel under the system.

MP's letter

Congress MP Anto Antony recently urged Union Health Minister J.P. Nadda to complete the enrolment of all registered nurses and issue National Unique Identity (NUID) cards within six months.

In a recent letter to the Health Minister on July 30, the MP said the incomplete implementation of the NRTS had caused considerable hardship to nurses, particularly those seeking NOCs, inter-State registra-

tion and verification of credentials for overseas employment.

The NRTS was launched by the Indian Nursing Council (INC) in association with the National Informatics Centre (NIC) to maintain a live national register of nursing personnel and provide a common online platform for primary registration, renewal, reciprocal registration, higher qualification registration and other services.

Meanwhile, nursing organisations argue that the uneven implementation has undermined the very purpose of creating a centralised digital registry. The Indian Professional Nurses Association (IPNA) contends that several State Nursing Registration Councils continue to process registration, renewal and reciprocal registration through their own systems, resulting in delays and duplication.

Speaking to *The Hindu*, Siju Thomas, Joint Secretary of the IPNA, called the NRTS “the hope of nurses across the country” and alleged that its failure was the result of “mismanagement and lack of accountability” on the part of the INC.

10A8. Two-thirds of nursing staff not listed in national registry: data

राष्ट्रीय रजिस्ट्री में दो-तिहाई नर्सिंग कर्मचारी सूचीबद्ध नहीं: आँकड़े

- More than two thirds of India's **registered nursing workforce** are yet to be brought under the **Nurses Registration and Tracking System (NRTS)**, despite the digital platform having been introduced over seven years ago to create a national registry and streamline registration-related services.

भारत के पंजीकृत नर्सिंग कार्यबल के दो-तिहाई से अधिक लोगों को अभी तक नर्सिंग रजिस्ट्रेशन एंड ट्रैकिंग सिस्टम (NRTS) के अंतर्गत नहीं लाया गया है, जबकि राष्ट्रीय रजिस्ट्री बनाने और पंजीकरण संबंधी सेवाओं को सुव्यवस्थित करने के लिए इस डिजिटल प्लेटफॉर्म को सात वर्ष से अधिक समय पहले शुरू किया गया था।

- Government data tabled in the **Lok Sabha** last month show that **only 14.24 lakh of the country's 46.02 lakh registered nursing personnel** — comprising Auxiliary Nurse Mid wives (ANMs), Registered Nurses and Registered Midwives (RN & RM), and Lady Health Visitors (LHVs) — have been enrolled on the platform, leaving **31.78 lakh** outside the national system.

पिछले महीने लोकसभा में प्रस्तुत सरकारी आँकड़ों से पता चलता है कि देश के 46.02 लाख पंजीकृत नर्सिंग कर्मियों — जिनमें सहायक नर्स दाइयाँ (ANMs), पंजीकृत नर्स और पंजीकृत दाइयाँ (RN & RM), तथा लेडी हेल्थ विजिटर्स (LHVs) शामिल हैं — में से केवल 14.24 लाख को इस प्लेटफॉर्म पर पंजीकृत किया गया है, जबकि 31.78 लाख लोग राष्ट्रीय प्रणाली से बाहर हैं।

GS Paper II: International Relations		10 August 2026
TOPICS COVERED		
10A8	Shifting sands बदलती परिस्थितियाँ	
10A8	Anew security triangle emerges with the Makkah Pact मक्का समझौते के साथ एक नया सुरक्षा त्रिकोण उभरता है	



THE HINDU
GS II: IR

Shifting sands

Pakistan, Saudi Arabia and Türkiye will struggle to create credible deterrent

The joint defence agreement, signed by Pakistan, Saudi Arabia and Türkiye in Mecca on August 7 reflects their shared strategic anxieties and the changes under way in West Asia's security architecture. The three countries have pledged to bolster collective security and deterrence, and promised to treat an armed attack against one as an attack against all. On paper, this is a formidable alliance. Pakistan is a nuclear-armed country with a powerful military; Saudi Arabia, one of the world's largest crude oil exporters, has deep pockets and considerable influence across the Muslim world; and Türkiye has an expanding military industrial base, including advanced drone production capabilities. That the pact was announced in the middle of the war on Iran and Israel's continuing bombing campaigns in the region is no coincidence. Faced with the prospect of reduced American strategic presence in West Asia, regional powers have begun looking beyond the traditional U.S. security umbrella for new partnerships. In September 2025, a few weeks after Israel bombed Qatar, Pakistan and Saudi Arabia announced a bilateral defence agreement. The war on Iran, which saw Tehran retaliating by striking U.S. bases across the Persian Gulf, and Israel's wars in its neighbourhood, have further deepened the security concerns of Saudi Arabia and Türkiye. They have now decided to turn the page on their often fraught relationship and build a trilateral framework with Pakistan, which fought a short aerial war with India in May 2025.

This agreement shows the growing appetite of regional powers for formal security pacts. Türkiye, which has long sought a bigger role in West Asia, will gain more strategic space. Pakistan, traditionally a South Asian regional power overshadowed by India, is also seeking to expand its role as a West Asia security provider and mediator. The alliance would allow the three countries to deepen defence cooperation and military interoperability though it is too early to say whether it would help them address their security challenges. Alliances based on collective security, such as NATO and CSTO, are generally formed to build deterrence against conflicts. The biggest liability of the Mecca Agreement is that it was signed amid ongoing wars. Over the past five months, Saudi Arabia has faced repeated Iranian missile and drone attacks. The collective security pledge is unlikely to deter Iran from targeting U.S. bases in Saudi Arabia if the war, currently on pause, escalates further. Existing conflicts, therefore, make the promise of collective defence largely symbolic from the very outset. So, the credibility of the Mecca Agreement will ultimately depend on whether the three partners can turn their political commitment into a credible deterrent, which is currently non-existent.

- Alliances based on collective security, such as **NATO and CSTO**, are generally formed to build deterrence against conflicts.

NATO और CSTO जैसे सामूहिक सुरक्षा पर आधारित गठबंधन सामान्यतः संघर्षों के विरुद्ध प्रतिरोधक क्षमता विकसित करने के लिए बनाए जाते हैं।

- The **biggest liability of the Mecca Agreement is that it was signed amid ongoing wars.** **मक्का समझौते की सबसे बड़ी कमजोरी यह है कि इस पर जारी युद्धों के बीच हस्ताक्षर किए गए हैं।**
- **Over the past five months, Saudi Arabia has faced repeated Iranian missile and drone attacks.**

पिछले पाँच महीनों के दौरान, सऊदी अरब को बार-बार ईरानी मिसाइल और ड्रोन हमलों का सामना करना पड़ा है।

10A8. Shifting sands

बदलती परिस्थितियाँ

- The joint defence agreement, signed by Pakistan, Saudi Arabia and Türkiye in Mecca on August 7 reflects their shared strategic anxieties and the changes under way in West Asia's security architecture.

7 अगस्त को मक्का में पाकिस्तान, सऊदी अरब और तुर्किये द्वारा हस्ताक्षरित संयुक्त रक्षा समझौता उनकी साझा रणनीतिक चिंताओं और पश्चिम एशिया की सुरक्षा व्यवस्था में हो रहे परिवर्तनों को दर्शाता है।

- The three countries have pledged to bolster **collective security and deterrence**, and promised to treat an armed attack against one as an attack against all.

तीनों देशों ने सामूहिक सुरक्षा और प्रतिरोधक क्षमता को मजबूत करने का संकल्प लिया है और यह वादा किया है कि एक देश के विरुद्ध सशस्त्र हमला सभी के विरुद्ध हमला माना जाएगा।

- **Pakistan is a nuclear-armed country with a powerful military; Saudi Arabia, one of the world's largest crude oil exporters, has deep pockets and considerable influence across the Muslim world; and Türkiye has an expanding military industrial base, including advanced drone production capabilities.**

पाकिस्तान एक परमाणु-सशस्त्र देश है जिसके पास शक्तिशाली सेना है; सऊदी अरब, जो दुनिया के सबसे बड़े कच्चे तेल निर्यातकों में से एक है, के पास पर्याप्त वित्तीय संसाधन और पूरे मुस्लिम विश्व में पर्याप्त प्रभाव है; और तुर्किये के पास उभरता हुआ सैन्य औद्योगिक आधार है, जिसमें उन्नत ड्रोन उत्पादन क्षमताएँ भी शामिल हैं।

- That the pact was announced in the middle of the war on Iran and Israel's continuing bombing campaigns in the region is no coincidence.

यह संयोग नहीं है कि इस समझौते की घोषणा ईरान पर युद्ध और क्षेत्र में इजराइल के लगातार बमबारी अभियानों के बीच की गई।

- **Türkiye, which has long sought a bigger role in West Asia, will gain more strategic space.**

तुर्किये, जो लंबे समय से पश्चिम एशिया में बड़ी भूमिका की तलाश करता रहा है, को अधिक रणनीतिक स्थान प्राप्त होगा।



A new security triangle emerges with the Makkah Pact

GS II: IR

The Makkah Joint Defence Agreement (MJDA), signed on August 7, 2026, by the top leaders of Saudi Arabia, Türkiye and Pakistan, is the first regional realignment since the geostrategic tsunami of the United States-Iran war. While the MJDA text has not been revealed, the joint statement issued specifically states that "any armed attack against any one of the three states shall be regarded as an attack against them all".

This echoes infamous Article 5 of the North Atlantic Treaty Organization (NATO) – never invoked – leading speculators to claim that the MJDA was a harbinger of a "Muslim NATO". It appears to be part of a jerky Saudi response to specific security challenges, including a Strategic Mutual Defence Agreement (SMDA) with Pakistan last year and a 14-country Multinational Maritime Defence Alliance (MMDA) in the last week of July.

Shifting alignments, uncertain stakes

Any analysis of the MJDA faces multiple uncertainties, including ongoing regional turbulence, partners' previous karma, and their varied expectations. This hazy context creates a push-pull effect: from anticipation of the MJDA having profound cascading implications to it being a seemingly desultory, inconsequential response to their asymmetric defence and security challenges. Some also see it as inducing counter-polarisation and alarming other stakeholders from Iran and its non-state allies, Israel, Kurds, and Greece to the United Arab Emirates and India. To walk back, the Saudi Deputy Foreign Minister has clarified that it is neither an effort to establish a military axis nor a sectarian bloc. He denied any link to nuclear ambitions or an arms race.

This denial is unlikely to pierce the statement's conspicuous silence about the precise threats that the MJDA is geared to confront, the U.S.-Iran war roiling the region, Israeli aggressiveness, threats from the non-state actors, and the impact of choke point constrictions. It also refrains from either inviting like-minded regional powers to join in or an uplink with the existing collective security architectures provided by the Arab League, the Organisation of Islamic Cooperation and the Gulf Cooperation Council (GCC).

Observers point out that the Arab-Muslim world has remained divided against Israel for close to eight decades. Hence, the prospect of the MJDA being a precursor to a Muslim NATO polarised against Iran and its Arab proxies appears far-fetched at this stage. Moreover, even as all three MJDA signatories are allies of the U.S. (which remains suspiciously silent), it is unclear if it is meant to substitute the regional Pax Americana or to serve as a surrogate for the *ancien régime*. In the same vein, if the proposed Muslim NATO in future decides to confront Israel, the U.S. would have scored its own goal.

Moreover, the MJDA is beset by various snags. The Saudis have bitter memories of the Ottoman



Maahesh Sachdev

Retired Indian Ambassador, specialising in the Arab world and oil issues

rule, which brutally suppressed the Al-Saud. For similar reasons, from Türkiye, Ankara's boots on the ground have been shunned by most post-independence Arab regimes.

Till recently, Türkiye promoted the Sunni outfits such as the Muslim Brotherhood, Hamas and motley Syrian militias, many of which are anathema to the Gulf regimes. Türkiye's President Recep Tayyip Erdoğan's Neo-Ottoman ambitions to lead the Sunni Islamic world collide with the Kingdom's self-image of being the Custodian of Islam's Two Holiest Shrines. Riyadh does not continue playing second fiddle to Turkey or any other Muslim power. President Erdoğan had a tenuous relationship with Saudi Crown Prince Mohammed bin Salman (Mbs) over the 2018 murder of Jamal Khashoggi, a U.S.-based Saudi journalist, in the Saudi consulate in Istanbul. Turkish leaks on this episode sullied Mbs's image, making him a western outlier.

On the other hand, Pakistani troop deployments in Saudi Arabia in the past resulted in frictions due to chain of command disputes, Islamabad's refusal to have its troops shorn of Shias and its reluctance to confront Iran or Yemen. Armed forces in Türkiye and Pakistan have a long-standing tradition of Bonapartism. Saudis have kept armed forces and the National Guard, both with an American-styled set up, out of politics since the Ikhwan militia insurrection (the late 1920s) and the Makkah siege of 1979. Both Türkiye and Pakistan have an active border with Iran – offering a potentially lucrative post-war economic bonanza that they would be loath to forego. Pakistan's enthusiasm for the MJDA is circumscribed by its 900 kilometre-long border with Iran, a large Shia minority, internal security challenges and hostility with India and Afghanistan. In a typical doublespeak, last week, Pakistan began formal discussions on a Free Trade Agreement with Iran, notwithstanding the U.S. sanctions, the MJDA and the SMDA.

Riyadh's security needs

The MJDA is clearly fulcrumed around Saudi security requirements, which Riyadh expects Türkiye and Pakistan to mitigate as part of a "friends with benefits" arrangement. However, the current threats faced by Saudi Arabia are complex and asymmetric, ranging from air attacks on its vital and vulnerable oil and civil infrastructure by Iran and its proxies, the closures of the Strait of Hormuz and Bab al-Mandeb and the possible insurrection by the restive Shia minority. It is unclear if Türkiye and Pakistan can meet such challenges, where the U.S. Central Command, with its large, long-standing presence and state-of-the-art equipment, failed. The new allies could perhaps upstage the U.S. in having more boots on the ground in Saudi Arabia, but the Kingdom is unlikely to face a ground invasion. Moreover, relying on foreign forces to address internal security challenges would be bad optics for the

Kingdom. The foregoing is not to deride the MJDA as merely a cosmetic exercise. It symbolises the congruence of the three large Sunni powers with considerable complementarity: the Saudi \$83 billion defence budget, Türkiye's booming military industrial complex exporting \$10 billion annually and Pakistan's 6,60,000-strong armed forces. Their defence and security cross-pollination through military exercises, interoperability of weapon systems and co-production and development of hardware would be beneficial to them all. Additionally, Türkiye and Pakistan could gain political influence in the Kingdom and enrich themselves.

At this stage, the MJDA's future appears uncertain. It may flourish if a low-burn attrition war continues to ripple through the region. Ironically, if an all-out shooting war breaks out, Türkiye and Pakistan may be hesitant to commit forces against Iran, their neighbour. At the other end, if peace prevails, the MJDA would become superfluous. A market share scrimmage among the oil exporters would create a glut, affecting the Saudi capacity to bankroll the MJDA partners.

Having suffered Iranian doggedness and Trumpian tantrums, Saudi Arabia and other Gulf Arabs are currently experimenting with various security alternatives. The Saudis began the SMDA with Pakistan last year and have felt the need for an MMDA and MJDA. They do not appear to be playing a zero-sum game between semi-reliable Pakistan and India. U.S. President Donald Trump's unreliability was on full display to the Saudis recently in his last-minute Abraham Accords rider to the recent nuclear agreement with the Kingdom. The Saudis may not wish to further complicate their dependence on Uncle Sam by deepening their entanglement with Ankara and Islamabad, both ultimately subject to Washington's dictates.

The implications for India

Depending on various scenarios panning out, the MJDA can impact India's interests in multiple ways. While India needs to keep a steady eye on Pakistan's attempt to align the MJDA partners with it against India, New Delhi should not overreact. As the world's third-largest crude oil importer, India is slated to drive global demand for the next 15 years. India has been the Kingdom's third-largest market and second largest trading partner. Like Saudi Arabia, India has been both a consistent and moderate pro-status quo power amenable to simpler paradigms of economic complementarity.

Riyadh finds ties with India uncluttered by extraneous considerations. India is a geo-strategically safe bet for the turbulent Gulf. Riyadh, facing a huge paradigm shift, is most unlikely to wade into supporting Pakistan's adventurism against India. So, while the MJDA may give Islamabad an adrenaline high, Pakistan's quest to match India's rise through military fluster in West Asia is unlikely to succeed.

10A8. Anew security triangle emerges with the Makkah Pact

मक्का समझौते के साथ एक नया सुरक्षा त्रिकोण उभरता है

- This echoes infamous **Article 5 of the North Atlantic Treaty Organization (NATO)** — never invoked — leading speculators to claim that the MJDA was a harbinger of a "Muslim NATO".

यह उत्तर अटलांटिक संधि संगठन (NATO) के कुख्यात अनुच्छेद 5 की प्रतिध्वनि करता है — जिसे कभी लागू नहीं किया गया — जिसके कारण कुछ विश्लेषकों ने दावा किया कि MJDA एक "मुस्लिम NATO" का अग्रदूत है।

- It appears to be part of a jerky Saudi response to specific security challenges, including a **Strategic Mutual Defence Agreement (SMDA)** with Pakistan last year and a **14-country Multinational Maritime Defence Alliance (MMDA)** in the last week of July.

यह विशिष्ट सुरक्षा चुनौतियों के प्रति सज्दी अरब की त्वरित प्रतिक्रिया का हिस्सा प्रतीत होता है, जिसमें

पिछले वर्ष पाकिस्तान के साथ रणनीतिक पारस्परिक रक्षा समझौता (SMDA) और जुलाई के अंतिम सप्ताह में 14 देशों का बहुराष्ट्रीय समुद्री रक्षा गठबंधन (MMDA) शामिल है।

- It also refrains from either inviting like-minded regional powers to join in or an uplink with the existing collective security architectures provided by the **Arab League, the Organisation of Islamic Cooperation and the Gulf Cooperation Council (GCC)**.

यह समान विचारधारा वाली क्षेत्रीय शक्तियों को इसमें शामिल होने के लिए आमंत्रित करने या अरब लीग, इस्लामिक सहयोग संगठन और खाड़ी सहयोग परिषद (GCC) द्वारा प्रदान की गई मौजूदा सामूहिक सुरक्षा व्यवस्थाओं से जुड़ने से भी परहेज करता है।

- Türkiye's President **Recep Tayyip Erdoğan's Neo-Ottoman ambitions** to lead the Sunni Islamic world collide with the Kingdom's self-image of being the Custodian of Islam's Two Holiest Shrines.

तुर्किये के राष्ट्रपति रेचेप तैय्यप एर्दोआन की नव-ऑटोमन महत्वाकांक्षाएँ, जिनका उद्देश्य सुन्नी इस्लामी दुनिया का नेतृत्व करना है, राज्य की उस स्व-छवि से टकराती हैं जिसमें वह इस्लाम के दो सबसे पवित्र स्थलों का संरक्षक है।

The implications for India

भारत के लिए निहितार्थ

- Depending on various scenarios panning out, the **MJDA can impact India's interests** in multiple ways.
विभिन्न संभावित परिदृश्यों के आधार पर, **MJDA भारत के हितों को कई तरीकों से प्रभावित कर सकता है।**
- While India needs to keep a steely eye on Pakistan's attempt to align the MJDA partners with it against India, New Delhi should not overreact.
भारत को पाकिस्तान द्वारा MJDA के साझेदारों को भारत के विरुद्ध अपने साथ जोड़ने के प्रयास पर कड़ी निगरानी रखनी चाहिए, लेकिन नई दिल्ली को अति-प्रतिक्रिया नहीं करनी चाहिए।
- As the **world's third-largest crude oil importer**, India is slated to drive global demand for the next 15 years.
विश्व के तीसरे सबसे बड़े कच्चे तेल आयातक के रूप में भारत अगले 15 वर्षों तक वैश्विक मांग को आगे बढ़ाने वाला देश बनने वाला है।
- India has been the **Kingdom's third-largest market and second largest trading partner**.
भारत साम्राज्य का तीसरा सबसे बड़ा बाजार और दूसरा सबसे बड़ा व्यापारिक साझेदार रहा है।
- Like Saudi Arabia, India has been both a consistent and moderate pro-status quo power amenable to simpler paradigms of economic complementarity.
सऊदी अरब की तरह, भारत भी एक निरंतर और उदार यथास्थिति समर्थक शक्ति रहा है, जो आर्थिक पूरकता के सरल प्रतिमानों के अनुकूल है।
- Riyadh finds ties with India uncluttered by extraneous considerations.
रियाद को भारत के साथ संबंध अनावश्यक बाहरी विचारों से मुक्त लगते हैं।
- India is a **geo-strategically safe bet for the turbulent Gulf**.
अशांत खाड़ी क्षेत्र के लिए भारत एक भू-रणनीतिक रूप से सुरक्षित विकल्प है।
- Riyadh, facing a huge paradigm shift, is most unlikely to wade into supporting Pakistan's adventurism against India.
एक बड़े प्रतिमान परिवर्तन का सामना कर रहा रियाद, भारत के विरुद्ध पाकिस्तान के दुस्साहस का समर्थन करने में शामिल होने की संभावना नहीं रखता।
- So, while the MJDA may give Islamabad an adrenaline high, Pakistan's quest to match India's rise through military cluster in West Asia is unlikely to succeed.
इसलिए, जबकि MJDA इस्लामाबाद को उत्साह का क्षण प्रदान कर सकता है, पश्चिम एशिया में सैन्य cluster के माध्यम से भारत के उदय की बराबरी करने की पाकिस्तान की कोशिश सफल होने की संभावना नहीं है।



GS Paper III: Economy		10 August 2026
TOPICS COVERED		
10A8	The cost of unconditional cash transfers बिना शर्त नकद अंतरण की लागत	
10A8	Using cultural connect and advertising to build consumer awareness and brand differentiation उपभोक्ता जागरूकता और ब्रांड विभेदीकरण के निर्माण के लिए सांस्कृतिक जुड़ाव और विज्ञापन का उपयोग	



Valley of plenty: Farmers collect almonds at a village in Pulwama district of Jammu and Kashmir on Sunday. Almond cultivation is a key agricultural activity in the Kashmir Valley, contributing to the livelihoods of thousands of families. IRRAW NISSAR

Valley of plenty: Farmers collect almonds at a village in Pulwama district of Jammu and Kashmir on Sunday. Almond cultivation is a key agricultural activity in the Kashmir Valley, contributing to the livelihoods of thousands of families.

Rank	Country	Key Region/Fact
1	United States	California dominates U.S. production and the global almond industry
2	Australia	Major production in the Murray–Darling region
3	Spain	One of Europe's leading almond producers
4	Türkiye	Important Mediterranean/West Asian producer
5	Morocco	Important North African producer

The cost of unconditional cash transfers

Data show that an overemphasis on cash transfer schemes is bound to eat into investments needed for other public service sectors such as education

GS III: Economy

DATA POINT

Dipa Sinha
Vijay Ram S.

On August 1, the Delhi Chief Minister launched the Lakshmi Yojana which will provide eligible women with an Unconditional Cash Transfer (UCT) of ₹2,500 per month, fulfilling one of the ruling party's central promises during the Assembly elections. With this, Delhi joins the list of States/UTs which now have such a UCT scheme for women.

Over the last two years, many studies, including the Economic Survey and the 16th Finance Commission (FC) report have raised concerns over the increasing fiscal burden of such schemes. Recent reports show that in States such as Maharashtra and Madhya Pradesh, the number of beneficiaries has been reducing in the name of rationalisation. In Delhi, even before the scheme has been rolled out, restrictive criteria such as requiring a recommendation from the local MLA or MP have been included, plausibly to keep the numbers in check. Evaluations of these schemes show that the money received by women is mostly spent on useful expenditures such as food, health and education. The usual barriers to access such as lack of documents, access to banks, and errors in digital records also remain. The question to be asked going forward is whether the finances for these schemes are coming at the cost of other investments in public services such as education and health. **Chart 1** shows the expenditure of these schemes relative to total expenditure and the expenditure of these sectors for some major States.

As a proportion of total State expenditure, expenditure on these UCT schemes range from over 10% in Jharkhand to less than 0.3% in Himachal Pradesh. According to the 16th FC report, almost 44% of State expenditure is tied up in in-

terest payments, pensions and salaries; this indicates that States do not have much space to manoeuvre towards financing new initiatives or investing in necessary infrastructure. The 16th FC also shows that the States' social sector revenue expenditure as a proportion of total revenue expenditure has remained stable since 2011-12. However, as a proportion of GDP they show a declining trend since 2020-21, indicating that there has been no commensurate increase in spending on these sectors with the increase in spending capacity.

In Jharkhand, Karnataka and West Bengal, which happen to have the largest UCT schemes, the spending on UCTs is more than half the entire spending on education (**Chart 2**). Further, in Jharkhand, Karnataka, West Bengal, and Maharashtra, the spending on these schemes exceeds the entire State spending on health (**Chart 3**). This shows that household benefits notwithstanding, there is a need for informed discussions on what the long-term implications of such schemes might be.

As these schemes expand, they increase the fiscal burden on States, which is likely to generate pressure on other forms of social sector spending, including existing expenditures towards providing health and education services. Given the resource-constrained position of State governments, this is not an unreasonable apprehension. Over time, the implications of underfunded public services must be considered.

Some scholars have been arguing that such cash transfers are a 'compensation' for the failure of the state to create opportunities for all. The timing of the cash transfers, immediately before elections, has also led many to call them a 'dole'. It could be argued that the recent protests demanding better facilities and greater accountability are an indication that people are no longer satisfied with only 'compensation' and demand a fair share in resources.

Burden or benefit?

Data were sourced from the Reserve Bank of India. Dipa Sinha and Vijay Ram S are affiliated with the Centre for the Study of the Indian Economy, Azim Premji University. Views expressed are personal



Cost of welfare: Women receive the Pongal gift items, along with ₹1,000 provided by the Tamil Nadu government in Madurai in January 2023

Chart 1: Expenditure of UCT schemes as a share of total expenditure for select States (in %)

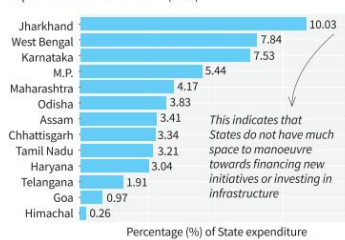


Chart 2: Expenditure on UCTs as a % of State expenditure on education for select States

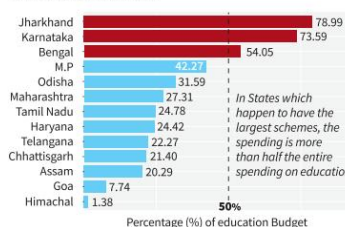
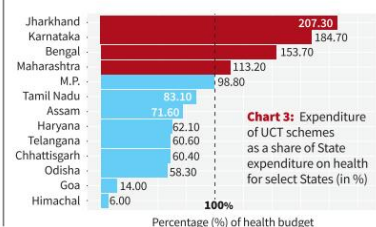


Table 1: A State-wise list of unconditional cash transfer (UCT) schemes, which have increased since 2023

State	Scheme name	Monthly amount (₹)	Year of introduction
Goa	Griha Aadhar Scheme	₹1,500	2016 (renewed in 2023)
Sikkim	Sikkim Aama Sashaktikaran Yojana	₹40,000 (per year)	2022 (expanded in 2023)
Karnataka	Gruha Lakshmi Scheme	₹2,000	2023
M.P.	Ladli Behna Yojana	₹1,500	2023
T.N.	Kalaigal Magalir Urimai Thogai	₹1,000	2023
Telangana	Mahalakshmi Scheme	₹2,500	2023
Maharashtra	Mukhyamantri Majhi Ladki Bahin Yojana	₹1,500	2024
Jharkhand	Mukhyamantri Maiya Samman Yojana	₹2,500	2024
Odisha	Subhadra Yojana	₹10,000 (per year)	2024
Chhattisgarh	Mahtari Vandan Yojana	₹1,000	2024
Assam	Orunodoi 3.0	₹1,250	2024
Himachal	Indira Gandhi Pyari Behna Sukh Samman Nidhi	₹1,500	2024
Haryana	Lado Lakshmi Yojana	₹2,100	2025
Kerala	Sthree Suraksha Scheme	₹1,000	2026
Punjab	Mukh Mantri Mawan Dheeyan Satkar Yojana	₹1,000 - 1,500	2026
Delhi	Lakshmi Yojana	₹2,500	2026 (replacing earlier scheme)
West Bengal	Annapurna Bhandar	₹3,000	2026 (replacing Lakshmi Bhandar (2021))



10A8. The cost of unconditional cash transfers

बिना शर्त नकद अंतरण की लागत

- On August 1, the **Delhi Chief Minister** launched the **Lakshmi Yojana** which will provide eligible women with an **Unconditional Cash Transfer (UCT) of ₹2,500 per month**, fulfilling one of the ruling party's central promises during the Assembly elections.
- 1 अगस्त को दिल्ली के मुख्यमंत्री ने लक्ष्मी योजना का शुभारंभ किया, जिसके तहत पात्र महिलाओं को प्रति माह ₹2,500 का बिना शर्त नकद अंतरण (UCT) प्रदान किया जाएगा, जिससे विधानसभा चुनावों के दौरान सत्तारूढ़ पार्टी के प्रमुख वादों में से एक पूरा हो गया है।
- With this, Delhi joins the list of States/UTs which now have such a **UCT scheme for women**. इसके साथ ही, दिल्ली उन राज्यों/केंद्रशासित प्रदेशों की सूची में शामिल हो गया है, जहाँ अब महिलाओं के लिए ऐसी UCT योजना है।

- Over the last two years, many studies, including the **Economic Survey** and the **16th Finance Commission (FC) report** have raised concerns over the increasing fiscal burden of such schemes.
पिछले दो वर्षों में आर्थिक सर्वेक्षण और 16वें वित्त आयोग (FC) की रिपोर्ट सहित कई अध्ययनों ने ऐसी योजनाओं के बढ़ते राजकोषीय बोझ को लेकर चिंता व्यक्त की है।
- Recent reports show that in States such as **Maharashtra and Madhya Pradesh**, the number of beneficiaries has been reducing in the name of rationalisation.
हालिया रिपोर्टों से पता चलता है कि महाराष्ट्र और मध्य प्रदेश जैसे राज्यों में लाभार्थियों की संख्या को युक्तिसंगत बनाने के नाम पर कम किया जा रहा है।
- In Delhi, even before the scheme has been rolled out, restrictive criteria such as requiring a recommendation from the local MLA or MP have been included, plausibly to keep the numbers in check.
दिल्ली में, योजना लागू होने से पहले ही, स्थानीय विधायक या सांसद की सिफारिश की आवश्यकता जैसे प्रतिबंधात्मक मानदंड शामिल किए गए हैं, संभवतः लाभार्थियों की संख्या को नियंत्रण में रखने के लिए।
- Evaluations of these schemes show that the money received by women is mostly spent on useful expenditures such as **food, health and education**.
इन योजनाओं के मूल्यांकन से पता चलता है कि महिलाओं को प्राप्त धनराशि का अधिकांश हिस्सा भोजन, स्वास्थ्य और शिक्षा जैसे उपयोगी मदों पर खर्च किया जाता है।
- The usual barriers to access such as lack of documents, access to banks, and errors in digital records also remain.
पहुँच में आने वाली सामान्य बाधाएँ, जैसे दस्तावेजों की कमी, बैंकों तक पहुँच और डिजिटल अभिलेखों में त्रुटियाँ, भी बनी हुई हैं।
- The question to be asked going forward is whether the finances for these schemes are coming at the cost of other investments in public services such as **education and health**.
आगे विचारणीय प्रश्न यह है कि क्या इन योजनाओं के लिए वित्तीय संसाधन शिक्षा और स्वास्थ्य जैसी अन्य सार्वजनिक सेवाओं में निवेश की कीमत पर उपलब्ध कराए जा रहे हैं।
- Chart 1 shows the expenditure of these schemes relative to total expenditure and the expenditure of these sectors for some major States.
चार्ट 1 कुछ प्रमुख राज्यों में इन योजनाओं पर होने वाले व्यय को कुल व्यय तथा इन क्षेत्रों पर होने वाले व्यय के सापेक्ष दर्शाता है।
- As a proportion of total State expenditure, expenditure on these **UCT schemes** range from over **10% in Jharkhand** to less than **0.3% in Himachal Pradesh**.
कुल राज्य व्यय के अनुपात के रूप में, इन UCT योजनाओं पर व्यय झारखंड में 10% से अधिक से लेकर हिमाचल प्रदेश में 0.3% से कम तक है।
- According to the **16th FC report**, almost **44% of State expenditure** is tied up in interest payments, pensions and salaries; this indicates that States do not have much space to manoeuvre towards financing new initiatives or investing in necessary infrastructure.
16वें वित्त आयोग की रिपोर्ट के अनुसार, राज्य व्यय का लगभग 44% हिस्सा ब्याज भुगतान, पेंशन और वेतन में बंधा हुआ है; इससे संकेत मिलता है कि राज्यों के पास नई पहलों के वित्तपोषण या आवश्यक बुनियादी ढाँचे में निवेश के लिए बहुत अधिक वित्तीय गुंजाइश नहीं है।
- The **16th FC** also shows that the States' social sector revenue expenditure as a proportion of total revenue expenditure has remained stable since **2011-12**.
16वें वित्त आयोग से यह भी पता चलता है कि कुल राजस्व व्यय के अनुपात के रूप में राज्यों का सामाजिक क्षेत्र का राजस्व व्यय 2011-12 से स्थिर बना हुआ है।
- However, as a proportion of GDP they show a declining trend since **2020-21**, indicating that there has been no commensurate increase in spending on these sectors with the increase in spending capacity.
हालाँकि, GDP के अनुपात के रूप में इसमें 2020-21 से गिरावट की प्रवृत्ति दिखाई देती है, जिससे संकेत मिलता है कि व्यय क्षमता में वृद्धि के अनुरूप इन क्षेत्रों पर खर्च में कोई समानुपाती वृद्धि नहीं हुई है।

- In **Jharkhand, Karnataka and West Bengal**, which happen to have the largest UCT schemes, the spending on UCTs is more than half the entire spending on **education** (Chart 2).
झारखंड, कर्नाटक और पश्चिम बंगाल, जहाँ सबसे बड़ी UCT योजनाएँ हैं, में UCT पर होने वाला व्यय शिक्षा पर होने वाले कुल व्यय के आधे से अधिक है (चार्ट 2)।
- Further, in Jharkhand, Karnataka, West Bengal, and Maharashtra, the spending on these schemes exceeds the entire State spending on **health** (Chart 3).
इसके अलावा, **झारखंड, कर्नाटक, पश्चिम बंगाल और महाराष्ट्र** में इन योजनाओं पर होने वाला व्यय राज्य द्वारा स्वास्थ्य पर किए जाने वाले कुल व्यय से अधिक है (चार्ट 3)।
- This shows that household benefits notwithstanding, there is a need for informed discussions on what the **long-term implications** of such schemes might be.
यह दर्शाता है कि घरेलू लाभों के बावजूद, ऐसी योजनाओं के दीर्घकालिक प्रभावों पर सूचित चर्चा की आवश्यकता है।
- As these schemes expand, they increase the fiscal burden on States, which is likely to generate pressure on other forms of **social sector spending**, including existing expenditures towards providing health and education services.
जैसे-जैसे इन योजनाओं का विस्तार होता है, वे राज्यों पर राजकोषीय बोझ बढ़ाती हैं, जिससे सामाजिक क्षेत्र के अन्य प्रकार के व्यय, जिसमें स्वास्थ्य और शिक्षा सेवाएँ प्रदान करने के लिए किए जाने वाले मौजूदा व्यय भी शामिल हैं, पर दबाव उत्पन्न होने की संभावना है।
- Given the resource-constrained position of State governments, this is not an unreasonable apprehension.
राज्य सरकारों की संसाधन-सीमित स्थिति को देखते हुए, यह आशंका अनुचित नहीं है।
- Over time, the implications of **underfunded public services** must be considered.
समय के साथ, अपर्याप्त वित्तपोषित सार्वजनिक सेवाओं के प्रभावों पर विचार किया जाना चाहिए।
- Some scholars have been arguing that such cash transfers are a '**compensation**' for the **failure of the state to create opportunities for all**.
कुछ विद्वानों का तर्क है कि ऐसे नकद अंतरण सभी के लिए अवसर पैदा करने में राज्य की विफलता के लिए एक 'क्षतिपूर्ति' हैं।
- The timing of the cash transfers, immediately before elections, has also led many to call them a '**dole**'.
चुनावों से ठीक पहले नकद अंतरण किए जाने के कारण भी कई लोगों ने इन्हें 'खैरात' कहा है।
- It could be argued that the recent protests demanding better facilities and greater accountability are an indication that people are no longer satisfied with only '**compensation**' and demand a fair share in resources.
यह तर्क दिया जा सकता है कि बेहतर सुविधाओं और अधिक जवाबदेही की मांग को लेकर हालिया प्रदर्शन इस बात का संकेत हैं कि लोग अब केवल 'क्षतिपूर्ति' से संतुष्ट नहीं हैं और संसाधनों में उचित हिस्सेदारी की मांग कर रहे हैं।



Using cultural connect and advertising to build consumer awareness and brand differentiation

OSM Economy

Shakthi H

Doing up a room calls for way more than just picking the paint colour for the walls. Long before choosing a brand, homeowners think about how they would use the space – a distraction-free work den, a fun-themed child's bedroom or a cosy balcony? They look for inspiration and lifestyle ideas first. To meet these consumers early in their shopping journey, Indicus Paints creates themed content on Pinterest centred around spaces such as home-offices, staircases, and balconies.

The Pinterest presence has generated engagement for the relatively new brand, says Gokul Basker, founder of Indicus Paints and partner at VNC Group, a diversified manufacturing and distribution conglomerate based in Tamil Nadu. Around half a million consumers engage with the content each month, while total views have run into 4-5 million, along with saves and shares, since the company launched in 2021. He does not, however, draw a direct connection between the engagement and sales. The platform, he says, gives people space to explore options at an early stage, before finally choosing

a paint brand. This distinction matters in a category where the person buying the paint is not always the one deciding on the brand.

Depending on the segment, homeowners may turn to painters, contractors, civil engineers, architects, or dealers for advice and recommendations. The consumer may have a veto but it is rarely exercised, Mr. Basker says.

For Indicus Paints, the VNC Group's first consumer brand, awareness forms an important first step in a category that is getting crowded with the entry of many new players with big pockets (like Birla Opus). The Indian paints and coatings market is estimated at ₹1 lakh crore, with a CAGR of 9% driven by rapid urbanisation, real estate activity and rising personal income. Decorative paints command 75% of this market and Asian Paints is the clear leader.

Grabbing attention

Indicus, says Mr. Basker, is in the awareness creation phase, ensuring the name is not unfamiliar to a consumer when a contractor recommends it. He observes younger consumers taking a greater interest in paint selection today, researching colours and fin-



Drishti Bommai: Reviving The Tradition, a documentary on figurines seen on South Indian rooftops, is one of Crosssections' project.

ishes, and arriving for the purchase armed with more information than earlier generations. Instagram and other social media have made consumers more discerning, he says.

Advertising is one of the ways in which the brand is driven by rapid urbanisation, real estate activity and rising personal income. Decorative paints command 75% of this market and Asian Paints is the clear leader.

Then there are the targeted efforts, such as Crosssections – a microsite within the brand's website

that's focused on architects and people interested in art and culture.

Visual symbolism

One of the projects under Crosssections is *Drishti Bommai: Reviving The Tradition*, a documentary on the striking charm figurines seen across South India on rooftops, at the entrances of new buildings, and on vehicles. The film looks at the cultural beliefs surrounding the figures, the visual symbolism of their distinctive features and the traditional craftsmanship involved in their making. It also captures the difficulties faced by the artisans, as cheaper, machine-made products and changing urban aesthetics affect the market for traditional crafts. Cross sections helped draw the attention

of architects to the relatively unknown paint brand, says Mr. Basker. After seeing the content on the microsite, architects, especially the younger crowd, reached out to Indicus for colour decks and meetings, Mr. Basker says.

The brand's advertising and cultural communication have prompted consumers to enquire about its availability in different parts of the country. Dealers have also received requests for specific products such as Ceiling Bright, the white water-based acrylic emulsion for ceilings, which is largely not available from other brands. Mr. Basker distinguishes between consumer-facing communication and those curated for channel partners. "You can't replace painter and dealer programmes with influencer marketing. Brands need to balance both," he says.

Xavier Prabhu, founder of BusinessHubs Consulting, an independent brand consultant, sees paint as a category where intermediaries such as dealers, contractors and interior designers continue to influence purchase decisions.

At the same time, he notes that consumers today are more informed,

with creators and digital content helping them understand products, applications and finishes.

Cultural positioning

Mr. Prabhu sees Indicus' cultural positioning as a way of creating a distinctive signal for the brand. Its focus on Tamil Nadu and its cultural heritage helps differentiate it from larger national and global brands that typically approach India as a single market.

If Indicus expands beyond its regional focus, it may need to identify cultural signals that resonate in other markets as well, Mr. Prabhu says.

For now, its brand-building effort is on two fronts: creating broad awareness through advertising and maintaining visibility in a category where purchases are infrequent; and targeted initiatives such as Pinterest and Crosssections to engage audiences on subjects that extend beyond paint.

In a category where the buying decision can pass through several hands, the brand-building challenge is not simply about reaching the consumer but also being recognised when the conversation around paint does happen.

(The writer is with The Hindu businessline)

10A8.
Using cultural connect and advertising to build consumer awareness and brand differentiation
उपभोक्ता और ब्रांड विभेदीकरण के निर्माण के लिए सांस्कृतिक जुड़ाव और विज्ञापन का उपयोग

उपभोक्ता और ब्रांड विभेदीकरण के निर्माण के लिए सांस्कृतिक जुड़ाव और विज्ञापन का उपयोग

- Doing up a room calls for way more than just picking the paint colour for the walls. किसी कमरे को सजाने-संवारने के लिए केवल दीवारों का पेंट रंग चुनना ही पर्याप्त नहीं है।
- Long before choosing a brand, homeowners think about how they would use the space — a distraction-free work den, a fun-themed child's bedroom or a cosy balcony? किसी ब्रांड का चयन करने से बहुत पहले, घर के मालिक इस बारे में सोचते हैं कि वे उस स्थान का उपयोग किस प्रकार करेंगे — बिना किसी व्यवधान वाला कार्य-कक्ष, मनोरंजक थीम वाला बच्चों का कमरा या आरामदायक बालकनी?
- They look for inspiration and lifestyle ideas first. वे सबसे पहले प्रेरणा और जीवनशैली संबंधी विचारों की तलाश करते हैं।
- To meet these consumers early in their shopping journey, Indicus Paints creates themed content on Pinterest centred around spaces such as home-offices, staircases, and balconies. इन उपभोक्ताओं तक उनकी खरीदारी यात्रा के शुरुआती चरण में पहुँचने के लिए Indicus Paints, Pinterest पर होम-ऑफिस, सीढ़ियों और बालकनी जैसे स्थानों पर केंद्रित थीम आधारित सामग्री तैयार करता है।
- The Pinterest presence has generated engagement for the relatively new brand, says Gokul Basker, founder of Indicus Paints and partner at VNC Group, a diversified manufacturing and distribution conglomerate based in Tamil Nadu. तमिलनाडु स्थित विविधीकृत विनिर्माण और वितरण समूह VNC Group के साझेदार और Indicus Paints के संस्थापक गोकुल बास्कर के अनुसार, Pinterest पर उपस्थिति ने इस अपेक्षाकृत नए ब्रांड के लिए उपभोक्ता जुड़ाव उत्पन्न किया है।
- Around half a million consumers engage with the content each month, while total views have run into 4-5 million, along with saves and shares, since the company launched in 2021.

हर महीने लगभग 5 लाख उपभोक्ता इस सामग्री से जुड़ते हैं, जबकि 2021 में कंपनी के लॉन्च होने के बाद से कुल 4-5 मिलियन व्यूज प्राप्त हुए हैं, साथ ही सामग्री को सेव और शेयर भी किया गया है।

- He does not, however, draw a direct connection between the engagement and sales. हालाँकि, वे उपभोक्ता जुड़ाव और बिक्री के बीच कोई प्रत्यक्ष संबंध नहीं स्थापित करते हैं।
- The platform, he says, gives people space to explore options at an early stage, before finally choosing a paint brand.

उनके अनुसार, यह प्लेटफॉर्म लोगों को अंततः पेंट ब्रांड चुनने से पहले शुरुआती चरण में विभिन्न विकल्पों का पता लगाने के लिए अवसर प्रदान करता है।

- This distinction matters in a category where the person buying the paint is not always the one deciding on the brand. यह अंतर उस श्रेणी में महत्वपूर्ण है जहाँ पेंट खरीदने वाला व्यक्ति हमेशा ब्रांड का निर्णय लेने वाला व्यक्ति नहीं होता।

- Depending on the segment, homeowners may turn to **painters, contractors, civil engineers, architects, or dealers** for advice and recommendations. खंड के आधार पर, घर के मालिक सलाह और सिफारिशों के लिए पेंटर, ठेकेदार, सिविल इंजीनियर, वास्तुकार या डीलर की ओर रुख कर सकते हैं।

- The consumer may have a veto but it is rarely exercised, Mr. Basker says. श्री बास्कर के अनुसार, उपभोक्ता के पास अंतिम निर्णय को रोकने का अधिकार हो सकता है, लेकिन इसका प्रयोग बहुत कम किया जाता है।
- For Indicus Paints, the VNC Group's first consumer brand, awareness forms an important first step in a category that is getting crowded with the entry of many new players with big pockets (like Birla Opus).

VNC Group के पहले उपभोक्ता ब्रांड Indicus Paints के लिए ब्रांड जागरूकता एक महत्वपूर्ण पहला कदम है, विशेष रूप से ऐसे क्षेत्र में जहाँ बड़ी वित्तीय क्षमता वाले कई नए खिलाड़ी, जैसे Birla Opus, प्रवेश कर रहे हैं और प्रतिस्पर्धा बढ़ रही है।

- The Indian paints and coatings market is estimated at ₹1 lakh crore, with a CAGR of 9% driven by rapid urbanisation, real estate activity and rising personal income. भारतीय पेंट और कोटिंग्स बाजार का अनुमानित आकार ₹1 लाख करोड़ है और इसकी CAGR 9% है, जिसे तीव्र शहरीकरण, रियल एस्टेट गतिविधियों और बढ़ती व्यक्तिगत आय से बढ़ावा मिल रहा है।
- Decorative paints command 75% of this market and Asian Paints is the clear leader. डेकोरेटिव पेंट्स इस बाजार के 75% हिस्से पर कब्जा रखते हैं और Asian Paints स्पष्ट रूप से अग्रणी है।

Grabbing attention

ध्यान आकर्षित करना

- Indicus, says Mr. Basker, is in the **awareness creation phase**, ensuring the name is not unfamiliar to a consumer when a contractor recommends it. श्री बास्कर के अनुसार, Indicus जागरूकता निर्माण के चरण में है, ताकि जब कोई ठेकेदार इसकी सिफारिश करे तो उपभोक्ता के लिए यह नाम अपरिचित न हो।
- He observes younger consumers taking a greater interest in paint selection today, researching colours and finishes, and arriving for the purchase armed with more information than earlier generations. वे देखते हैं कि आज युवा उपभोक्ता पेंट के चयन में अधिक रुचि ले रहे हैं, रंगों और फिनिश के बारे में शोध कर रहे हैं तथा पिछली पीढ़ियों की तुलना में अधिक जानकारी के साथ खरीदारी के लिए पहुँच रहे हैं।
- Instagram and other social media have made consumers more discerning, he says. उनके अनुसार, Instagram और अन्य सोशल मीडिया प्लेटफॉर्मों ने उपभोक्ताओं को अधिक विवेकशील और जागरूक बना दिया है।

- Advertising is one of the ways in which the brand is building initial awareness.
विज्ञापन उन माध्यमों में से एक है जिनके द्वारा ब्रांड प्रारंभिक **जागरूकता** का निर्माण कर रहा है।
- Mr. Basker says the mass market communication uses humour and entertainment to establish Indicus as a **new and bold brand**.
श्री बास्कर के अनुसार, **मास मार्केट संचार** Indicus को एक **नए और साहसिक ब्रांड** के रूप में स्थापित करने के लिए हास्य और मनोरंजन का उपयोग करता है।
- Longer-term initiatives such as serving as the co title sponsor of the reality TV show **Super Singer Junior 11** help in sustaining brand recall in a category where the consumer may repaint a home only once in several years.
Super Singer Junior 11 जैसे रियलिटी टीवी शो के **सह-शीर्षक प्रायोजक** के रूप में जुड़ने जैसी दीर्घकालिक पहल उस श्रेणी में ब्रांड की **स्मरणीयता बनाए रखने** में मदद करती हैं, जहाँ उपभोक्ता कई वर्षों में केवल एक बार अपने घर को दोबारा पेंट कर सकता है।
- Then there are the targeted efforts, such as **Crosssections** — a microsite within the brand's website that's focused on **architects and people interested in art and culture**.
इसके अलावा लक्षित प्रयास भी हैं, जैसे **Crosssections** — ब्रांड की वेबसाइट के भीतर एक माइक्रोसाइट, जो **वास्तुकारों तथा कला और संस्कृति में रुचि रखने वाले लोगों** पर केंद्रित है।

Visual symbolism

दृश्य प्रतीकात्मकता

- One of the projects under **Crosssections** is **Drishti Bommai: Reviving The Tradition**, a documentary on the striking charm of murals seen across South India on rooftops, at the entrances of new buildings, and on vehicles.
Crosssections के अंतर्गत परियोजनाओं में से एक है **Drishti Bommai: Reviving The Tradition**, जो दक्षिण भारत में छतों पर, नई इमारतों के प्रवेश द्वारों पर और वाहनों पर दिखाई देने वाली आकर्षक **मुरल** पर आधारित एक वृत्तचित्र है।
- The film looks at the **cultural beliefs** surrounding the murals, the visual symbolism of their distinctive features and the traditional craftsmanship involved in their making.
यह फिल्म इन आकृतियों से जुड़ी **सांस्कृतिक मान्यताओं**, उनकी विशिष्ट विशेषताओं की दृश्य प्रतीकात्मकता और उनके निर्माण में शामिल पारंपरिक **शिल्प कौशल** को देखता है।
- It also captures the difficulties faced by the artisans, as cheaper, machine-made products and changing urban aesthetics affect the market for traditional crafts.
यह कारीगरों के सामने आने वाली **कठिनाइयों** को भी दर्शाता है, क्योंकि सस्ते, मशीन से निर्मित उत्पाद और बदलती शहरी सौंदर्य-दृष्टि पारंपरिक शिल्प के बाजार को प्रभावित करते हैं।
- Cross sections helped draw the attention**
Cross sections ने ध्यान आकर्षित करने में मदद की
- of architects to the relatively unknown paint brand, says Mr. Basker.
श्री बास्कर के अनुसार, Cross sections ने अपेक्षाकृत **अज्ञात पेंट ब्रांड** की ओर वास्तुकारों का ध्यान आकर्षित करने में मदद की।
- After seeing the content on the microsite, architects, especially the younger crowd, reached out to Indicus for colour decks and meetings, Mr. Basker says.
श्री बास्कर कहते हैं कि माइक्रोसाइट पर सामग्री देखने के बाद वास्तुकारों, विशेष रूप से **युवा वर्ग**, ने रंगों के डेक और बैठकों के लिए Indicus से संपर्क किया।
- The brand's advertising and cultural communication have prompted consumers to enquire about its availability in different parts of the country.
ब्रांड के **विज्ञापन और सांस्कृतिक संचार** ने उपभोक्ताओं को देश के विभिन्न हिस्सों में इसकी उपलब्धता के बारे में पूछताछ करने के लिए प्रेरित किया है।
- Dealers have also received requests for specific products such as Ceiling Bright, the white water based acrylic emulsion for ceilings, which is largely not available from other brands.

डीलरों को **Ceiling Bright** जैसे विशिष्ट उत्पादों के लिए भी अनुरोध प्राप्त हुए हैं, जो छतों के लिए सफेद जल-आधारित ऐक्रेलिक इमल्शन है और अन्य ब्रांडों से व्यापक रूप से उपलब्ध नहीं है।

- Mr. Basker distinguishes between consumer-facing communication and those curated for channel partners.
श्री बास्कर **उपभोक्ता-केंद्रित संचार** और चैनल भागीदारों के लिए तैयार किए गए संचार के बीच अंतर करते हैं।
- “You can’t replace painter and dealer programmes with influencer marketing. Brands need to balance both,” he says.
“आप पेंटर और डीलर कार्यक्रमों को **इन्फ्लुएंसर मार्केटिंग** से प्रतिस्थापित नहीं कर सकते। ब्रांडों को दोनों के बीच संतुलन बनाना चाहिए,” वे कहते हैं।
- Xavier Prabhu, founder of BusinessHubs Consulting, an independent brand consultant, sees paint as a category where intermediaries such as dealers, contractors and interior designers continue to influence purchase decisions.
BusinessHubs Consulting के संस्थापक और स्वतंत्र ब्रांड सलाहकार **जेवियर प्रभु** पेंट को ऐसी श्रेणी के रूप में देखते हैं, जहाँ डीलर, ठेकेदार और इंटीरियर डिजाइनर जैसे **मध्यस्थ खरीद संबंधी निर्णयों को प्रभावित** करते रहते हैं।
- At the same time, he notes that consumers today are more informed, साथ ही, वे ध्यान दिलाते हैं कि आज **उपभोक्ता अधिक जागरूक हैं**,
- with creators and digital content helping them understand products, applications and niches.
और क्रिएटर्स तथा **डिजिटल सामग्री** उन्हें उत्पादों, उनके अनुप्रयोगों और **niches** को समझने में सहायता कर रही है।

Cultural positioning सांस्कृतिक स्थिति निर्धारण

- Mr. Prabhu sees Indicus’ cultural positioning as a way of creating a **distinctive signal** for the brand.
श्री प्रभु Indicus के **सांस्कृतिक स्थिति निर्धारण** को ब्रांड के लिए एक विशिष्ट पहचान संकेत बनाने के माध्यम के रूप में देखते हैं।
- Its focus on Tamil Nadu and its cultural heritage helps differentiate it from larger national and global brands that typically approach India as a single market
तमिलनाडु और उसकी **सांस्कृतिक विरासत** पर इसका ध्यान इसे बड़े राष्ट्रीय और वैश्विक ब्रांडों से अलग करने में मदद करता है, जो सामान्यतः भारत को एकल बाजार के रूप में देखते हैं।
- If Indicus expands beyond its regional focus, it may need to identify cultural signals that resonate in other markets as well, Mr. Prabhu says.
श्री प्रभु कहते हैं कि यदि Indicus अपने **क्षेत्रीय फोकस** से आगे विस्तार करता है, तो उसे ऐसे सांस्कृतिक संकेतों की पहचान करने की आवश्यकता हो सकती है जो अन्य बाजारों में भी प्रभावी हों।
- For now, its brand building effort is on two fronts:
फिलहाल, इसके **ब्रांड निर्माण प्रयास** दो मोर्चों पर केंद्रित हैं:
- creating broad awareness through advertising and maintaining visibility in a category where purchases are infrequent; and targeted initiatives such as Pinterest and Crosssections to engage audiences on subjects that extend beyond paint.
विज्ञापन के माध्यम से व्यापक **जागरूकता पैदा करना** और ऐसी श्रेणी में दृश्यता बनाए रखना जहाँ खरीदारी कम होती है; तथा **Pinterest और Crosssections** जैसी लक्षित पहलों के माध्यम से दर्शकों को ऐसे विषयों से जोड़ना, जो पेंट से आगे तक विस्तृत हैं।
- In a category where the buying decision can pass through several hands, the brand-building challenge is not simply about reaching the consumer but also being recognised when the conversation around paint does happen.

ऐसी श्रेणी में जहाँ खरीद का निर्णय कई लोगों के माध्यम से आगे बढ़ सकता है, **ब्रांड निर्माण की चुनौती** केवल उपभोक्ता तक पहुँचने की नहीं है, बल्कि पेंट के बारे में बातचीत होने पर पहचाने जाने की भी है।

GS Paper III: Science and Technology		10 August 2026
TOPICS COVERED		
10A8	If DNA is the instruction manual, we just opened a big second volume यदि DNA निर्देश पुस्तिका है, तो हमने अभी इसका एक बड़ा दूसरा खंड खोला है।	
10A8	Glueball: matter of force ग्लूबॉल: बल का पदार्थ	
10A8	Former U.S. President Joe Biden's cancer has spread further, says son पूर्व अमेरिकी राष्ट्रपति जो बाइडेन का कैंसर और फैल गया है, बेटे ने कहा	

If DNA is the instruction manual, we just opened a big second volume

A new study found that several inherited traits occur not because genes mutate but because of chemical modifications of the genome that can jump across generations, change depending on whether an animal is male or female, and even copy themselves from one copy of a gene to another

D.P. Kasbekar

A team led by researchers at the Johns Hopkins School of Medicine has found that several inherited traits in the mouse genome break the rules Gregor Mendel laid down in the 19th century about how genes work. This is not because the genes mutate but because of chemical modifications of the genome that can jump across generations, change depending on whether an animal is male or female, and even copy themselves from one copy of a gene to another.

Their findings were reported recently in *Nature Genetics*. While the study was in mice, the implications go far beyond – as the same mechanisms may also shape human health, and be able to explain conditions that have long resisted genetic analysis.

'On' and 'off' genes

Every cell in the body carries two kinds of genetic information. One is the sequence – the order of the four chemical bases, A, T, G, and C, that spells out which proteins a gene produces. This is the genome that geneticists have spent decades mapping. The other is about whether a small chemical compound – called the methyl group (CH₃) – is attached to the DNA at specific locations.

When cytosines are methylated, the gene is usually silenced. When the group is removed, the gene can be expressed again. This process of switching genes 'on' and 'off' without changing the underlying sequence is called epigenetic modification. Epigenetic modifications are not permanent. They can even differ between tissues – e.g. liver cells and muscle cells methylate differently. Many of them are also reversed when the body makes fresh sperm or eggs.

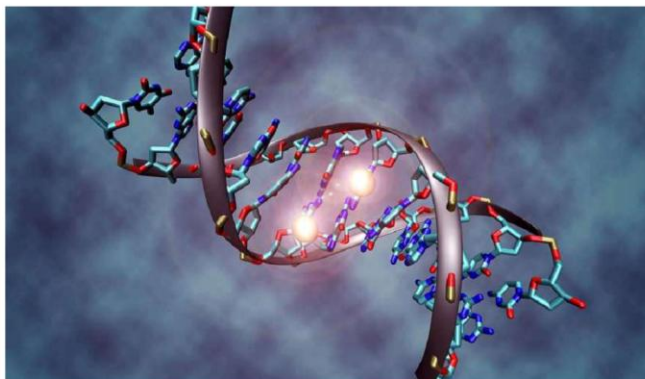
The new study has found this rule to be violated.

Vastly underestimated

The researchers used a technology called nanopore sequencing. A single strand of DNA is threaded through a microscopic hole – the pore. As each base passes through, it produces a distinct blip in the electrical current flowing across the pore. Methylated cytosines produce a different blip from unmethylated ones.

The team sequenced DNA from the liver and muscle tissues of mice belonging to two inbred strains. Their genomes differed at millions of positions.

Of the 7,600 or so locations on the genomes where the methylation patterns differed, around 52% followed Mendel's rules. That is, methylation had passed reliably from parent to offspring. But in the remaining 7% or so, the researchers identified more than 500 instances of



Representation of a DNA molecule that is methylated. The two white spheres represent methyl groups. They are bound to two cytosine nucleotide molecules that make up the DNA sequence. CHRISTOPH BOCK (CC BY-SA)

non-Mendelian epigenetic inheritance.

To illustrate, in 305 genome regions, all in the liver, the methylation depended on whether the mouse was male or female. Mendel's rules don't allow this. In 304 of these regions, females' genomes were more methylated than males' genomes.

While sex-specific methylation in the liver has been reported before in both mice and humans, the new study found that the scale has been vastly underestimated.

A new first

The researchers also identified at least five new genes displaying genomic imprinting – where the level of methylation depends on whether the gene was inherited from the mother or the father.

The most striking finding had to do with a phenomenon called paramutation. Here, the methylation status of one copy of a gene – say, the one inherited from the father – is also transferred to the other copy, inherited from the mother. The 'rewritten' mother's copy then persists through the next generation.

Again, scientists had observed paramutation in plants and engineered mice before. This is the first time it has been reported to be naturally occurring in a mammal's genome.

In the study, the paramutated gene was *Capn1*, which contains the recipe for a protein that is active in the testes during meiosis. When this protein is not available

The researchers also identified at least five new genes displaying genomic imprinting – where the level of methylation depends on whether the gene was inherited from the mother or the father

in sufficient amounts, the effects may include infertility and azoospermia (having no sperm in the semen).

The team also identified two likely instances of paramutation related to the gene *Vps37c* and a downstream stretch of the genome. Both these areas are associated with intracisternal A particles – the genetic remains of ancient viruses that became embedded in the mouse genome.

According to the study's authors, these particles may be central to the paramutation process since they have been known to resist the body's mechanisms to remove epigenetic modifications when producing sperm or eggs.

Genome-wide association studies

The study also offers a new framework to explain heritable traits that researchers have struggled to study using genetics. For instance, a condition called hypertrichosis pinnae auris leads to the growth of coarse, dark hair on the outer ear and is prevalent among South Asian men. It is transmitted from fathers to sons

but never to daughters.

According to the study's results, if a father carries a paramutagenic version of the gene that causes this condition and the mother carries a 'normal' version, then in a son the paramutagenic copy would rewrite the maternal copy, leaving the son to have hairy ears. He could then pass the paramutagenic variant of the gene to his own children. But if the paramutagenic variant is demethylated in females – as the new findings suggest can happen – a daughter's own copies of the gene would be unmethylated and her ears would be unaffected.

Even more broadly, the findings imply that genome-wide association studies – an increasingly popular kind of study that looks for the genetic variants linked to diseases – may be missing a significant fraction of heritable variation because that variation is not in the sequence. Instead, the study's authors have argued the work opens the door to a new kind of analysis: allele-specific epigenome-wide association studies, which trace methylation patterns rather than sequence variants, to find parts of the genome associated with diseases that conventional methods miss.

Human genetics has long assumed that if you sequence the genome, you have read the instruction manual. It may be that the manual has a second volume – and we have barely opened it today.

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THE GIST

A team led by researchers at the Johns Hopkins School of Medicine has found that several inherited traits in the mouse genome break the rules Gregor Mendel laid down in the 19th century about how genes work.

The study offers a new framework to explain heritable traits that researchers have struggled to study using genetics.

The study's authors have argued that the work opens the door to a new kind of analysis: allele-specific epigenome-wide association studies.

10A8. If DNA is the instruction manual, we just opened a big second volume यदि DNA निर्देश पुस्तिका है, तो हमने अभी इसका एक बड़ा दूसरा खंड खोला है।

- A team led by researchers at the **Johns Hopkins School of Medicine** has found that **several inherited traits in the mouse genome break the rules Gregor Mendel laid down in the 19th century about how genes work.**
जॉन्स हॉपकिन्स स्कूल ऑफ मेडिसिन के शोधकर्ताओं के नेतृत्व में एक दल ने पाया है कि चूहे के जीनोम में कई वंशागत लक्षण उन नियमों का उल्लंघन करते हैं जिन्हें ग्रेगर मेंडल ने 19वीं शताब्दी में जीन के कार्य करने के तरीके के संबंध में प्रतिपादित किया था।
- This is not because the genes mutate but because of chemical modifications of the genome that can jump across generations, change depending on whether an animal is male or female, and even copy themselves from one copy of a gene to another.
यह जीन में उत्परिवर्तन के कारण नहीं है, बल्कि जीनोम में होने वाले रासायनिक संशोधनों के कारण है, जो पीढ़ियों के बीच स्थानांतरित हो सकते हैं, यह इस बात के आधार पर बदल सकते हैं कि कोई जीव नर है या मादा, और यहां तक कि जीन की एक प्रति से दूसरी प्रति में स्वयं की प्रतिलिपि भी बना सकते हैं।
- Their findings were reported recently in **Nature Genetics**. 97182
उनके निष्कर्ष हाल ही में **Nature Genetics** में प्रकाशित हुए हैं। 97182
- While the study was in mice, the implications go far beyond — as the same mechanisms may also shape human health, and be able to explain conditions that have long resisted genetic analysis.
हालाँकि यह अध्ययन चूहों में किया गया था, इसके निहितार्थ इससे कहीं अधिक व्यापक हैं — क्योंकि यही तंत्र मानव स्वास्थ्य को भी प्रभावित कर सकते हैं और उन स्थितियों को समझाने में सक्षम हो सकते हैं, जो लंबे समय से आनुवंशिक विश्लेषण की पहुँच से बाहर रही हैं।

‘On’ and ‘off’ genes

‘सक्रिय’ और ‘निष्क्रिय’ जीन

- Every cell in the body carries two kinds of genetic information.**
शरीर की प्रत्येक कोशिका में दो प्रकार की आनुवंशिक जानकारी होती है।
- One is the sequence —the order of the four **chemical bases, A, T, G, and C, that spells out which proteins a gene produces.**
पहली अनुक्रमणिका है — चार रासायनिक क्षारों **A, T, G और C** का क्रम, जो यह निर्धारित करता है कि कोई जीन कौन-से प्रोटीन उत्पन्न करता है।
- This is the genome that geneticists have spent decades mapping.
यही वह जीनोम है, जिसका मानचित्रण आनुवंशिकीविद् दशकों से करते आए हैं।
- The other is about whether a small chemical compound — called the **methyl group (–CH₃)** — is attached to the DNA at specific locations.
दूसरी जानकारी इस बात से संबंधित है कि क्या एक छोटा रासायनिक यौगिक — जिसे **मिथाइल समूह (–CH₃)** कहा जाता है — DNA पर विशिष्ट स्थानों से जुड़ा हुआ है।
- When cytosines are methylated, the gene is usually silenced.
जब साइटोसिन का मिथाइलीकरण होता है, तो सामान्यतः जीन निष्क्रिय हो जाता है।
- When the group is removed, the gene can be expressed again.
जब यह समूह हटा दिया जाता है, तो जीन पुनः अभिव्यक्त हो सकता है।
- This process of switching genes ‘on’ and ‘off’ without changing the underlying sequence is called epigenetic modification.**
मूल अनुक्रम में परिवर्तन किए बिना जीन को ‘सक्रिय’ और ‘निष्क्रिय’ करने की इस प्रक्रिया को एपिजेनेटिक संशोधन कहा जाता है।

- Epigenetic modifications are not permanent.
एपिजेनेटिक संशोधन स्थायी नहीं होते हैं।
- They can even differ between tissues — e.g. liver cells and muscle cells methylate differently.
वे विभिन्न ऊतकों के बीच भी भिन्न हो सकते हैं — उदाहरण के लिए, यकृत कोशिकाएँ और मांसपेशी कोशिकाएँ अलग-अलग प्रकार से मिथाइलेट होती हैं।
- Many of them are also reversed when the body makes fresh sperm or eggs.
जब शरीर नए शुक्राणु या अंडाणु बनाता है, तब इनमें से कई संशोधन भी उलट जाते हैं।
- The new study has found this rule to be violated.
नए अध्ययन में पाया गया है कि इस नियम का उल्लंघन भी होता है।

Vastly underestimated

व्यापक रूप से कम आकलन किया गया

- The researchers used a technology called **nanopore sequencing**.
शोधकर्ताओं ने **नैनोपोर अनुक्रमण** नामक तकनीक का उपयोग किया।
- A single strand of DNA is threaded through a microscopic hole — the pore.
DNA की एकल श्रृंखला को एक सूक्ष्म छिद्र — अर्थात् **पोर** — के माध्यम से गुजारा जाता है।
- As each base passes through, it produces a distinct blip in the electrical current flowing across the pore.
जैसे ही प्रत्येक क्षार इस छिद्र से होकर गुजरता है, यह छिद्र के आर-पार प्रवाहित होने वाली विद्युत धारा में एक विशिष्ट संकेत उत्पन्न करता है।
- **Methylated cytosines produce a different blip from unmethylated ones.**
मिथाइलेटेड साइटोसिन और गैर-मिथाइलेटेड साइटोसिन अलग-अलग संकेत उत्पन्न करते हैं।
- The team sequenced DNA from the liver and muscle tissues of mice belonging to two inbred strains.
दल ने दो **अंतःप्रजनित नस्लों** से संबंधित चूहों के यकृत और मांसपेशी ऊतकों से प्राप्त DNA का अनुक्रमण किया।
- Their genomes differed at millions of positions.
उनके जीनोम लाखों स्थानों पर एक-दूसरे से भिन्न थे।
- Of the 7,600 or so locations on the genomes where the methylation patterns differed, around 93% followed **Mendel's rules**.
जीनोम में लगभग **7,600 स्थानों**, जहाँ मिथाइलेशन के पैटर्न अलग-अलग थे, उनमें से लगभग **93%** ने **मेंडल के नियमों** का पालन किया।
- That is, methylation had passed reliably from parent to offspring.
अर्थात्, **मिथाइलेशन** माता-पिता से संतानों में विश्वसनीय रूप से स्थानांतरित हुआ था।
- But in the remaining 7% or so, the researchers identified more than **500 instances of non-Mendelian epigenetic inheritance**.
लेकिन शेष लगभग **7%** में शोधकर्ताओं ने **गैर-मेंडेलियन एपिजेनेटिक वंशागति** के **500 से अधिक उदाहरणों** की पहचान की।
- To illustrate, in **305 genome regions**, all in the liver, the methylation depended on whether the mouse was male or female.
उदाहरण के लिए, **जीनोम के 305 क्षेत्रों**, जो सभी यकृत में पाए गए, में मिथाइलेशन इस बात पर निर्भर करता था कि चूहा **नर था या मादा**।
- Mendel's rules don't allow this.
मेंडल के नियम इसकी अनुमति नहीं देते हैं।
- In **304 of these regions**, females' genomes were more methylated than males' genomes.
इनमें से **304 क्षेत्रों** में मादाओं के जीनोम में नर चूहों के जीनोम की तुलना में अधिक **मिथाइलेशन** पाया गया।

- While sex-specific methylation in the liver has been reported before in both mice and humans, the new study found that the scale has been **vastly underestimated**.
हालाँकि यकृत में लिंग-विशिष्ट मिथाइलेशन की सूचना पहले भी चूहों और मनुष्यों दोनों में दी जा चुकी है, नए अध्ययन में पाया गया कि इसके पैमाने का व्यापक रूप से कम आकलन किया गया था।

Anew first

एक नया •rst

- The researchers also identified at least five new genes displaying **genomic imprinting** — where the level of methylation depends on whether the gene was inherited from the mother or the father.
शोधकर्ताओं ने जीनोमिक इम्प्रिंटिंग प्रदर्शित करने वाले कम से कम पाँच नए जीनों की भी पहचान की — जहाँ मिथाइलेशन का स्तर इस बात पर निर्भर करता है कि जीन माँ से विरासत में मिला है या पिता से।
- The most striking •nding had to do with a phenomenon called **paramutation**.
सबसे उल्लेखनीय निष्कर्ष पैराम्यूटेशन नामक घटना से संबंधित था।
- Here, the methylation status of one copy of a gene — say, the one inherited from the father — is also transferred to the other copy, inherited from the mother.
इसमें जीन की एक प्रति — उदाहरण के लिए, पिता से विरासत में मिली प्रति — की मिथाइलेशन स्थिति दूसरी प्रति, जो माँ से विरासत में मिली है, में भी स्थानांतरित हो जाती है।
- The 'rewritten' mother's copy then persists through the next generation.
इसके बाद माँ से प्राप्त 'पुनर्लिखित' प्रति अगली पीढ़ी तक बनी रहती है।
- Again, scientists had observed paramutation in plants and engineered mice before.
इससे पहले भी वैज्ञानिकों ने पौधों और आनुवंशिक रूप से संशोधित चूहों में पैराम्यूटेशन का अवलोकन किया था।
- This is the •rst time it has been reported to be naturally occurring in a **mammal's genome**.
यह पहली बार है जब किसी स्तनपायी के जीनोम में इसके प्राकृतिक रूप से होने की सूचना दी गई है।
- In the study, the paramutated gene was **Capn11**, which contains the recipe for a protein that is active in the testes during meiosis.
अध्ययन में पैराम्यूटेटेड जीन **Capn11** था, जिसमें एक ऐसे प्रोटीन के निर्माण की जानकारी होती है जो अर्धसूत्री विभाजन के दौरान वृषणों में सक्रिय रहता है।
- When this protein is not available in sufficient amounts, the effects may include **infertility and azoospermia** (having no sperm in the semen).
जब यह प्रोटीन पर्याप्त मात्रा में उपलब्ध नहीं होता है, तो इसके प्रभावों में बांझपन और एज़ूस्पर्मिया (वीर्य में शुक्राणुओं का न होना) शामिल हो सकते हैं।
- The team also identified two likely instances of paramutation related to the gene **Vps37c** and a downstream stretch of the genome.
टीम ने **Vps37c** जीन और जीनोम के उसके डाउनस्ट्रीम क्षेत्र से संबंधित पैराम्यूटेशन के दो संभावित उदाहरणों की भी पहचान की।
- Both these areas are associated with **intracisternal A particles** —the genetic remains of ancient viruses that became embedded in the mouse genome.
ये दोनों क्षेत्र इंटरसिस्टर्नल A पार्टिकल्स से जुड़े हैं — जो प्राचीन वायरस के आनुवंशिक अवशेष हैं और जो चूहे के जीनोम में समाहित हो गए थे।
- According to the study's authors, these particles may be central to the **paramutation process** since they have been known to resist the body's mechanisms to remove epigenetic modifications when producing sperm or eggs.
अध्ययन के लेखकों के अनुसार, ये कण पैराम्यूटेशन प्रक्रिया में केंद्रीय भूमिका निभा सकते हैं, क्योंकि वे शुक्राणु या अंडाणु के निर्माण के दौरान एपिजेनेटिक संशोधनों को हटाने के लिए शरीर की तंत्रों का प्रतिरोध करने के लिए जाने जाते हैं।

Genome-wide association studies

जीनोम-व्यापी एसोसिएशन अध्ययन

- The study also offers a new framework to explain **heritable traits** that researchers have struggled to study using genetics.
यह अध्ययन **वंशागत लक्षणों** की व्याख्या करने के लिए एक नया ढाँचा भी प्रस्तुत करता है, जिनका आनुवंशिकी के माध्यम से अध्ययन करने में शोधकर्ताओं को कठिनाई होती रही है।
- For instance, a condition called **hypertrichosis pinnae auris** leads to the growth of coarse, dark hair on the outer ear and is prevalent among South Asian men.
उदाहरण के लिए, **हाइपरट्राइकोसिस पिन्नी ऑरिस** नामक स्थिति बाहरी कान पर मोटे, काले बालों की वृद्धि का कारण बनती है और यह दक्षिण एशियाई पुरुषों में अधिक पाई जाती है।
- It is transmitted from fathers to sons but never to daughters.
यह पिता से पुत्रों में स्थानांतरित होती है, लेकिन कभी पुत्रियों में नहीं जाती।
- According to the study's results, if a father carries a **paramutagenic version** of the gene that causes this condition and the mother carries a 'normal' version, then in a son the paramutagenic copy would rewrite the maternal copy, leaving the son to have hairy ears.
अध्ययन के परिणामों के अनुसार, यदि पिता इस स्थिति का कारण बनने वाले जीन का **पैराम्यूटेजेनिक संस्करण** वहन करता है और माँ इसका 'सामान्य' संस्करण वहन करती है, तो पुत्र में पैराम्यूटेजेनिक प्रति मातृ प्रति को पुनर्लिखित कर देगी, जिसके परिणामस्वरूप पुत्र के कानों पर बाल होंगे।
- He could then pass the paramutagenic variant of the gene to his own children.
इसके बाद वह जीन के **पैराम्यूटेजेनिक वैरिएंट** को अपनी संतानों में स्थानांतरित कर सकता है।
- But if the paramutagenic variant is demethylated in females — as the new findings suggest can happen — a daughter's own copies of the gene would be unmethylated and her ears would be unaffected.
लेकिन यदि महिलाओं में पैराम्यूटेजेनिक वैरिएंट **डीमिथाइलेटेड** हो जाता है — जैसा कि नए निष्कर्षों से संभव प्रतीत होता है — तो पुत्री में जीन की अपनी प्रतियाँ अनमिथाइलेटेड होंगी और उसके कान अप्रभावित रहेंगे।
- Even more broadly, the findings imply that **genome-wide association studies** — an increasingly popular kind of study that looks for the genetic variants linked to diseases — may be missing a significant fraction of heritable variation because that variation is not in the sequence.
और व्यापक रूप से, निष्कर्षों से संकेत मिलता है कि **जीनोम-व्यापी एसोसिएशन अध्ययन** — जो रोगों से जुड़े आनुवंशिक वैरिएंट की खोज करने वाले तेजी से लोकप्रिय होते जा रहे अध्ययनों का एक प्रकार है — वंशागत विविधता के एक महत्वपूर्ण हिस्से को छोड़ सकते हैं, क्योंकि वह विविधता अनुक्रम में मौजूद नहीं है।
- Instead, the study's authors have argued the work opens the door to a new kind of analysis: **allele-specific epigenome-wide association studies**, which trace methylation patterns rather than sequence variants, to find parts of the genome associated with diseases that conventional methods miss.
इसके बजाय, अध्ययन के लेखकों ने तर्क दिया है कि यह कार्य एक नए प्रकार के विश्लेषण का मार्ग खोलता है: **एलील-विशिष्ट एपिजीनोम-व्यापी एसोसिएशन अध्ययन**, जो अनुक्रम वैरिएंट के बजाय **मिथाइलेशन पैटर्न** का पता लगाते हैं, ताकि जीनोम के उन हिस्सों की पहचान की जा सके जो रोगों से जुड़े हैं और जिन्हें पारंपरिक विधियाँ पहचानने में विफल रहती हैं।
- Human genetics has long assumed that if you sequence the genome, you have read the **instruction manual**.
मानव आनुवंशिकी में लंबे समय से यह माना जाता रहा है कि यदि आप जीनोम का अनुक्रम निर्धारित कर लेते हैं, तो आपने **निर्देश पुस्तिका** पढ़ ली है।
- It may be that the manual has a **second volume** — and we have barely opened it today.
संभव है कि इस पुस्तिका का एक **दूसरा खंड** भी हो — और आज हमने उसे मुश्किल से खोलना शुरू किया है।



Glueball: matter of force

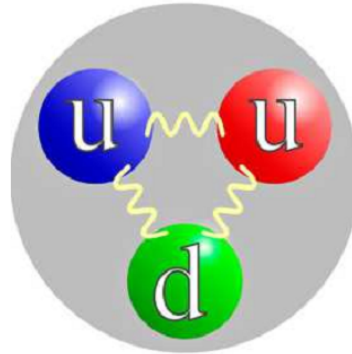
GS III: S&T
Vasudevan Mukunth

Nature has four fundamental forces: gravity, the weak force (responsible for radioactivity), electromagnetism, and the strong force. The strong force is responsible for keeping the protons and neutrons together in the nuclei of atoms.

The theory describing the strong interaction between two particles is called quantum chromodynamics (QCD). In QCD, the strong force is carried by gluons — just like how the electromagnetic force is carried by photons. But unlike photons, gluons carry a kind of charge that allows gluons to be attracted to each other. And QCD says they can come together to form composite particles called glueballs.

In new research, scientists have taken a big step closer to showing glueballs exist. The team used data from the BESIII experiment in Beijing to uncover them. This is easier said than done because when a glueball appears in a particle physics experiment, it will be very short-lived and quickly decay into lighter particles in a way that is hard to distinguish from some other particles.

Scientists had first observed a candidate glueball called X(2370) in BESIII data in 2011. Its mass seemed consistent with a glueball. They also estimated some of its properties based on the decays of a particle called the J/ψ meson. The new data buttresses the odds that



Protons are made up of three smaller particles called quarks, held together by the strong interaction mediated by particles called gluons. ARPAD HORVATH (CC BY-SA)

X(2370) is indeed a glueball by revealing more properties glueballs possess.

Thus, BESIII has assembled the strongest case to date that X(2370) has a dominant glueball component, potentially providing the first evidence for a form of matter made just from the carriers of a fundamental force.

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10A8. Glueball: matter of force

ग्लूबॉल: बल का पदार्थ

• Nature has four fundamental forces: **gravity**, the **weak force** (responsible for radioactivity), **electromagnetism**, and the **strong force**.

प्रकृति में चार मूलभूत बल हैं: गुरुत्वाकर्षण, कमजोर बल (जो रेडियोधर्मिता के लिए उत्तरदायी है), विद्युतचुंबकत्व, और प्रबल बल।

• The strong force is responsible for keeping the **protons and neutrons** together in the nuclei of atoms.

प्रबल बल परमाणुओं के नाभिक में प्रोटॉन और न्यूट्रॉन को एक साथ बाँधे रखने के लिए उत्तरदायी है।

• The theory describing the strong interaction between two particles is called **quantum chromodynamics (QCD)**.

दो कणों के बीच प्रबल अंतःक्रिया का वर्णन करने वाले सिद्धांत को क्वांटम क्रोमोडायनेमिक्स (QCD) कहा जाता है।

क्रोमोडायनेमिक्स (QCD) कहा जाता है।

• In QCD, the strong force is carried by **gluons** — just like how the

electromagnetic force is carried by photons.

QCD में प्रबल बल का वहन ग्लूऑन द्वारा किया जाता है — ठीक उसी प्रकार जैसे विद्युतचुंबकीय बल का वहन फोटॉन द्वारा किया जाता है।

- But unlike photons, gluons carry a kind of **charge** that allows gluons to be attracted to each other.
लेकिन फोटॉन के विपरीत, ग्लूऑन में एक प्रकार का आवेश होता है, जिसके कारण ग्लूऑन एक-दूसरे की ओर आकर्षित हो सकते हैं।
- And QCD says they can come together to form composite particles called **glueballs**.
और QCD के अनुसार, वे एक साथ आकर ग्लूबॉल नामक संयुक्त कणों का निर्माण कर सकते हैं।
- In new research, scientists have taken a big step closer to showing **glueballs exist**.
नए शोध में वैज्ञानिकों ने ग्लूबॉल के अस्तित्व को सिद्ध करने की दिशा में एक बड़ा कदम आगे बढ़ाया है।
- The team used data from the **BESIII experiment in Beijing to uncover them**.
दल ने इन्हें खोजने के लिए बीजिंग में किए गए **BESIII प्रयोग** के आँकड़ों का उपयोग किया।
- This is easier said than done because when a glueball appears in a **particle physics experiment**, it will be very short-lived and quickly decay into lighter particles in a way that is hard to distinguish from some other particles.
यह कहना जितना आसान है, करना उतना ही कठिन है, क्योंकि जब किसी **कण भौतिकी प्रयोग** में ग्लूबॉल उत्पन्न होता है, तो उसका जीवनकाल बहुत कम होता है और वह शीघ्र ही हल्के कणों में क्षय हो जाता है, जिसका स्वरूप कुछ अन्य कणों से अलग करना कठिन होता है।
- Scientists had first observed a candidate glueball called **X(2370) in BESIII data in 2011**.
वैज्ञानिकों ने पहली बार **2011** में BESIII के आँकड़ों में **X(2370)** नामक एक संभावित ग्लूबॉल का अवलोकन किया था।



- Its mass seemed consistent with a glueball.
इसका द्रव्यमान ग्लूबॉल के अपेक्षित द्रव्यमान के अनुरूप प्रतीत हुआ।
- They also estimated some of its properties based on the decays of a particle called the **J/ψ meson**.
उन्होंने **J/ψ मेसॉन** नामक एक कण के क्षय के आधार पर इसके कुछ गुणों का भी अनुमान लगाया।
- The new data buttresses the odds that
नए आँकड़े इस संभावना को और मजबूत करते हैं कि
- **X(2370) is indeed a glueball** by revealing more properties glueballs possess.
X(2370) वास्तव में एक ग्लूबॉल है, क्योंकि इन आँकड़ों ने ग्लूबॉल में पाए जाने वाले और अधिक गुणों को उजागर किया है।
- Thus, **BESIII** has assembled the strongest case to date that X(2370) has a dominant **glueball component**, potentially providing the first evidence for a form of matter made just from the **carriers of a fundamental force**.
इस प्रकार, **BESIII** ने अब तक का सबसे मजबूत प्रमाण प्रस्तुत किया है कि X(2370) में प्रमुख **ग्लूबॉल घटक** मौजूद है, जो संभावित रूप से ऐसे पदार्थ के एक रूप के लिए पहला प्रमाण प्रदान कर सकता है जो केवल किसी **मूलभूत बल के वाहकों** से बना हो।