



**TELEGRAM CHANNEL:** <https://t.me/patrioticIAS>

**YOUTUBE CHANNEL:** <https://www.youtube.com/@PatrioticIAS>

**CONTACT:** 9971932488



# **PATRIOTIC IAS**

## **DAILY CURRENT AFFAIRS**

## **THE HINDU NEWSPAP**

## **19 OCTOBER 2025**

**YouTube link:** <https://www.youtube.com/@PatrioticIAS>

**Telegram Channel:** <https://t.me/patrioticIAS>

PATRIOTIC

**Address :** 3rd Floor, KV Tower, Padleyganj Road, Gorakhpur  
**Email Id :** info@patrioticias.in  
**Contact Number :** 9971932488  
**Website :** patrioticias.in



<b>PCS Special:</b>	<b>19 October 2025</b>
1.	<b>Trump commutes sentence of George Santos in fraud case</b> <b>ट्रम्प ने जॉर्ज सैंटोस को धोखाधड़ी मामले में सजा माफ की</b>

**WASHINGTON**

**Trump commutes sentence of George Santos in fraud case**



**PCS** AP  
Disgraced former Republican lawmaker George Santos, who was convicted of committing wire fraud and identity theft, left prison after his sentence was commuted by U.S. President Donald Trump. Santos was sentenced to seven years for stealing campaign donors' identities and using their credit cards, among other charges. AFP

**Trump commutes sentence of George Santos in fraud case**

**ट्रम्प ने जॉर्ज सैंटोस को धोखाधड़ी मामले में सजा माफ की**

• Disgraced former Republican lawmaker George Santos, who was convicted of committing wire fraud and identity theft, left prison after his sentence was commuted by the U.S. President Donald Trump.

कलंकित पूर्व रिपब्लिकन सांसद जॉर्ज सैंटोस (Republican lawmaker George Santos), जिन्हें वायर धोखाधड़ी (wire fraud) और पहचान की चोरी (identity theft) के अपराध में दोषी ठहराया गया था, यू.एस. राष्ट्रपति डोनाल्ड ट्रम्प (U.S. President Donald Trump) द्वारा उनकी सजा कम किए जाने के बाद जेल से बाहर निकले।

• Santos was sentenced to seven years for stealing campaign donors' identities and using their credit cards, among other charges.

सैंटोस को सात साल (seven years) की सजा सुनाई गई थी, क्योंकि उन्होंने अभियान दाताओं की पहचान (campaign donors' identities) चुराई और उनके क्रेडिट कार्ड (credit cards) का उपयोग किया, अन्य आरोपों के साथ।

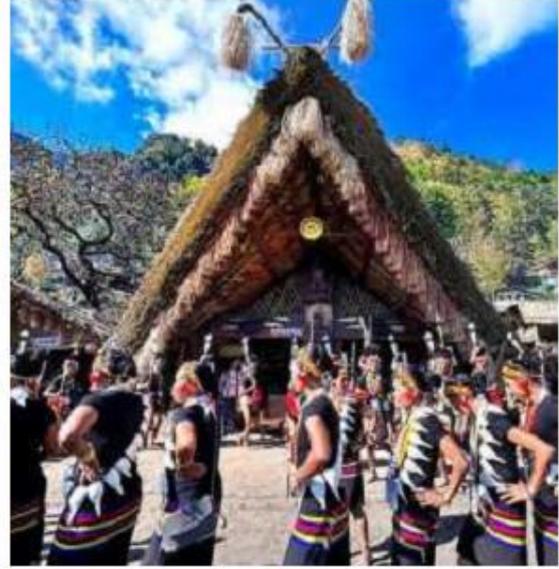
<b>GS Paper 1: History, Society and Geography</b>	
<b>TOPICS COVERED</b>	<b>19 October 2025</b>
1.	<b>Rain fury causes massive damage in Kerala's Idukki</b> <b>केरल के इडुक्की में बारिश के कहर से भारी तबाही</b>
2.	<b>Mamata urges PM to withdraw appointment of interlocutor on issues relating to Gurkhas</b> <b>ममता ने प्रधानमंत्री से गोरखा मुद्दों पर मध्यस्थ की नियुक्ति वापस लेने का आग्रह किया</b>



3.	<b>A festival woven in flowers</b> फूलों में बुना एक त्योहार
4.	<b>Study recreates mean sea level over 4.5M years</b> अध्ययन ने 4.5 मिलियन वर्षों में औसत समुद्र स्तर को पुनःनिर्मित किया



GS I: Society



**Natural splendour:** A view of Darjeeling from the Heritage toy train; (right) the Konyak tribespeople performing at the Hornbill festival in Kohima. FILE PHOTO

A view of Darjeeling from the Heritage toy train; (right) the Konyak tribespeople performing at the Hornbill festival in Kohima. FILE

PATRI



# Rain fury causes massive damage in Kerala's Idukki

Water level in Mullaperiyar dam rises overnight, prompting T.N. to open all 13 shutters; flash floods and landslips were reported at many places; rescue operations save people trapped inside houses

**GS I: Geography:**  
**Sa Drainage System**

IDUKKI

**T**he high-range villages of the hill district of Kerala's Idukki witnessed extremely heavy rainfall on Friday night and Saturday morning, causing widespread damage. The water level rose by nearly 6 ft in the Mullaperiyar dam, prompting Tamil Nadu to open all 13 shutters.

The rain that began on Friday night caused flash floods, landslips, and mudslides in Kumily, Chakkupallam, Vandanmedu, Karunapuram, and Nedumkandam panchayats, as well as the Kattappana municipality.

Heavy rain flooded many shops and houses in the district, including at Cumbummettu, Balagram, Thoorkupalam, Kumily, Balanpillai City, and Koottar. A reported landslip at Puttady, near Puliyanmala, disrupted traffic on the Kumily-Munnar route. Widespread damage was reported from Kunthalampara, near Kattappana, following a landslip.

On Friday night, the Kottarakkara-Dindigul National Highway was inundated at Kumily. A four-member family trapped in a waterlogged house at Kumily was rescued after sig-



**Rain havoc:** A vehicle being washed away after water level rose in the Koottar river. SPECIAL ARRANGEMENT

nificant efforts. At Mundiyyeruma in Nedumkandam, local people rescued another family trapped in a waterlogged house.

Five vehicles, including a parked one, were washed away at Koottar, near Nedumkandam, after the water level rose in the Koottar river. A bridge was also damaged in the area.

## **Brimming water level**

The water level in the Mullaperiyar dam, which stood at 132.9 ft at 11 p.m. on Friday, rose to 136 ft by 3 a.m. on Saturday. It further increased to 137.7 ft at 7 a.m. Tamil Nadu opened all 13 spillway shutters of the dam, releasing 7,305 cusecs into the Periyar riv-

er. The water level in the dam was 138.9 ft at 5 p.m.

The water level in the Idukki reservoir on Saturday morning stood at 2,381.82 ft. The upper rule level is 2,398.96 ft. The shutters for the Kallar, Pambla, and Kallarkutty dams were also opened.

According to the district administration, Udumbanchola taluk received rainfall of 82.8 mm, Peerumade taluk 28 mm, Devikulam taluk 35.4 mm, Idukki taluk 38.8 mm, and Thodupuzha taluk 85.4 mm in the past 24 hours.

## **High range areas hit**

The high-range areas of Pathanamthitta, Ernakulam, and Kozhikode dis-

tricts also witnessed heavy rainfall, resulting in flooding at many places. As a precautionary measure, the shutters of the Kallarkutty dam were raised, releasing around 500 cusecs. In addition, four shutters of the Kallar dam were raised by 60 cm, releasing 1,063 cusecs.

Authorities have alerted people living along the banks of the Kallar and Chinnar rivers about rising water levels.

Four shutters of the Malankara diversion dam also remained open. The inflow to the dam depends on the water released after power generation at the Kerala State Electricity Board's Moolamattom plant.



## Rain fury causes massive damage in Kerala's Idukki

### केरल के इडुक्की में बारिश के कहर से भारी तबाही

- The high-range villages of the hill district of Kerala's Idukki witnessed extremely heavy rainfall on Friday night and Saturday morning, causing widespread damage.  
केरल के इडुक्की जिले के ऊँचाई वाले गाँवों में शुक्रवार रात और शनिवार सुबह को भारी वर्षा हुई, जिससे व्यापक नुकसान हुआ।
- The water level rose by nearly 6 ft in the Mullaperiyar dam, prompting Tamil Nadu to open all 13 shutters.  
मुल्लापेरियार बांध में जल स्तर लगभग 6 फीट बढ़ गया, जिससे तमिलनाडु ने सभी 13 शटर खोल दिए।
- The rain that began on Friday night caused flash floods, landslips, and mudslides in Kumily, Chakkupallam, Vandanmedu, Karunapuram, and Nedumkandam panchayats, as well as the Kattappana municipality.  
शुक्रवार रात से शुरू हुई बारिश ने कुमिली, चक्कुपल्लम, वंदनमेडु, करुनापुरम और नेडुमकंडम पंचायतों तथा कट्टप्पना नगरपालिका में अचानक बाढ़, भूस्खलन और कीचड़ के धसकने की घटनाएँ पैदा कीं।
- Heavy rain flooded many shops and houses in the district, including at Cumbummettu, Balagram, Thoorkupalam, Kumily, Balanpillai City, and Koottar.  
भारी बारिश ने जिले के कई दुकानों और घरों को डुबो दिया, जिनमें कुम्बुम्मेट्टु, बालाग्राम, थूक्कुपालम, कुमिली, बालनपिल्लई सिटी और कुट्टार शामिल हैं।
- A reported landslide at Puttady, near Puliyanmala, disrupted traffic on the Kumily-Munnar route.  
पुलियानमला के पास पुट्टाडी में भूस्खलन की सूचना से कुमिली-मुन्नार मार्ग पर यातायात बाधित हुआ।
- Widespread damage was reported from Kunthalampara, near Kattappana, following a landslide.  
कट्टप्पना के पास कुंथालमपारा से भूस्खलन के बाद व्यापक नुकसान की सूचना मिली।
- On Friday night, the Kottarakkara-Dindigul National Highway was inundated at Kumily.  
शुक्रवार रात, कुमिली में कोट्टाराक्कारा-डिंडिगुल राष्ट्रीय राजमार्ग जलमग्न हो गया।
- A four-member family trapped in a waterlogged house at Kumily was rescued after significant efforts.  
कुमिली में जलमग्न घर में फँसे चार सदस्यीय परिवार को कड़ी मशक्कत के बाद बचाया गया।
- At Mundiyyeruma in Nedumkandam, local people rescued another family trapped in a waterlogged house.  
नेडुमकंडम के मुंडियरुमा में स्थानीय लोगों ने जलमग्न घर में फँसे दूसरे परिवार को बचाया।
- Five vehicles, including a parked one, were washed away at Koottar, near Nedumkandam, after the water level rose in the Koottar river.  
नेडुमकंडम के पास कुट्टार में कुट्टार नदी के जल स्तर बढ़ने से एक खड़ी गाड़ी सहित पाँच वाहन बह गए।
- A bridge was also damaged in the area.  
क्षेत्र में एक पुल भी क्षतिग्रस्त हुआ।

### Brimming water level

#### भरता हुआ जल स्तर

- The water level in the Mullaperiyar dam, which stood at 132.9 ft at 11 p.m. on Friday, rose to 136 ft by 3 a.m. on Saturday.  
मुल्लापेरियार बांध में शुक्रवार रात 11 बजे जल स्तर 132.9 फीट था, जो शनिवार सुबह 3 बजे 136 फीट तक पहुँच गया।
- It further increased to 137.7 ft at 7 a.m.  
यह सुबह 7 बजे 137.7 फीट तक और बढ़ गया।
- Tamil Nadu opened all 13 spillway shutters of the dam, releasing 7,305 cusecs into the Periyar river.  
तमिलनाडु ने बांध के सभी 13 स्पिलवे शटर खोलकर 7,305 क्यूसेक पानी पेरियार नदी में छोड़ा।
- The water level in the dam was 138.9 ft at 5 p.m.  
शाम 5 बजे बांध में जल स्तर 138.9 फीट दर्ज किया गया।
- The water level in the Idukki reservoir on Saturday morning stood at 2,381.82 ft.  
शनिवार सुबह इडुक्की जलाशय में जल स्तर 2,381.82 फीट था।



- The upper rule level is 2,398.96 ft.  
ऊपरी सीमा स्तर 2,398.96 फीट है।
- The shutters for the Kallar, Pambla, and Kallarkutty dams were also opened.  
कल्लार, पाम्बला और कल्लरकुट्टी बांधों के शटर भी खोले गए।
- According to the district administration, Udumbanchola taluk received 82.8 mm, Peerumade taluk 28 mm, Devikulam taluk 35.4 mm, Idukki taluk 38.8 mm, and Thodupuzha taluk 85.4 mm rainfall in the past 24 hours.  
जिला प्रशासन के अनुसार, पिछले 24 घंटों में उडुम्बनचोला तालुक में 82.8 मिमी, पीरुमाडे में 28 मिमी, देविकुलम में 35.4 मिमी, इडुक्की में 38.8 मिमी, और थोडुपुझा में 85.4 मिमी वर्षा हुई।
- High range areas hit  
ऊँचाई वाले क्षेत्र प्रभावित
- The high-range areas of Pathanamthitta, Ernakulam, and Kozhikode districts also witnessed heavy rainfall, resulting in flooding at many places.  
पथनमथिट्टा, एर्नाकुलम और कोझिकोड जिलों के ऊँचाई वाले क्षेत्रों में भी भारी वर्षा हुई, जिससे कई स्थानों पर बाढ़ आई।
- As a precautionary measure, the shutters of the Kallarkutty dam were raised, releasing around 500 cusecs.  
सावधानी के तौर पर, कल्लरकुट्टी बांध के शटर उठाए गए, जिससे लगभग 500 क्यूसेक पानी छोड़ा गया।
- In addition, four shutters of the Kallar dam were raised by 60 cm, releasing 1,063 cusecs.  
इसके अलावा, कल्लार बांध के चार शटर 60 सेमी उठाए गए, जिससे 1,063 क्यूसेक पानी छोड़ा गया।
- Authorities have alerted people living along the banks of the Kallar and Chinnar rivers about rising water levels.  
प्रशासन ने कल्लार और चिनार नदियों के किनारे रहने वाले लोगों को बढ़ते जल स्तर के बारे में चेतावनी दी है।
- Four shutters of the Malankara diversion dam also remained open.  
मालंकारा डायवर्जन बांध के चार शटर भी खुले रहे।
- The inflow to the dam depends on the water released after power generation at the Kerala State Electricity Board's Moolamattom plant.  
बांध में पानी का प्रवाह केरल स्टेट इलेक्ट्रिसिटी बोर्ड के मूलमट्टम संयंत्र में बिजली उत्पादन के बाद छोड़े गए पानी पर निर्भर करता है।



# Mamata urges PM to withdraw appointment of interlocutor on issues relating to Gurkhas

**GS I: Geography**

**Shiv Sahay Singh**

KOLKATA

West Bengal Chief Minister Mamata Banerjee on Saturday wrote to Prime Minister Narendra Modi expressing “surprise and shock” at the Centre’s unilateral appointment of an interlocutor for the “issues relating to Gurkhas in the **Darjeeling hills, Terai and Dooars** regions of West Bengal”.

The Union Home Ministry on Thursday appointed retired IPS officer Pankaj Kumar Singh as the interlocutor to hold talks with representatives of political parties in the Darjeeling hills to address their political demands.

The appointment of Mr. Singh, a former chief of the Border Security Force (BSF) who also served as Deputy National Security Adviser, was welcomed by



Mamata Banerjee

the political parties such as the Gorkha Janmukti Morcha (GJM), Gorkha National Liberation Front and the BJP. But Ms. Banerjee said the appointment was made without any consultations with the State government. Ms. Banerjee also said the appointment was against the spirit of cooperative federalism.

“This appointment has been made without any consultation with the Go-

vernment of West Bengal, even though the issues under reference directly relate to the governance, peace, and administrative stability of the area under Gorkhaland Territorial Administration (GTA), an autonomous body under Government of West Bengal,” she said.

In the letter, the Chief Minister recalled how the GTA was constituted following a Tripartite Agreement signed on July 18, 2011 in Darjeeling among the Government of India, the Government of West Bengal and the GJM, “in the presence of the then Hon’ble Union Home Minister and the Chief Minister of West Bengal”.

She said that “any unilateral action in this sensitive matter will not be in interest of peace, and harmony in the region”.

**Mamata urges PM to withdraw appointment of interlocutor on issues relating to Gurkhas**

**ममता ने प्रधानमंत्री से गोरखा मुद्दों पर मध्यस्थ की नियुक्ति वापस लेने का आग्रह किया**

- **West Bengal Chief Minister Mamata Banerjee on Saturday** wrote to **Prime Minister Narendra Modi** expressing “**surprise and shock**” at the **Centre’s unilateral appointment of an interlocutor** for the “**issues relating to Gurkhas in the Darjeeling hills, Terai and Dooars regions of West Bengal**”.

पश्चिम बंगाल की मुख्यमंत्री ममता बनर्जी ने शनिवार को प्रधानमंत्री नरेंद्र मोदी को पत्र लिखकर केंद्र सरकार द्वारा गोरखा से संबंधित मुद्दों पर एकतरफा तरीके से मध्यस्थ की नियुक्ति करने पर “आश्चर्य और सदमा” व्यक्त किया। यह नियुक्ति दार्जिलिंग हिल्स, तराई और झुआर्स क्षेत्रों से संबंधित है।



- The **Union Home Ministry** on **Thursday** appointed **retired IPS officer Pankaj Kumar Singh** as the **interlocutor** to hold talks with **representatives of political parties** in the **Darjeeling hills** to address their **political demands**.  
गृह मंत्रालय ने गुरुवार को सेवानिवृत्त आईपीएस अधिकारी पंकज कुमार सिंह को मध्यस्थ नियुक्त किया ताकि वे दार्जिलिंग हिल्स में राजनीतिक दलों के प्रतिनिधियों से उनके राजनीतिक मांगों पर बातचीत कर सकें।
- The appointment of **Mr. Singh**, a former **chief of the Border Security Force (BSF)** who also served as **Deputy National Security Adviser**, was **welcomed by political parties** such as the **Gorkha Janmukti Morcha (GJM)**, **Gorkha National Liberation Front**, and the **BJP**.  
पंकज कुमार सिंह, जो सीमा सुरक्षा बल (BSF) के पूर्व प्रमुख और उप राष्ट्रीय सुरक्षा सलाहकार भी रह चुके हैं, की नियुक्ति का स्वागत गोरखा जनमुक्ति मोर्चा (जीजेएम), गोरखा नेशनल लिबरेशन फ्रंट और भाजपा जैसे राजनीतिक दलों ने किया।
- But **Ms. Banerjee** said the **appointment was made without any consultations** with the **State government**.  
लेकिन सुश्री बनर्जी ने कहा कि यह नियुक्ति राज्य सरकार से किसी भी प्रकार की परामर्श के बिना की गई।
- **Ms. Banerjee** also said the **appointment was against the spirit of cooperative federalism**.  
सुश्री बनर्जी ने यह भी कहा कि यह नियुक्ति सहकारी संघवाद की भावना के खिलाफ है।
- “This appointment has been made **without any consultation with the Government of West Bengal**, even though the issues under reference directly relate to the **governance, peace, and administrative stability** of the area under **Gorkhaland Territorial Administration (GTA)**, an **autonomous body under Government of West Bengal**,” she said.  
उन्होंने कहा, “यह नियुक्ति पश्चिम बंगाल सरकार से बिना किसी परामर्श के की गई है, जबकि संबंधित मुद्दे सीधे तौर पर गवर्नेंस, शांति और प्रशासनिक स्थिरता से जुड़े हैं जो गोरखालैंड टेरिटोरियल एडमिनिस्ट्रेशन (जीटीए) — जो पश्चिम बंगाल सरकार के अधीन एक स्वायत्त निकाय है — के अंतर्गत आता है।”
- In the **letter**, the **Chief Minister** recalled how the **GTA was constituted** following a **Tripartite Agreement** signed on **July 18, 2011**, in **Darjeeling** among the **Government of India, the Government of West Bengal, and the GJM**, “in the presence of the then Hon’ble Union Home Minister and the Chief Minister of West Bengal”.  
अपने पत्र में मुख्यमंत्री ने याद दिलाया कि जीटीए का गठन 18 जुलाई 2011 को दार्जिलिंग में हुए त्रिपक्षीय समझौते के बाद हुआ था, जो भारत सरकार, पश्चिम बंगाल सरकार और जीजेएम के बीच उस समय के केंद्रीय गृह मंत्री और पश्चिम बंगाल के मुख्यमंत्री की उपस्थिति में हुआ था।
- She said that “any **unilateral action** in this **sensitive matter** will not be in the interest of **peace and harmony** in the region.”  
उन्होंने कहा कि “इस संवेदनशील मामले में किसी भी एकतरफा कार्रवाई से क्षेत्र में शांति और सौहार्द को नुकसान पहुँचेगा।”



# A festival woven in flowers

At the start of winter, the women of Telangana celebrate **Bathukamma**, paying floral tributes to **Mother Nature**; the festival fills the season with colour, song, and devotion

GSJ: A&T



**Nagara Gopal**  
nagara.gopal@thehindu.co.in

As the winter approaches, the women of Telangana pay floral tributes to Mother Nature in a unique way.

Bathukamma is a celebration of the intrinsic bond between earth, water, and humankind. Observed according to the Satavahana calendar, the nine-day festival begins on Bhadrapada Purnima (also known as Mahalaya Amavasya or Pitru Amavasya) and concludes on Durgashtami, typically falling in September or October.

Each day of Bathukamma carries a distinct name and significance – marking stages of devotion, harvest, and togetherness.

More than a festival, Bathukamma stands as a vibrant emblem of Telangana's cultural identity and feminine spirit. Women from all walks of life come together to handcraft stunning floral stacks – intricate arrangements symbolising gratitude and reverence for nature. The air fills with music,

rhythmic clapping, and traditional songs, creating a mosaic of joy, unity, and spiritual energy. This year, Telangana witnessed a record-breaking celebration: a 63-foot-tall Bathukamma, crafted with 13 tonnes of flowers, entered the Guinness World Records, becoming a proud symbol of the State's collective devotion and creativity. Women, transcending boundaries of caste, creed, religion, or nationality, gathered in large numbers to mark the occasion with unmatched zeal and enthusiasm.

For farmers, the season brought brisk activity as they supplied vast quantities of marigold, a key flower in Bathukamma arrangements. Yet, with demand soaring beyond supply, artificial flowers also made an appearance.

Bathukamma thus continues to bloom, a living expression of Telangana's reverence for nature, its spirit of community, and its celebration of womanhood.



On the move: A woman transports her intricately arranged Bathukamma in a car through the streets of Kukatpally.

## A festival woven in flowers फूलों में बना एक त्योहार

- As the winter approaches, the women of Telangana pay floral tributes to Mother Nature in a unique way.  
जैसे ही सर्दी करीब आती है, तेलंगाना की महिलाएं एक अनोखे तरीके से माँ प्रकृति को फूलों से श्रद्धांजलि अर्पित करती हैं।



- **Bathukamma** is a celebration of the intrinsic bond between **earth, water, and humankind**.  
बथुकम्मा पृथ्वी, जल और मानवता के बीच के आंतरिक बंधन का उत्सव है।
- Observed according to the **Satavahana calendar**, the nine-day festival begins on **Bhadrapada Purnima** (also known as **Mahalaya Amavasya** or **Pitru Amavasya**) and concludes on **Durgashtami**, typically falling in **September or October**.  
सातवाहन कैलेंडर के अनुसार मनाया जाने वाला यह नौ-दिवसीय त्योहार भाद्रपद पूर्णिमा (जिसे महालय अमावस्या या पितृ अमावस्या भी कहा जाता है) से शुरू होकर दुर्गाष्टमी को समाप्त होता है, जो आमतौर पर सितंबर या अक्टूबर में पड़ता है।
- Each day of **Bathukamma** carries a distinct name and significance — marking stages of **devotion, harvest, and togetherness**.  
बथुकम्मा के प्रत्येक दिन का एक अलग नाम और महत्व होता है — जो भक्ति, फसल कटाई और एकता के चरणों को दर्शाता है।
- More than a festival, **Bathukamma** stands as a vibrant emblem of **Telangana's cultural identity and feminine spirit**.  
एक त्योहार से बढ़कर, बथुकम्मा तेलंगाना की सांस्कृतिक पहचान और नारी भावना का जीवंत प्रतीक है।
- Women from all walks of life come together to handcraft stunning floral stacks — intricate arrangements symbolising **gratitude and reverence for nature**.  
जीवन के हर क्षेत्र से महिलाएं एकत्र होकर सुंदर फूलों की सजावट हाथों से तैयार करती हैं — जो प्रकृति के प्रति कृतज्ञता और श्रद्धा का प्रतीक होती हैं।
- The air fills with **music, rhythmic clapping, and traditional songs**, creating a mosaic of **joy, unity, and spiritual energy**.  
वातावरण संगीत, तालबद्ध ताली और पारंपरिक गीतों से भर जाता है, जो खुशी, एकता और आध्यात्मिक ऊर्जा की एक सुंदर झांकी बनाता है।
- This year, **Telangana** witnessed a record-breaking celebration: a **63-foot-tall Bathukamma**, crafted with **13 tonnes of flowers**, entered the **Guinness World Records**, becoming a proud symbol of the State's **collective devotion and creativity**.  
इस वर्ष, तेलंगाना ने एक रिकॉर्ड तोड़ उत्सव देखा: 63 फीट ऊंची बथुकम्मा, जो 13 टन फूलों से बनाई गई थी, ने गिनीज वर्ल्ड रिकॉर्ड्स में जगह बनाई, और राज्य की सामूहिक भक्ति और सृजनशीलता का गर्वित प्रतीक बन गई।
- Women, transcending boundaries of **caste, creed, religion, or nationality**, gathered in large numbers to mark the occasion with unmatched zeal and enthusiasm.  
महिलाओं ने जाति, पंथ, धर्म या राष्ट्रीयता की सीमाओं से ऊपर उठकर, इस अवसर को अद्वितीय जोश और उत्साह के साथ मनाने के लिए बड़ी संख्या में एकत्रित हुईं।
- For **farmers**, the season brought brisk activity as they supplied vast quantities of **marigold**, a key flower in **Bathukamma arrangements**.  
किसानों के लिए, यह मौसम व्यस्तता लेकर आया क्योंकि उन्होंने बथुकम्मा सजावट के मुख्य फूल गेंदे की बड़ी मात्रा में आपूर्ति की।
- Yet, with demand soaring beyond supply, **artificial flowers** also made an appearance.  
फिर भी, जब मांग आपूर्ति से अधिक हो गई, तो कृत्रिम फूलों का भी उपयोग किया गया।
- **Bathukamma** thus continues to bloom, a living expression of **Telangana's reverence for nature, its spirit of community, and its celebration of womanhood**.  
इस प्रकार, बथुकम्मा निरंतर खिलती रहती है — प्रकृति के प्रति तेलंगाना की श्रद्धा, सामुदायिक भावना और स्त्रीत्व के उत्सव की जीवंत अभिव्यक्ति के रूप में।



**GS I: Evolution of Earth**

## Study recreates mean sea level over 4.5M years

Researchers have reconstructed the global mean sea level over the last 4.5 million years using oxygen isotope data from marine sediments. They reported that the levels 4.5-3 million years ago were around 20 m higher than today. Between 3-2.5 million years ago they dropped as the ice ages intensified. The study concluded that the familiar 100,000-year ice age cycles developed not from changes in the earth's orbit but from internal climate feedbacks.



**Study recreates mean sea level over 4.5M years**

**अध्ययन ने 4.5 मिलियन वर्षों में औसत समुद्र स्तर को पुनःनिर्मित किया**

• Researchers have reconstructed the **global mean sea level** over the last **4.5 million years** using **oxygen isotope data** from **marine sediments**.

शोधकर्ताओं ने **समुद्री तलछट (marine sediments)** से **ऑक्सीजन आइसोटोप डेटा (oxygen isotope data)** का उपयोग करके पिछले **4.5 मिलियन वर्षों (4.5 million years)** में **वैश्विक औसत समुद्र स्तर (global mean sea level)** को पुनर्निर्मित किया है।

• They reported that the levels **4.5-3 million years ago** were around **20 m higher than today**.

उन्होंने बताया कि **4.5-3 मिलियन वर्ष पहले (4.5-3 million years ago)** समुद्र स्तर आज की तुलना में लगभग **20 मीटर अधिक (20 m higher than today)** था।

• Some **3-2.5 million years ago** they dropped as the **ice ages intensified**.

कुछ **3-2.5 मिलियन वर्ष पहले (3-2.5 million years ago)** यह गिर गए जब **हिम युग (ice ages)** तीव्र हो गए।

• The study concluded that the familiar **100,000-year ice age cycles** developed not from changes in the **earth's orbit** but from **internal climate feedbacks**.

अध्ययन में निष्कर्ष निकाला गया कि परिचित **100,000 वर्षीय हिम युग चक्र (100,000-year ice age cycles)** पृथ्वी के **कक्षीय परिवर्तनों (earth's orbit)** के कारण नहीं बल्कि **आंतरिक जलवायु प्रतिक्रिया (internal climate feedbacks)** से विकसित हुए।

### GS Paper II: Polity, Governance, And International Relations

#### TOPICS COVERED

**19 October 2025**

1.	<b>Women form 49% of total hospital admissions with Ayushman Bharat</b> आयुष्मान भारत के तहत कुल अस्पताल में भर्ती का 49% महिलाएं हैं
2.	<b>How are India-Taliban relations changing?</b> भारत-तालिबान संबंध कैसे बदल रहे हैं?
3.	<b>From backroom to ballot</b> पृष्ठभूमि से मतदान तक
4.	<b>Chinese whispers</b> चीनी फुसफुसाहट



5.

**Make a deal,' Trump tells Zelenskyy as plea for Tomahawk misses mark**  
**‘डील करो,’ ट्रम्प ने ज़ेलेंस्की से कहा जब टोमहॉक मिसाइलों की मांग सफल नहीं हुई**

# Women form 49% of total hospital admissions with Ayushman Bharat

**GS II: Health Sector**

**Bindu Shajan Perappadan**  
NEW DELHI

Women account for 49% of total hospital admissions under the government's flagship health insurance scheme, the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), according to the annual report for 2024-25 of the National Health Authority. This signals improved access to institutional health-care for women, the report said.

Haemodialysis was the most availed treatment (14%), followed by multiple packages (7%); treatment for acute febrile illness (4%); acute gastroenteritis, and cataract and related procedures (3%).

The AB-PMJAY, launched in 2018, is among the largest health insurance schemes in the



**Promoting inclusivity:** In 2023, the scheme included 37 lakh families of frontline workers. FILE PHOTO

world, aiming to provide a health cover of ₹5 lakh for a family every year. Recently, Odisha and Delhi were onboarded for the scheme's implementation.

Except West Bengal, 35 States and Union Territories are now under the AB-PMJAY umbrella.

As of March 31, the AB-PMJAY covers 15.14 crore eligible families, with an

additional 8.57 crore families under State-specific schemes, the report added.

“So far, over 9.19 crore hospital admissions have been facilitated under AB-PMJAY, with treatment worth ₹1,29,386 crore completed and 31,005 hospitals empanelled, ensuring nationwide accessibility – 55% public, and 45% priv-

ate,” the report said.

It added that under the nationwide Ayushman card saturation drives, over 40.45 crore cards had been issued, covering 14.69 crore families.

The *Aapke Dwar Ayushman* (ADA 3.0) initiative achieved outreach through technology-led, community-based, self-registration campaigns, empowering citizens at the grassroots.

To further facilitate inclusivity, the 2023 interim Budget announced the inclusion of 37 lakh families of frontline workers, including Accredited Social Health Activists (ASHAs), Anganwadi workers, and Anganwadi helpers, into the AB-PMJAY.

In October 2024, the scheme included all citizens aged 70 and above, irrespective of income or socio-economic status.

## Women form 49% of total hospital admissions with Ayushman Bharat आयुष्मान भारत के तहत कुल अस्पताल में भर्ती का 49% महिलाएं हैं

- Women account for **49%** of total hospital admissions under the government's flagship health insurance scheme, the **Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)**, according to the **annual report for 2024-25** of the **National Health Authority**. सरकार की प्रमुख स्वास्थ्य बीमा योजना **आयुष्मान भारत-प्रधानमंत्री जन आरोग्य योजना (AB-PMJAY)** के



तहत कुल अस्पताल भर्ती में 49% महिलाएं शामिल हैं, यह जानकारी राष्ट्रीय स्वास्थ्य प्राधिकरण की 2024-25 की वार्षिक रिपोर्ट में दी गई है।

- This signals improved access to institutional healthcare for women, the report said. रिपोर्ट में कहा गया कि यह महिलाओं के लिए संस्थागत स्वास्थ्य सेवाओं तक बेहतर पहुंच को दर्शाता है।
- **Haemodialysis** was the most availed treatment (14%), followed by **multiple packages (7%)**; treatment for **acute febrile illness (4%)**; **acute gastroenteritis**, and **cataract and related procedures (3%)**.  
हीमोडायलिसिस (14%) सबसे अधिक ली जाने वाली चिकित्सा थी, इसके बाद मल्टीपल पैकेज (7%), तीव्र बुखार की बीमारी (4%), तीव्र जठरांत्रशोथ और मोतियाबिंद एवं संबंधित प्रक्रियाएं (3%) रहीं।
- The **AB-PMJAY**, launched in 2018, is among the **largest health insurance schemes in the world**, aiming to provide a **health cover of ₹5 lakh per family per year**. Recently, **Odisha and Delhi** were onboarded for the scheme's implementation.  
**AB-PMJAY**, जिसे 2018 में शुरू किया गया था, दुनिया की सबसे बड़ी स्वास्थ्य बीमा योजनाओं में से एक है, जिसका उद्देश्य प्रति परिवार प्रति वर्ष ₹5 लाख का स्वास्थ्य कवर प्रदान करना है। हाल ही में ओडिशा और दिल्ली को भी योजना के कार्यान्वयन में शामिल किया गया है।
- Except **West Bengal, 35 States and Union Territories** are now under the **AB-PMJAY umbrella**.  
पश्चिम बंगाल को छोड़कर, अब 35 राज्य और केंद्र शासित प्रदेश **AB-PMJAY** के दायरे में हैं।
- As of **March 31**, the **AB-PMJAY** covers **15.14 crore eligible families**, with an additional **8.57 crore families** under **State-specific schemes**, the report added.  
31 मार्च तक, **AB-PMJAY** के तहत 15.14 करोड़ पात्र परिवार शामिल हैं, जबकि राज्य-विशिष्ट योजनाओं के तहत अतिरिक्त 8.57 करोड़ परिवार भी जोड़े गए हैं, रिपोर्ट में कहा गया।
- “So far, over **9.19 crore hospital admissions** have been facilitated under **AB-PMJAY**, with treatment worth **₹1,29,386 crore** completed and **31,005 hospitals empanelled**, ensuring nationwide accessibility — **55% public**, and **45% private**,” the report said.  
अब तक **AB-PMJAY** के तहत 9.19 करोड़ से अधिक अस्पताल भर्ती कराई गई हैं, जिनमें ₹1,29,386 करोड़ का इलाज पूरा हुआ है और 31,005 अस्पतालों को सूचीबद्ध किया गया है — जिनमें 55% सरकारी और 45% निजी हैं, रिपोर्ट में कहा गया।
- It added that under the nationwide **Ayushman card saturation drives**, over **40.45 crore cards** had been issued, covering **14.69 crore families**.  
रिपोर्ट में यह भी जोड़ा गया कि देशव्यापी आयुष्मान कार्ड संतृप्ति अभियान के तहत 40.45 करोड़ से अधिक कार्ड जारी किए गए हैं, जो 14.69 करोड़ परिवारों को कवर करते हैं।
- The **Aapke Dwar Ayushman (ADA 3.0)** initiative achieved outreach through **technology-led, community-based, self-registration campaigns**, empowering citizens at the grassroots.  
आपके द्वार आयुष्मान (ADA 3.0) पहल ने तकनीक-आधारित, सामुदायिक और स्व-पंजीकरण अभियानों के माध्यम से लोगों तक पहुंच बनाई, जिससे नागरिकों को जमीनी स्तर पर सशक्त किया गया।
- To further facilitate inclusivity, the **2023 interim Budget** announced the inclusion of **37 lakh families of frontline workers**, including **Accredited Social Health Activists (ASHAs)**, **Anganwadi workers**, and **Anganwadi helpers**, into the **AB-PMJAY**.  
समावेशिता को और बढ़ावा देने के लिए, 2023 के अंतरिम बजट में फ्रंटलाइन वर्कर्स के 37 लाख परिवारों को **AB-PMJAY** में शामिल करने की घोषणा की गई, जिनमें आशा कार्यकर्ता, आंगनवाड़ी कार्यकर्ता और आंगनवाड़ी सहायिकाएं शामिल हैं।
- In **October 2024**, the scheme included **all citizens aged 70 and above**, irrespective of **income or socio-economic status**.  
अक्टूबर 2024 में, इस योजना में 70 वर्ष या उससे अधिक आयु के सभी नागरिकों को शामिल किया गया, चाहे उनकी आय या सामाजिक-आर्थिक स्थिति कुछ भी हो।



# How are India-Taliban relations changing?

Is India's Afghanistan policy changing? What did the Muttaqi visit achieve? With India deciding to reopen its embassy in Kabul, is it inching closer to recognising a Taliban-led government? Did the restrictions imposed on women by the Taliban come up during talks?

**GS II: India-Afghanistan**  
**Suhasini Haidar**

## The story so far:

**T**he Indian government framed the visit by Acting Foreign Minister of Afghanistan, Amir Khan Muttaqi, and the warm welcome it extended to the Taliban leader, as an outreach to the "people of Afghanistan". The visit coincided with violent clashes on the Afghanistan-Pakistan border.

## How has India grown links with the Taliban?

After years of being seen as "too slow" to engage with the Taliban, the government has gone to considerable lengths in recent months to build ties with the group that controls Afghanistan. In January this year, Foreign Secretary Vikram Misri made the first such contact, meeting Mr. Muttaqi in Dubai, and discussed increasing trade between both countries. On May 16, just days after the India-Pakistan conflict ended in a ceasefire, External Affairs Minister S. Jaishankar spoke to Mr. Muttaqi over the telephone, thanking Afghanistan for its support and condolences over the Pahalgam terror attack. In August, India approached the UN Security Council to request permission from its Sanctions Committee for a visit by the Taliban FM to India. Mr. Muttaqi is on the UNSC's consolidated sanctions list since January 2001, and requires a waiver to travel internationally. The request was denied, but when the request was repeated a month later, it came through, allowing the visit from October 9 to 16. India doesn't recognise the "Islamic Emirate of Afghanistan", as the Taliban that took control of Kabul in 2021 renamed it. Even so, Mr. Jaishankar met Mr. Muttaqi with full protocol and held delegation-level meetings with him at the official venue, Hyderabad House, and

The Afghan side joined India in condemning terrorism in the region

the visitor was accorded security and hospitality any other foreign minister would receive.

## What transpired during the talks?

During the talks, Mr. Jaishankar announced India's plans to upgrade its technical mission in Kabul to an embassy, and is expected to appoint diplomats to be posted there shortly. He also handed over the keys to 20 ambulances being donated to Afghanistan, and promised health infrastructure projects, water projects and humanitarian aid. For its part, the Afghan side joined India in condemning terrorism in the region and committed that it would not allow Afghan soil to be used by groups inimical to India. In 2022, UN reports said Jaish-e-Mohammad and Lashkar-e-Taiba maintained camps in Eastern Afghan provinces.

## Why has cooperation been enhanced?

Mr. Muttaqi's visit began just as clashes broke out between Pakistan and Afghanistan. Pakistan launched airstrikes on Kabul in retaliation for terror attacks by the Tehreek-e-Taliban Pakistan (TTP) that Pakistan claims is sheltered by the Taliban. The timing suggests India is getting closer to its "enemy's enemy" in an effort to upset Pakistan with a pincer movement months after Operation Sindoor, but there are many other reasons for such an outreach. The first is to neutralise any threat from the Taliban in an increasingly volatile neighbourhood, with governments losing power to protesters; India losing stable partners in South Asia; and China making inroads. Another reason is to build connectivity for trade as land routes are closed. Pakistan refuses to allow transit trade, and the U.S. has now re-imposed sanctions for projects at Iran's Chabahar port, which was being developed by India as an alternate route. In the broader Eurasian region, Russia has officially recognised the Taliban government, the first country to do so, and others like China, Pakistan, Iran, Gulf and the Central Asian states, that have already allowed Taliban embassies, could follow. India cannot afford to be cut out. India has also maintained that working with the regime in power is the only way for it to continue its humanitarian aid to Afghan men and women, and to secure more than \$3 billion in investments that it made between 2001-2021, when the Taliban was out of power. Four years since it took over, the Taliban regime appears stable, with little political or insurgent opposition to its control of the country, and has been able to impose a very strict form of the Islamic Sharia law, that prohibits women from education, work, forces them into burkhas, and bans them from public parks and buildings.

Despite the situation, Mr. Jaishankar's opening remarks and the joint statement contained no mention of the restrictions on women, another indicator that New Delhi has decided that the Taliban is here to stay for the foreseeable future.

## Is India preparing to recognise the Taliban?

The rapid growth of Delhi's ties with the Taliban, and the setting up of an embassy in Kabul, have raised speculation that India could, like Russia, break with the UN and western countries to give recognition to the Taliban government. This may seem unlikely soon, but much will depend on the next steps New Delhi takes, and the seniority level at which it establishes the embassy. Mr. Muttaqi said once Indian diplomats are sent to Kabul, he expects India to receive Taliban-appointed diplomats in Delhi. This will be significant, as thus far the Afghanistan embassy in Delhi has remained loyal to the previous democratically-elected Islamic Republic of Afghanistan government. As a result, they resisted Mr. Muttaqi's visit to the embassy, and at the two press conferences he held there, tried unsuccessfully, to stop the Taliban delegation from placing the black and white flags of the Emirate there. The black, green and red tricolour of the Republic is still hoisted at the front of the embassy for now, but India's decision to upgrade missions has cast a cloud over its future and that of the staff members there, who now fear for their lives. The Ministry of External Affairs did not protest when Mr. Muttaqi held a press conference on October 10, inviting nearly 20 journalists, all male, to the embassy. However, after public outrage, the Taliban delegation held a second press conference, inviting all journalists without restrictions. There, they faced hard questions on the condition of women, although Mr. Muttaqi maintained that women were "free" and girls were receiving an education in religious madrassas, statements which are clearly untrue.

## Can a Taliban led-Afghanistan go from being India's enemy's enemy and become a friend?

India has much to gain from a friendly government in Kabul, with influence based on its historic friendship with the Afghan people during the 2001-2021 period. India was Afghanistan's first strategic partner; built an air corridor to increase bilateral trade; and worked on a number of development and infrastructure projects there. While the Taliban's current conflict with Pakistan will only enhance New Delhi's role, it must be remembered that the Taliban in power now have had very close ties with Pakistan's military in the past. In addition, the Taliban leadership in Kabul and Kandahar have differences, and as Afghanistan's economy continues to suffer, they may face challenges to the regime's control. For India, building a tactical relationship with Kabul is vital, but a friendship based on shared values and common worldviews seem impossible at present.



**Changing ties:** External Affairs Minister S. Jaishankar and his Afghan counterpart Amir Muttaqi during a meeting in New Delhi on October 10. AFP

## How are India-Taliban relations changing? भारत-तालिबान संबंध कैसे बदल रहे हैं?

- The Indian government framed the visit by **Acting Foreign Minister of Afghanistan, Amir Khan Muttaqi**, and the warm welcome extended to the Taliban leader, as an outreach to the "people of Afghanistan".  
भारतीय सरकार ने अफगानिस्तान के कार्यवाहक विदेश मंत्री आमिर खान मुत्ताकी की यात्रा और तालिबान नेता को दिए गए गर्मजोशी भरे स्वागत को "अफगानिस्तान के लोगों तक पहुंच" के रूप में प्रस्तुत किया।
- The visit coincided with **violent clashes** on the **Afghanistan-Pakistan border**.  
यह यात्रा अफगानिस्तान-पाकिस्तान सीमा पर हुए हिंसक झड़पों के साथ हुई।

## How has India grown links with the Taliban? भारत ने तालिबान से संबंध कैसे बढ़ाए हैं?



- After years of being seen as “too slow” to engage with the Taliban, the government has gone to considerable lengths in recent months to build ties with the group that controls Afghanistan.  
कई वर्षों तक “बहुत धीमा” माने जाने के बाद, सरकार ने हाल के महीनों में अफगानिस्तान पर नियंत्रण रखने वाले इस समूह के साथ संबंध बनाने के लिए काफी प्रयास किए हैं।
- In **January this year**, **Foreign Secretary Vikram Misri** made the first such contact, meeting Mr. Muttaqi in **Dubai**, and discussed increasing trade between both countries.  
इस वर्ष जनवरी में, विदेश सचिव विक्रम मिस्री ने दुबई में मुत्ताकी से मुलाकात की और दोनों देशों के बीच व्यापार बढ़ाने पर चर्चा की।
- On **May 16**, just days after the **India-Pakistan conflict** ended in a ceasefire, **External Affairs Minister S. Jaishankar** spoke to Mr. Muttaqi over the telephone, thanking Afghanistan for its support and condolences over the **Pahalgam terror attack**.  
16 मई को, भारत-पाकिस्तान संघर्षविराम के कुछ दिनों बाद, विदेश मंत्री एस. जयशंकर ने मुत्ताकी से फोन पर बात की और पहलगाम आतंकी हमले पर अफगानिस्तान के समर्थन और संवेदना के लिए धन्यवाद दिया।
- In **August**, India approached the **UN Security Council** to request permission from its **Sanctions Committee** for a visit by the Taliban FM to India.  
अगस्त में, भारत ने संयुक्त राष्ट्र सुरक्षा परिषद (UNSC) की प्रतिबंध समिति से तालिबान विदेश मंत्री की भारत यात्रा के लिए अनुमति मांगी।
- Mr. Muttaqi is on the **UNSC’s consolidated sanctions list** since **January 2001**, and requires a **waiver to travel internationally**.  
मुत्ताकी जनवरी 2001 से UNSC की संयुक्त प्रतिबंध सूची में हैं और उन्हें अंतरराष्ट्रीय यात्रा की अनुमति के लिए छूट की आवश्यकता होती है।
- The request was denied, but when the request was repeated a month later, it came through, allowing the visit from **October 9 to 16**.  
पहली बार यह अनुरोध अस्वीकार कर दिया गया था, लेकिन एक महीने बाद दोहराए जाने पर इसे 9 से 16 अक्टूबर तक की यात्रा की अनुमति दी गई।
- India doesn’t recognise the “**Islamic Emirate of Afghanistan**”, as the Taliban that took control of Kabul in **2021** renamed it.  
भारत “इस्लामिक अमीरात ऑफ अफगानिस्तान” को मान्यता नहीं देता, जैसा कि 2021 में काबुल पर नियंत्रण करने के बाद तालिबान ने नाम रखा था।
- Even so, **Mr. Jaishankar** met **Mr. Muttaqi** with full **protocol** and held **delegation-level meetings** with him at **Hyderabad House**, and the visitor was accorded **security and hospitality** any other foreign minister would receive.  
फिर भी, श्री जयशंकर ने श्री मुत्ताकी से हैदराबाद हाउस में पूर्ण प्रोटोकॉल के साथ प्रतिनिधिमंडल स्तर की बैठकें कीं और उन्हें किसी अन्य विदेश मंत्री के समान सुरक्षा और आतिथ्य प्रदान किया गया।

## What transpired during the talks?

### वार्ता के दौरान क्या हुआ?

- During the talks, **Mr. Jaishankar** announced India’s plans to **upgrade its technical mission in Kabul to an embassy**, and is expected to appoint diplomats to be posted there shortly.  
वार्ता के दौरान, श्री जयशंकर ने काबुल में भारत के तकनीकी मिशन को दूतावास में अपग्रेड करने की योजना की घोषणा की और जल्द ही वहां राजनयिकों की नियुक्ति की संभावना जताई।
- He also handed over the **keys to 20 ambulances** being donated to Afghanistan, and promised **health infrastructure projects, water projects and humanitarian aid**.  
उन्होंने अफगानिस्तान को दान की जा रही 20 एंबुलेंस की चाबियां सौंपीं और स्वास्थ्य, जल परियोजनाओं व मानवीय सहायता का आश्वासन दिया।
- For its part, the Afghan side joined India in **condemning terrorism** in the region and committed that it would not allow Afghan soil to be used by groups **inimical to India**.  
अफगान पक्ष ने भारत के साथ मिलकर क्षेत्र में आतंकवाद की निंदा की और यह वचन दिया कि भारत-विरोधी समूहों को अफगान धरती का उपयोग नहीं करने दिया जाएगा।
- In **2022**, **UN reports** said **Jaish-e-Mohammad** and **Lashkar-e-Taiba** maintained camps in **Eastern Afghan provinces**.



2022 में, संयुक्त राष्ट्र रिपोर्टों ने बताया कि जैश-ए-मोहम्मद और लश्कर-ए-तैयबा के पूर्वी अफगान प्रांतों में शिविर थे।

- **Why has cooperation been enhanced? सहयोग क्यों बढ़ाया गया है?**
- Mr. Muttaqi's visit began just as **clashes broke out between Pakistan and Afghanistan. मुत्ताकी की यात्रा** उसी समय शुरू हुई जब **पाकिस्तान और अफगानिस्तान के बीच झड़पें** शुरू हुईं।
- Pakistan launched **airstrikes on Kabul** in retaliation for **terror attacks by the Tehreek-e-Taliban Pakistan (TTP)** that Pakistan claims is sheltered by the Taliban.  
**पाकिस्तान ने काबुल पर हवाई हमले** किए, जो **तहरीक-ए-तालिबान पाकिस्तान (TTP)** के आतंकी हमलों के जवाब में थे, जिनके बारे में पाकिस्तान का दावा है कि उन्हें **तालिबान का संरक्षण** प्राप्त है।
- The timing suggests India is getting closer to its **"enemy's enemy"** in an effort to **upset Pakistan** with a **pincer movement** months after **Operation Sindoor**, but there are many other reasons for such an outreach.  
समय यह संकेत देता है कि भारत **"अपने दुश्मन के दुश्मन"** के करीब आ रहा है ताकि **ऑपरेशन सिंदूर** के महीनों बाद **पाकिस्तान को असहज** किया जा सके, हालांकि इसके कई अन्य कारण भी हैं।
- The first is to **neutralise any threat from the Taliban** in an increasingly volatile neighbourhood, with governments losing power to protesters; India losing stable partners in South Asia; and **China making inroads**.  
पहला कारण है **अशांत पड़ोसी क्षेत्र में तालिबान से किसी भी खतरे को निष्क्रिय करना**, जहां सरकारें प्रदर्शनकारियों के हाथों सत्ता खो रही हैं; भारत **दक्षिण एशिया में स्थिर साझेदारों** को खो रहा है; और **चीन अपनी पैठ बना रहा है**।
- Another reason is to **build connectivity for trade as land routes are closed**.  
एक अन्य कारण है **व्यापार के लिए संपर्क मार्ग बनाना**, क्योंकि **स्थल मार्ग बंद** हैं।
- Pakistan refuses to allow **transit trade**, and the **U.S.** has now **re-imposed sanctions** for projects at **Iran's Chabahar port**, which was being developed by India as an alternate route.  
**पाकिस्तान ट्रांजिट ट्रेड** की अनुमति नहीं देता, और **अमेरिका ने ईरान के चाबहार बंदरगाह** पर परियोजनाओं के लिए **फिर से प्रतिबंध लगाए**, जिसे भारत एक **वैकल्पिक मार्ग** के रूप में विकसित कर रहा था।
- In the broader Eurasian region, **Russia** has officially **recognised the Taliban government**, the first country to do so, and others like **China, Pakistan, Iran, Gulf and Central Asian states** could follow.  
विस्तृत **यूरेशियाई क्षेत्र** में, **रूस** ने आधिकारिक रूप से **तालिबान सरकार को मान्यता दी है** — ऐसा करने वाला पहला देश — और **चीन, पाकिस्तान, ईरान, खाड़ी देश और मध्य एशियाई राष्ट्र** भी इसका अनुसरण कर सकते हैं।
- India cannot afford to be **cut out**.  
भारत के लिए **बाहर रहना संभव नहीं है**।
- India has also maintained that working with the **regime in power** is the only way to continue its **humanitarian aid** and **protect \$3 billion in investments** made between **2001-2021**.  
भारत का यह भी कहना है कि **सत्ता में मौजूद शासन के साथ काम करना ही मानवीय सहायता जारी रखने और 2001-2021 के बीच किए गए 3 अरब डॉलर के निवेश की सुरक्षा का एकमात्र तरीका है**।
- Four years since it took over, the **Taliban regime** appears **stable**, with little political or insurgent opposition, and has been able to impose a **strict form of Islamic Sharia law** that **prohibits women from education and work**.  
सत्ता संभालने के चार साल बाद, **तालिबान शासन स्थिर** प्रतीत होता है, जहाँ राजनीतिक या विद्रोही विरोध नगण्य है, और उसने **इस्लामी शरीयत कानून का कठोर रूप लागू किया है जो महिलाओं की शिक्षा और काम पर रोक लगाता है**।
- Despite the situation, **Mr. Jaishankar's** opening remarks and the **joint statement** contained **no mention of restrictions on women**, another indicator that **New Delhi** has decided the Taliban is **here to stay**.  
स्थिति के बावजूद, **श्री जयशंकर के प्रारंभिक वक्तव्य और संयुक्त बयान में महिलाओं पर प्रतिबंधों का कोई उल्लेख नहीं था**, जो इस बात का संकेत है कि **नई दिल्ली ने मान लिया है कि तालिबान लंबे समय तक रहेगा**।

**Is India preparing to recognise the Taliban?**

**क्या भारत तालिबान को मान्यता देने की तैयारी कर रहा है?**



- The **rapid growth of Delhi's ties with the Taliban**, and the **setting up of an embassy in Kabul**, have raised speculation that India could, like **Russia**, give **recognition to the Taliban government**.  
दिल्ली के तालिबान से बढ़ते संबंधों और काबुल में दूतावास स्थापित करने से यह अटकलें लगाई जा रही हैं कि भारत, रूस की तरह, तालिबान सरकार को मान्यता दे सकता है।
- This may seem unlikely soon, but much will depend on the **next steps New Delhi takes**, and the **seniority level** at which it establishes the embassy.  
यह निकट भविष्य में संभव नहीं लगता, लेकिन यह इस पर निर्भर करेगा कि **नई दिल्ली आगे क्या कदम उठाती है** और दूतावास किस **पद-स्तर के राजनयिकों** से संचालित होता है।
- Mr. Muttaqi said once **Indian diplomats** are sent to Kabul, he expects India to receive **Taliban-appointed diplomats** in Delhi.  
मुत्ताकी ने कहा कि जब **भारतीय राजनयिकों** को काबुल भेजा जाएगा, तो वे उम्मीद करते हैं कि भारत **तालिबान नियुक्त राजनयिकों** को दिल्ली में स्वीकार करेगा।
- This will be significant, as so far the **Afghanistan embassy in Delhi** has remained **loyal to the previous democratic government**.  
यह महत्वपूर्ण होगा क्योंकि अब तक **दिल्ली में अफगानिस्तान का दूतावास पूर्व लोकतांत्रिक सरकार** के प्रति **वफादार** रहा है।
- They resisted Mr. Muttaqi's visit to the embassy, and at the two **press conferences**, they tried to stop the Taliban delegation from placing the **black and white flags of the Emirate**, though unsuccessfully.  
उन्होंने **मुत्ताकी की दूतावास यात्रा** का विरोध किया और दो **प्रेस कॉन्फ्रेंसों** में तालिबान प्रतिनिधिमंडल को **अमीरात के काले-सफेद झंडे** लगाने से रोकने की कोशिश की, लेकिन असफल रहे।
- The **black, green and red tricolour** of the Republic is still hoisted at the embassy, but India's decision to **upgrade missions** has **cast a cloud over its future** and the **staff members' safety**.  
**गणराज्य का काला, हरा और लाल तिरंगा** अभी भी दूतावास पर फहराया जा रहा है, लेकिन भारत के **मिशन अपग्रेड करने के निर्णय** ने उसके **भविष्य और कर्मचारियों की सुरक्षा** पर सवाल खड़े कर दिए हैं।
- The **Ministry of External Affairs (MEA)** did not protest when Mr. Muttaqi held a **press conference** on **October 10**, inviting nearly **20 male journalists** to the embassy.  
**विदेश मंत्रालय (MEA)** ने **10 अक्टूबर** को **मुत्ताकी** द्वारा **20 पुरुष पत्रकारों** को आमंत्रित कर **प्रेस कॉन्फ्रेंस** करने पर कोई आपत्ति नहीं जताई।
- However, after public outrage, the **Taliban delegation** held a **second press conference**, inviting **all journalists** without restrictions.  
हालांकि, सार्वजनिक आक्रोश के बाद, **तालिबान प्रतिनिधिमंडल** ने **दूसरी प्रेस कॉन्फ्रेंस** की, जिसमें **सभी पत्रकारों** को बिना किसी प्रतिबंध के आमंत्रित किया गया।
- There, they faced **hard questions on the condition of women**, although Mr. Muttaqi maintained that **women were "free"** and **girls were receiving education in madrassas**, statements which are **clearly untrue**.  
वहाँ, उन्हें **महिलाओं की स्थिति पर कठिन प्रश्नों** का सामना करना पड़ा, हालांकि **मुत्ताकी** ने दावा किया कि **महिलाएँ "स्वतंत्र"** हैं और **लड़कियाँ मदरसों में शिक्षा प्राप्त कर रही हैं**, जो स्पष्ट रूप से असत्य है।
- **Can a Taliban-led Afghanistan go from being India's enemy's enemy and become a friend?**  
**क्या तालिबान-शासित अफगानिस्तान भारत के दुश्मन का दुश्मन से दोस्त बन सकता है?**
- India has much to gain from a **friendly government in Kabul**, based on its **historic friendship with the Afghan people** during **2001-2021**.  
भारत को **काबुल में मित्रवत सरकार** से बहुत कुछ हासिल हो सकता है, क्योंकि **2001-2021** के दौरान उसकी **अफगान जनता से ऐतिहासिक मित्रता** रही है।
- India was **Afghanistan's first strategic partner**, built an **air corridor** to increase bilateral trade, and worked on **development and infrastructure projects** there.  
भारत **अफगानिस्तान का पहला रणनीतिक साझेदार** था, जिसने **द्विपक्षीय व्यापार बढ़ाने के लिए वायु मार्ग** बनाया और वहाँ कई **विकास व आधारभूत परियोजनाओं** पर काम किया।
- While the Taliban's current conflict with **Pakistan** will enhance **New Delhi's role**, it must be remembered that the **Taliban** has had **close ties with Pakistan's military** in the past.  
हालांकि **तालिबान का वर्तमान संघर्ष पाकिस्तान से नई दिल्ली की भूमिका** को बढ़ा सकता है, लेकिन यह याद रखना चाहिए कि **तालिबान के पाकिस्तान की सेना से पुराने घनिष्ठ संबंध** रहे हैं।



- In addition, the **Taliban leadership in Kabul and Kandahar have differences**, and as **Afghanistan's economy continues to suffer**, they may face challenges to **the regime's control**.

इसके अलावा, **काबुल और कंधार में तालिबान नेतृत्व के बीच मतभेद हैं**, और जैसे-जैसे **अफगानिस्तान की अर्थव्यवस्था कमजोर** होती जा रही है, वे **शासन पर नियंत्रण बनाए रखने में चुनौतियों का सामना** कर सकते हैं।

- For India, **building a tactical relationship with Kabul is vital**, but a **friendship based on shared values seems impossible at present**.

भारत के लिए **काबुल के साथ सामरिक संबंध बनाना आवश्यक है**, लेकिन **साझा मूल्यों पर आधारित मित्रता वर्तमान में असंभव प्रतीत होती है**।

## From backroom to ballot

**Prashant Kishor**

The former political strategist, whose Jan Suraj Party is contesting the coming Assembly elections in Bihar, seeks to disrupt the existing bipolar equations of the State and emerge as a new force

GS II: Election

Nistula Hebbar

**P**rashant Kishor, 48, political strategist-turned-leader of the Jan Suraj Party (JSP), is a public figure about whom much is known and seen, yet with every new assignment or stage in his career, something more is revealed. As an unknown wag once said, "why pay money to have your family tree traced; go into politics and your opponents will do it for you." Mr. Kishor is now in politics, neck deep.

For starters, political observers came to know of Mr. Kishor as one of the figures behind the Citizens for Accountability and Governance (C&G), an organisation actively involved in the political campaign of the Bharatiya Janata Party (BJP) in 2014, the election that saw the emergence of Narendra Modi, then Gujarat Chief Minister, on the national stage. At that time, the concept of a political strategist working parallel to the party cadre with a close working relationship with the political principal was new. Mr. Kishor was described as a former employee at a UN body abroad connected to public health policy, with an interest in politics that fuelled his move back to India. Novel campaign outreaches such as the 'chai pe charcha' (chats over tea) were credited to Mr. Kishor and his team.

As the BJP settled into governance after the 2014 victory, and Mr. Kishor found himself at odds with a party organisation that did not seem to have any space for him and his ideas, he exited the BJP's system, and became close to Bihar Chief Minister Nitish Kumar, who proudly declared his association with Mr. Kishor as the return of the prodigal son. Mr. Kishor, who hails from Bihar, worked with the Mahagathbandhan (an alliance of the Janata Dal (United), the Rashtriya Janata Dal (RJD) and the Congress, which beat the National Democratic Alliance (NDA) in the 2015 Assembly polls.

A child of a physician and a homemaker, Prashant Kishor, hailing from Bihar's Rohtas, did his early

education in Buxar, and later in Hyderabad. After studies, he moved abroad to work with the UN, before returning to India as a political consultant. He founded, along with a few old colleagues, the Indian Political Action Committee (IPAC), a political strategy firm, which brought in a monumental shift in the way Indians saw their political parties organise and fight elections.

The Mahagathbandhan's victory in the Bihar elections saw not only the rise of the industry of political strategy firms, but also revealed, for the first time, a glimmer of front office political ambition in Mr. Kishor. He was appointed vice-president of the Janata Dal (U), while at the same time being a strategist for political clients. He handled the Congress in Uttar Pradesh in 2017 (not a victorious outcome), and went on to engage the YSRCP in Andhra Pradesh in 2019, the Aam Aadmi Party (AAP) in 2020 and the Trinamool Congress and the DMK in 2021.

Things between Mr. Kishor and Nitish Kumar, however, did not continue to be rosy, with the final fall-out happening in 2020, when Mr. Kishor openly criticised the Chief Minister on his support for the Citizenship Amendment Act (CAA), which was being pushed by the Modi government at the Centre. Harsh words were exchanged and discipline and intrigues were alleged, but some aspects of Mr. Kishor's ideological bent amid the heterodoxy of his client list was revealed in that exchange.

### Out of the backroom

It was after the 2021 polls in West Bengal and Tamil Nadu, where Mr. Kishor aided the Trinamool and the DMK to victory, that he made the decision to make the leap from backroom political strategy to forming his own party. In an interview to *The Hindu* recently, he explained his thinking at that time. "The trigger point was the COVID pandemic. At that time, I was involved in elections in [West] Bengal and Tamil Nadu, and I



ILLUSTRATION: R. RAJESH

felt helpless that despite all the network, power, resources that I had, I felt that I could not be of any help to anybody. It also made me realise that a lot of the talk of good governance in Bihar is hollow. That almost 5 million people got into trouble, had to walk back to Bihar. That's the time I thought I should go back to Bihar. And the proof of this is that the day the Trinamool won Bengal, May 2, 2021, I announced that I'm quitting what I was doing," he said.

His modus operandi thereafter was one of exploring the political field. He undertook a two-year tour across Bihar, and reached out to the Congress. His first idea, he said, was to work with the Congress, to devise a plan for six States of North India where the Congress was diminishing, and revive the pre-independence role of the Congress as an outlet for anyone who wants to contribute to public affairs. "Just as during the freedom movement, anyone, from those who

wanted to agitate on the streets to those boycotting foreign goods and spinning the charkha, said they were part of the Congress, the party should mean that in governance terms," Mr. Kishor said. "We, however, failed to take the leap of faith," he added. The Congress leadership pored over a presentation made by him and later decided not to participate.

This brings us to October 2024, when, with lakhs of sign-ups, the Jan Suraj Party (JSP) was launched in Patna. Leaders said they would contest the 2025 Assembly polls in Bihar. It revealed a journey of political alternatives. But detractors reminded the newly-founded party that the leader's full name is Prashant Kishor Pandey, alluding that his identity (that of a Brahmin) would be a detriment within the social justice politics of the State.

### 'Development politics'

Mr. Kishor's navigation of Indian politics has revealed both his ascribed and acquired identities and his views. As a vocal face of the JSP, he has been at the forefront of articulating the party's ideology and plans for what he termed "development politics". What is still unknown, however, are two things – whether his party, now in the electoral fray, will be a disruptor of the two decades of Bihar's bipolar political equations and whether his refusal to fight the polls as a candidate has wrecked or aided that project. Mr. Kishor is upbeat about the chances of his party, and dismissive of the criticism that the JSP "is a spoiler party". "When people say, *vote katwa* (spoiler) party, they think that they are using it as an abuse to us, I say, yes, we are, but we are cutting so many votes of both sides (NDA and INDIA bloc) that they will be finished, he told *The Hindu*.

For someone who has disrupted the backroom of political campaigning in India, entering the electoral fray without a political legacy to bank upon, Prashant Kishor continues to be a fascinating chapter of India's democracy.

### THE GIST

Political observers came to know of Prashant Kishor as one of the figures behind the Citizens for Accountability and Governance (C&G), an organisation actively involved in the political campaign of the BJP in 2014

He founded, along with a few old colleagues, the Indian Political Action Committee (IPAC), a political strategy firm, which brought in a monumental shift in the way Indians saw their political parties organise and fight elections

After the 2021 polls in West Bengal and Tamil Nadu, where Mr. Kishor aided the Trinamool and the DMK to victory, he made the decision to make the leap from backroom strategy to forming his own political party

## From backroom to ballot पृष्ठभूमि से मतदान तक

- The former political strategist, whose **Jan Suraj Party** is contesting the coming **Assembly elections in Bihar**, seeks to disrupt the existing bipolar equations of the State and emerge as a new force.



पूर्व राजनीतिक रणनीतिकार, जिनकी जन सुराज पार्टी आगामी बिहार विधानसभा चुनावों में हिस्सा ले रही है, राज्य के मौजूदा द्विध्रुवीय समीकरणों को बदलने और एक नई शक्ति के रूप में उभरने का प्रयास कर रहे हैं।

- Prashant Kishor, 48, political strategist-turned-leader of the **Jan Suraaj Party (JSP)**, is a public figure about whom much is known and seen, yet with every new assignment or stage in his career, something more is revealed.

प्रशांत किशोर, 48, जो एक राजनीतिक रणनीतिकार से नेता बने हैं और जन सुराज पार्टी (JSP) के प्रमुख हैं, एक सार्वजनिक व्यक्ति हैं जिनके बारे में बहुत कुछ जाना जाता है, फिर भी उनके करियर के हर नए चरण में कुछ नया सामने आता है।

- As an unknown wag once said, “why pay money to have your family tree traced; go into politics and your opponents will do it for you.” Mr. Kishor is now in politics, neck deep.  
जैसा कि एक अज्ञात व्यक्ति ने कहा था, “अपने परिवार वृक्ष को खोजने के लिए पैसे क्यों खर्च करें; राजनीति में जाइए और आपके विरोधी आपके लिए यह कर देंगे।” श्री किशोर अब पूरी तरह राजनीति में डूब चुके हैं।
- For starters, political observers came to know of Mr. Kishor as one of the figures behind the **Citizens for Accountability and Governance (C&AG)**, an organisation actively involved in the political campaign of the **Bharatiya Janata Party (BJP)** in 2014, the election that saw the emergence of **Narendra Modi** on the national stage.  
शुरुआत में, राजनीतिक पर्यवेक्षकों ने श्री किशोर को **Citizens for Accountability and Governance (C&AG)** के रूप में जाना, जो **भारतीय जनता पार्टी (BJP)** के 2014 के चुनाव अभियान में सक्रिय रूप से शामिल थे, वही चुनाव जिसमें **नरेंद्र मोदी** राष्ट्रीय स्तर पर उभरे थे।
- At that time, the concept of a political strategist working parallel to the party cadre was new. Mr. Kishor was described as a **former UN employee** connected to **public health policy**, with an interest in politics that fuelled his move back to India.  
उस समय, पार्टी कैडर के समानांतर काम करने वाले राजनीतिक रणनीतिकार की अवधारणा नई थी। श्री किशोर को **संयुक्त राष्ट्र (UN)** के एक **पूर्व कर्मचारी** के रूप में जाना गया जो **सार्वजनिक स्वास्थ्य नीति** से जुड़े थे, और राजनीति में रुचि ने उन्हें भारत वापस लाया।
- Novel campaign outreaches such as the ‘**chai pe charcha**’ (**chats over tea**) were credited to Mr. Kishor and his team.  
‘चाय पे चर्चा’ जैसी अभिनव अभियान योजनाओं का श्रेय श्री किशोर और उनकी टीम को दिया गया।
- As the BJP settled into governance after the 2014 victory, and Mr. Kishor found himself at odds with the party organisation, he exited the BJP’s system and became close to **Bihar Chief Minister Nitish Kumar**.  
2014 की जीत के बाद जब **भाजपा सरकार** में स्थिर हुई, श्री किशोर को पार्टी संगठन से मतभेद हुआ और उन्होंने **भाजपा छोड़ दी** तथा **बिहार के मुख्यमंत्री नीतीश कुमार** के करीब आ गए।
- He worked with the **Mahagathbandhan (JD(U), RJD, Congress)**, which beat the **National Democratic Alliance (NDA)** in the **2015 Assembly polls**.  
उन्होंने **महागठबंधन (जदयू, राजद, कांग्रेस)** के साथ काम किया, जिसने **2015 विधानसभा चुनावों** में **राष्ट्रीय जनतांत्रिक गठबंधन (NDA)** को हराया।
- A child of a physician and a homemaker, Prashant Kishor, hailing from **Rohtas (Bihar)**, did his early education in **Buxar** and later in **Hyderabad**.  
एक **डॉक्टर और गृहिणी** के पुत्र, **प्रशांत किशोर** का मूल स्थान **रोहतास (बिहार)** है। उन्होंने अपनी प्रारंभिक शिक्षा **बक्सर** में और बाद में **हैदराबाद** में पूरी की।
- After studies, he moved abroad to work with the **UN**, before returning to India as a **political consultant**.  
पढ़ाई के बाद, वे **संयुक्त राष्ट्र (UN)** में काम करने विदेश गए, और बाद में **राजनीतिक सलाहकार** के रूप में भारत लौटे।
- He founded the **Indian Political Action Committee (IPAC)**, a **political strategy firm**, which changed the way Indians viewed political campaigns.  
उन्होंने **Indian Political Action Committee (IPAC)** की स्थापना की, जो एक **राजनीतिक रणनीति फर्म** है, जिसने भारतीय राजनीतिक अभियानों की शैली को बदल दिया।
- The **Mahagathbandhan’s victory in 2015** also revealed Mr. Kishor’s political ambition, as he was appointed **vice-president of JD(U)** while also continuing as a strategist.  
2015 में **महागठबंधन की जीत** ने श्री किशोर की **राजनीतिक महत्वाकांक्षा** को भी उजागर किया, क्योंकि उन्हें **जदयू के उपाध्यक्ष** के रूप में नियुक्त किया गया, जबकि वे रणनीतिकार के रूप में भी कार्य करते रहे।
- He worked with the **Congress (UP, 2017)**, **YSRCP (Andhra Pradesh, 2019)**, **AAP (Delhi, 2020)**, **TMC** and **DMK (2021)**.



उन्होंने कांग्रेस (उत्तर प्रदेश, 2017), वाईएसआरसीपी (आंध्र प्रदेश, 2019), आप (दिल्ली, 2020), टीएमसी और डीएमके (2021) के साथ कार्य किया।

- His relationship with **Nitish Kumar** soured in **2020** over the **Citizenship Amendment Act (CAA)**, leading to a fallout and public criticism.  
2020 में नागरिकता संशोधन अधिनियम (CAA) को लेकर उनका नीतीश कुमार से मतभेद हुआ, जिससे दोनों के बीच सार्वजनिक विवाद हुआ।
- After the **2021 polls in West Bengal and Tamil Nadu**, where he aided **TMC** and **DMK**, he decided to form his own party.  
2021 के पश्चिम बंगाल और तमिलनाडु चुनावों में टीएमसी और डीएमके को जीत दिलाने के बाद, उन्होंने अपनी पार्टी बनाने का निर्णय लिया।
- He said the **COVID pandemic** was the trigger, as it exposed governance failures in **Bihar**.  
उन्होंने कहा कि **COVID महामारी** वह कारण बनी जिसने बिहार में सुशासन की असलियत उजागर कर दी।
- He undertook a **two-year tour across Bihar**, even reaching out to the **Congress** with a proposal to revive it in **six northern States**, but the plan did not materialise.  
उन्होंने दो वर्षों तक बिहार का दौरा किया और कांग्रेस से संपर्क कर छह उत्तरी राज्यों में उसे पुनर्जीवित करने का प्रस्ताव दिया, लेकिन योजना सफल नहीं हुई।
- In **October 2024**, he launched the **Jan Suraj Party (JSP)** in **Patna**, with plans to contest the **2025 Assembly polls** in Bihar.  
अक्टूबर 2024 में उन्होंने पटना में जन सुराज पार्टी (JSP) की शुरुआत की, जिसका लक्ष्य 2025 बिहार विधानसभा चुनावों में उतरना है।
- Critics pointed out his **Brahmin identity** (Prashant Kishor Pandey) as a possible disadvantage in **Bihar's social justice politics**.  
आलोचकों ने उनकी ब्राह्मण पहचान (प्रशांत किशोर पांडेय) को बिहार की सामाजिक न्याय राजनीति में एक संभावित बाधा बताया।
- Mr. Kishor promotes "**development politics**" as the ideology of **JSP**, and claims his party will **disrupt the NDA and INDIA bloc**.  
श्री किशोर "विकास की राजनीति" को जन सुराज पार्टी की विचारधारा बताते हैं और दावा करते हैं कि उनकी पार्टी एनडीए और इंडिया गठबंधन दोनों को चुनौती देगी।
- He denied that JSP is a "**spoiler party**", saying "we are cutting so many votes of both sides that they will be finished."  
उन्होंने यह कहते हुए इंकार किया कि JSP "वोट काटने वाली पार्टी" है — "हम दोनों पक्षों के इतने वोट काट रहे हैं कि वे खत्म हो जाएंगे।"
- For someone who has disrupted political campaigning in India, **Prashant Kishor** continues to be a **fascinating chapter in India's democracy**.  
भारत में राजनीतिक रणनीति को बदल देने वाले व्यक्ति के रूप में, प्रशांत किशोर अब भी भारतीय लोकतंत्र का एक रोचक अध्याय बने हुए हैं।



# Chinese whispers

**Ashley J. Tellis**

The South Asia expert is now accused of keeping in his private custody around 1,000 pages of documents marked 'TOP SECRET' and 'SECRET'

**GS II: India-US**

**Varghese K. George**

The line that divides the deep state and the anti-national is terrifyingly thin, the arrest of strategic affairs expert Ashley J. Tellis by the U.S. Federal Bureau of Investigation (FBI) suggests. True, the FBI has said that being charged does not mean he is guilty, but regardless of how the case turns out, Mr. Tellis has his reputation, built over a lifetime, smirched overnight.

This was in the making for several years, the FBI has told the court. Mr. Tellis was under surveillance since 2022, it turns out. To begin with, Mr. Tellis had access to a lot of state secrets of the U.S., and perhaps everyone who has such access might be under some surveillance. Actors in the hazy world of spycraft and secret wars of nation states are aware that they are all by themselves if something goes wrong. The U.S. Justice Department documents are sketchy about the alleged crime, but they sound to suggest that Mr. Tellis shared secret government files with Chinese contacts, and received something in return from them. Mr. Tellis has been released on bond, and his lawyers have told *AFP* that they would be "vigorously contesting" the charges against him.

Mr. Tellis has held a series of senior positions in the U.S. administration, and was an unpaid consul-



tant with the State Department when he was arrested. Aligned with the Republican Party in the U.S., his most consequential role possibly was at the White House of George W. Bush. At the National Security Council (NSC), as Special Assistant to Mr. Bush and Senior Director for Strategic Planning and Southwest Asia, Mr. Tellis played a key role in reshaping the South Asia policy of the U.S., and particularly contributed to the U.S.-India Civil Nuclear Agreement, which was concluded in 2008. That was a turning point in the India-U.S. relations.

### Scholarship and policy

Scholarship tailored to suit political and economic interest is far from a scandal now, particularly in international relations. Independent thinking is rarely incentivised in strategic expertise while advocates of particular positions occupy positions of influence. The rise of Mr. Tellis as someone who could easily straddle policy and scholarship in the U.S. corres-

ponded with the dominant bipartisan thinking about India and China.

He became the key proponent of expansive India-U.S. relations over the past two decades. He wanted U.S. primacy in world affairs to last and China's rise balanced, and placed India in that context from the U.S. vantage. Mr. Tellis championed India under Manmohan Singh and Narendra Modi for many years, but in recent years, he turned an India-sceptic, citing the weakening of democratic processes.

His books and monographs represent deep and nuanced scholarship but not always beyond possible conflict of interest. While holding the Tata Chair for Strategic Affairs at the Carnegie Endowment for International Peace, Mr. Tellis advocated F-16 planes for the IAF. Tata and Boeing, the makers of F-16, are in a partnership.

Mr. Tellis is now accused of keeping in his private custody around 1,000 pages of documents marked 'TOP SECRET' and 'SE-

CRET'. The documents were reportedly stored in various locations, including filing cabinets and trash bags. From court documents, it appears that he was authorised to access these documents, but perhaps not authorised to print them out and carry them home. Surveillance footage apparently showed him removing documents from the Pentagon's Mark Center in Alexandria, Virginia. He was also reported to have renamed and printed a 1,288-page U.S. Air Force manual labelled 'Secret', which he later deleted from the system. The FBI affidavit detailed multiple meetings between Mr. Tellis and Chinese interlocutors between 2022 and 2025, at restaurants in Virginia, close to Washington DC. Documents claim that Mr. Tellis was seen entering a restaurant with a manila envelope and leaving without it, after meeting Chinese contacts.

On another occasion, it is noted that he received a gift bag. If convicted, Mr. Tellis can be in jail for up to 10 years, and be asked to pay fine of up to \$250,000.

In the shadow games of strategy, enemies and friends can change abruptly; and yesterday's terrorist can reincarnate as an honourable head of state. Mr. Tellis has been a key amplifier of the China challenge in Washington DC, and in a peak paradox, is now under a cloud of suspicion of Beijing connections.

**Chinese whispers**  
चीनी फुसफुसाहट



- The South Asia expert is now accused of keeping in his private custody around **1,000 pages of documents** marked '**TOP SECRET**' and '**SECRET**'  
दक्षिण एशिया विशेषज्ञ पर अब आरोप है कि उन्होंने अपने निजी कब्जे में लगभग **1,000 पन्नों के दस्तावेज़** रखे थे, जिन पर '**टॉप सीक्रेट**' और '**सीक्रेट**' का निशान था।
- The line that divides the deep state and the anti-national is terrifyingly thin, the arrest of strategic affairs expert **Ashley J. Tellis** by the **U.S. Federal Bureau of Investigation (FBI)** suggests.  
**डीप स्टेट और राष्ट्रविरोधी** के बीच की रेखा भयावह रूप से पतली है, यह **अमेरिकी संघीय जांच ब्यूरो (FBI)** द्वारा **रणनीतिक मामलों के विशेषज्ञ एशले जे. टेलिस** की गिरफ्तारी से पता चलता है।
- True, the FBI has said that being charged does not mean he is guilty, but regardless of how the case turns out, Mr. Tellis has his reputation, built over a lifetime, smirched overnight.  
सच है, **FBI** ने कहा है कि आरोपित होने का अर्थ दोषी होना नहीं है, लेकिन चाहे मामला जैसा भी निकले, **श्री टेलिस** की जीवनभर में बनी प्रतिष्ठा एक रात में धूमिल हो गई।
- This was in the making for several years, the FBI has told the court.  
**FBI** ने अदालत को बताया कि यह कई वर्षों से बन रहा था।
- Mr. Tellis was under surveillance since **2022**, it turns out.  
पता चला कि **श्री टेलिस 2022** से निगरानी में थे।
- To begin with, Mr. Tellis had access to a lot of **state secrets of the U.S.**, and perhaps everyone who has such access might be under some surveillance.  
शुरुआत में, **श्री टेलिस** के पास **अमेरिका के कई राज्तीय रहस्यों** की पहुंच थी, और संभवतः जिनके पास ऐसी पहुंच होती है, वे सभी किसी न किसी निगरानी में रहते हैं।
- Actors in the hazy world of spycraft and secret wars of nation states are aware that they are all by themselves if something goes wrong.  
**जासूसी कला और राष्ट्रों के गुप्त युद्धों** की धुंधली दुनिया के खिलाड़ी जानते हैं कि अगर कुछ गलत हो गया, तो वे पूरी तरह अकेले रह जाते हैं।
- The **U.S. Justice Department** documents are sketchy about the alleged crime, but they sound to suggest that Mr. Tellis shared **secret government files** with **Chinese contacts**, and received something in return from them.  
**अमेरिकी न्याय विभाग** के दस्तावेज़ कथित अपराध के बारे में अस्पष्ट हैं, लेकिन ऐसा प्रतीत होता है कि **श्री टेलिस** ने **गुप्त सरकारी फाइलें चीनी संपर्कों** के साथ साझा कीं और बदले में उनसे कुछ प्राप्त किया।
- Mr. Tellis has been released on bond, and his lawyers have told **AFP** that they would be "vigorously contesting" the charges against him.  
**श्री टेलिस** को **जमानत** पर रिहा कर दिया गया है, और उनके वकीलों ने **एएफपी (AFP)** को बताया कि वे उनके खिलाफ लगे आरोपों का "जोरदार विरोध" करेंगे।
- Mr. Tellis has held a series of senior positions in the **U.S. administration**, and was an unpaid consultant with the **State Department** when he was arrested.  
**श्री टेलिस** ने **अमेरिकी प्रशासन** में कई वरिष्ठ पदों पर कार्य किया है, और गिरफ्तारी के समय वे **विदेश विभाग** के एक **बिना वेतन वाले सलाहकार** थे।
- Aligned with the **Republican Party**, his most consequential role possibly was at the **White House of George W. Bush**.  
**रिपब्लिकन पार्टी** से जुड़े **श्री टेलिस** की सबसे महत्वपूर्ण भूमिका संभवतः **जॉर्ज डब्ल्यू. बुश** के **व्हाइट हाउस** में थी।
- At the **National Security Council (NSC)**, as **Special Assistant** to Mr. Bush and **Senior Director for Strategic Planning and Southwest Asia**, Mr. Tellis played a key role in reshaping **U.S. South Asia policy**, particularly contributing to the **U.S.-India Civil Nuclear Agreement (2008)**.  
**राष्ट्रीय सुरक्षा परिषद (NSC)** में, **श्री टेलिस** ने **जॉर्ज डब्ल्यू. बुश** के विशेष सहायक और **रणनीतिक योजना एवं दक्षिण पश्चिम एशिया के वरिष्ठ निदेशक** के रूप में **अमेरिकी दक्षिण एशिया नीति** को पुनः आकार देने में महत्वपूर्ण भूमिका निभाई, विशेष रूप से **2008 के अमेरिका-भारत नागरिक परमाणु समझौते** में योगदान दिया।
- That was a turning point in **India-U.S. relations**.  
यह **भारत-अमेरिका संबंधों** में एक **टर्निंग पॉइंट** था।

Scholarship and policy  
वृत्तिवृत्ति और नीति



- Scholarship tailored to suit **political and economic interest** is far from a scandal now, particularly in **international relations**.  
राजनीतिक और आर्थिक हितों के अनुरूप बनाई गई शैक्षणिक शोध अब किसी घोटाले से कम नहीं है, विशेष रूप से अंतरराष्ट्रीय संबंधों में।
- Independent thinking is rarely incentivised in **strategic expertise**, while advocates of particular positions occupy positions of influence.  
रणनीतिक विशेषज्ञता में स्वतंत्र सोच को शायद ही कभी प्रोत्साहित किया जाता है, जबकि विशिष्ट दृष्टिकोण रखने वाले प्रभावशाली पदों पर होते हैं।
- The rise of **Mr. Tellis** as someone who could straddle **policy and scholarship** in the U.S. corresponded with the dominant **bipartisan thinking about India and China**.  
श्री टेलिस का नीति और अकादमिक शोध के बीच सहज रूप से चलने वाला व्यक्ति बनना, भारत और चीन पर अमेरिका की द्विदलीय सोच के अनुरूप था।
- He became the key proponent of expansive **India-U.S. relations** over the past two decades. पिछले दो दशकों में वह भारत-अमेरिका संबंधों के प्रमुख समर्थक बन गए।
- He wanted **U.S. primacy** in world affairs to last and **China's rise balanced**, and placed **India** in that context.  
वह चाहते थे कि अमेरिका की वैश्विक प्रधानता बनी रहे और चीन के उदय को संतुलित किया जाए, तथा उन्होंने उस संदर्भ में भारत को रखा।
- Mr. Tellis championed **India** under **Manmohan Singh** and **Narendra Modi**, but in recent years, he turned an **India-sceptic**, citing **weakening of democratic processes**.  
श्री टेलिस ने मनमोहन सिंह और नरेंद्र मोदी के नेतृत्व में भारत का समर्थन किया, लेकिन हाल के वर्षों में वे भारत के प्रति संदेहवादी हो गए, यह कहते हुए कि लोकतांत्रिक प्रक्रियाएँ कमजोर हो रही हैं।
- His books and monographs represent **deep and nuanced scholarship**, but not always beyond possible **conflict of interest**.  
उनकी पुस्तकें और मोनोग्राफ्स गहन और सूक्ष्म शोध का प्रतिनिधित्व करती हैं, लेकिन हमेशा संभावित हितों के टकराव से परे नहीं होतीं।
- While holding the **Tata Chair for Strategic Affairs** at the **Carnegie Endowment for International Peace**, Mr. Tellis advocated **F-16 planes** for the **IAF**.  
कार्नेगी एंडोमेंट फॉर इंटरनेशनल पीस में रणनीतिक मामलों के टाटा चेयर के रूप में कार्य करते हुए, श्री टेलिस ने भारतीय वायुसेना (IAF) के लिए **F-16 विमान** का समर्थन किया।
- **Tata and Boeing**, the makers of **F-16**, are in a partnership.  
टाटा और बोइंग, जो **F-16** के निर्माता हैं, एक साझेदारी में हैं।
- Mr. Tellis is now accused of keeping in his private custody around **1,000 pages** of documents marked **'TOP SECRET'** and **'SECRET'**.  
श्री टेलिस पर अब अपने निजी कब्जे में लगभग **1,000 पन्नों** के दस्तावेज़ रखने का आरोप है, जिन पर **'टॉप सीक्रेट'** और **'सीक्रेट'** का निशान था।
- The documents were reportedly stored in various locations, including **filing cabinets and trash bags**.  
रिपोर्टों के अनुसार दस्तावेज़ फ़ाइलिंग कैबिनेट्स और कूड़ेदानों में रखे गए थे।
- From court documents, it appears that he was authorised to access these documents, but not authorised to **print and carry them home**.  
अदालती दस्तावेजों से पता चलता है कि उन्हें इन दस्तावेजों तक पहुंच की अनुमति थी, लेकिन उन्हें **प्रिंट कर घर ले जाने** की अनुमति नहीं थी।
- Surveillance footage showed him removing documents from the **Pentagon's Mark Center in Alexandria, Virginia**.  
निगरानी फुटेज में उन्हें वर्जीनिया के एलेक्ज़ेंड्रिया में पेंटागन के मार्क सेंटर से दस्तावेज़ निकालते हुए देखा गया।
- He was also reported to have renamed and printed a **1,288-page U.S. Air Force manual labelled 'Secret'**, which he later deleted from the system.  
रिपोर्टों के अनुसार उन्होंने **'सीक्रेट'** लेबल वाले **1,288-पन्नों के अमेरिकी वायुसेना मैनुअल** का नाम बदलकर प्रिंट किया और बाद में सिस्टम से हटा दिया।
- The **FBI affidavit** detailed multiple meetings between **Mr. Tellis and Chinese interlocutors (2022–2025)**, at restaurants near **Washington DC**.  
**FBI हलफनामे** में श्री टेलिस और चीनी मध्यस्थों के बीच **2022 से 2025** के बीच **वॉशिंगटन डीसी** के पास स्थित रेस्तरां में कई बैठकों का विवरण दिया गया।



- Documents claim that Mr. Tellis was seen entering a restaurant with a **manila envelope** and leaving without it, after meeting Chinese contacts.  
दस्तावेज़ों में कहा गया है कि **श्री टेलिस** को **मनीला लिफाफे** के साथ एक रेस्तरां में प्रवेश करते और **चीनी संपर्कों** से मिलने के बाद बिना लिफाफे के निकलते हुए देखा गया।
- On another occasion, it is noted that he received a **gift bag**.  
एक अन्य अवसर पर यह दर्ज किया गया कि उन्होंने एक **उपहार बैग** प्राप्त किया।
- If convicted, Mr. Tellis can be in jail for up to **10 years** and pay a fine of up to **\$250,000**.  
अगर दोषी पाया गया, तो **श्री टेलिस** को **10 साल** तक की जेल और **\$250,000** तक का जुर्माना हो सकता है।
- In the shadow games of strategy, enemies and friends can change abruptly; and yesterday's terrorist can reincarnate as an honourable head of state.  
**रणनीति के छाया खेलों** में, दुश्मन और दोस्त अचानक बदल सकते हैं; और कल का **आतंकी आज सम्मानित राष्ट्राध्यक्ष** बन सकता है।
- Mr. Tellis has been a key amplifier of the **China challenge** in Washington DC, and in a peak paradox, is now under suspicion of **Beijing connections**.  
**श्री टेलिस वॉशिंगटन डीसी** में **चीन चुनौती** के प्रमुख प्रवर्तक रहे हैं, और एक गहरे विरोधाभास में, अब वे बीजिंग से संबंधों के संदेह के घेरे में हैं।

## Taliban's diplomatic front

### Amir Khan Muttaqi

The acting Foreign Minister of Afghanistan, who survived the many conflicts of the country over the years, seeks legitimacy for the regime even as repression continues at home

**GS II: India-Afghanistan**

ILLUSTRATIONS: SREEJITH R. KUMAR

**Kallol Bhattacharjee**

Visiting the Deoband Darul Uloom during his recent India tour, the Taliban's Foreign Minister, Amir Khan Muttaqi, described the institution as "Madar e Ilmi", or alma mater, which in a way provided a glimpse of Mr. Muttaqi's evolution as a fighter and a diplomat.

Born in 1970 in a Pashtun family in Zarghun village of Helmand province, Amir Khan Muttaqi's life has been intertwined with the history of his conflict-torn country. His family had migrated to Helmand from Paktia. The Afghanistan that he was born into was to change radically even as he started his early education in his village.

Among the waves of Afghans who left their homes after Soviet intervention began in December 1979 were Mr. Muttaqi and his family from Helmand. He shifted to the Afghan refugee camps that had come up near Peshawar, Pakistan. The refugees also provided young fighters for resisting the Soviet invasion and Mr. Muttaqi was one of the teenagers who joined the anti-Soviet jihad of the 1980s, funded by the CIA and guided by Pakistan's ISI. It was during his years as a refugee in Pakistan that the young Pashtun fighter picked up Urdu which he uses today with his Pakistani and Indian interlocutors.

In Peshawar, seven poli-



tical parties came up in the refugee camps (the Peshawar Seven). Prominent leaders from these groups were Gulbuddin Hekmatyar, Burhanuddin Rabbani, Abdul Rasul Sayyaf, Hazrat Sibghatullah Mojaddedi, Pir Sayed Ahmad Gailani, Maulana Mohammad Nabi Mohammadi, and Mohammed Yunus Khalis. Of them, Maulana Mohammadi and Khalis extended full support to the Taliban when the outfit was launched in the 1990s.

Mr. Muttaqi joined the Islamic Revolutionary Movement of Afghanistan of Maulana Mohammadi, who had also groomed other Taliban leaders such as its founder Mullah Omar. Like Mohammadi before them, Mullah Omar, Mr. Muttaqi, and Hibatullah Akhundzada, the current leader of the Taliban, studied in madrasas that followed the curriculum of Darul Uloom Deoband. It was because of this link Mr. Muttaqi described Deoband as his 'Madar e Ilmi'.

Among all the Taliban commanders, Mr. Muttaqi is known for being a nego-

tiator, a role that was given to him by the late Mullah Omar. Muttaqi is one of the few Taliban leaders who have survived all the violent phases of Afghanistan's recent history. As a young Taliban leader, he became the Minister of Information and Culture and general spokesperson of the Taliban in 1996 when the outfit took power in a chaotic situation.

He was serving as the Minister of Education when the war with the U.S. began in Afghanistan in 2001, following the 9/11 attacks, leading to the overthrow of the first Taliban regime. He survived the most intense phase of violence that continued till negotiation was started with the Taliban during the first term of U.S. President Donald Trump in 2017-18.

#### Return to Kabul

Mr. Muttaqi was part of the U.S.-Taliban negotiation and was present at the signing of the deal in Doha on February 29, 2020, when the Taliban delegation was led by Mullah Abdul Ghani Baradar. Though

the deal was opposed by the Ashraf Ghani government of the Islamic Republic of Afghanistan, the Taliban carried out a hybrid war on the ground following the deal and captured Kabul by August 2021. Mr. Muttaqi then became the Foreign Minister.

Ever since, Mr. Muttaqi has travelled to China, Russia, Pakistan, Doha, Dubai, Saudi Arabia, India and other countries.

Over the last four years, the most challenging aspect of Mr. Muttaqi's assignment has been presenting Afghanistan as a rational actor even as it continued to impose its no-education policy on young women, who are also restricted from joining the workforce. Mr. Muttaqi has also carried out a few difficult discussions successfully since taking charge, including the one regarding the release of American hostage Amir Amir, who was released in September 2025 after President Trump's Special Representative on hostage affairs, Adam Boehler, held discussions with him.

Apart from the conflict with Pakistan, Mr. Muttaqi's biggest challenge continues to be the fact that only Russia has so far given diplomatic recognition to Taliban as the ruler of Afghanistan. It remains to be seen if he can convince other major powers to recognise the Taliban as the de jure rulers of Afghanistan.



## Taliban's diplomatic front तालिबान का कूटनीतिक मोर्चा

- The acting **Foreign Minister of Afghanistan**, who survived the many conflicts of the country over the years, seeks **legitimacy for the regime** even as repression continues at home.  
अफगानिस्तान के कार्यवाहक विदेश मंत्री, जिन्होंने वर्षों से देश के कई संघर्षों से जीवित बचे हैं, वे शासन की वैधता चाहते हैं, जबकि देश में दमन जारी है।
- Visiting the **Deoband Darul Uloom** during his recent **India tour**, the Taliban's Foreign Minister, **Amir Khan Muttaqi**, described the institution as "**Madar e Ilmi**", or alma mater, which in a way provided a glimpse of Mr. Muttaqi's evolution as a fighter and a diplomat.  
अपने हालिया **भारत दौरे** के दौरान **देवबंद दारुल उलूम** का दौरा करते हुए **तालिबान के विदेश मंत्री आमिर खान मुत्ताकी** ने इस संस्था को "**मदर-ए-इल्मी**" यानी मातृसंस्था बताया, जिसने एक तरह से **मुत्ताकी के योद्धा और राजनयिक के रूप में विकास** की झलक दी।
- Born in **1970** in a **Pashtun family** in **Zarghun village of Helmand province**, **Amir Khan Muttaqi's life** has been intertwined with the history of his conflict-torn country.  
**1970 में हेलमंद प्रांत के जरघून गाँव की एक पश्तून परिवार में जन्मे आमिर खान मुत्ताकी का जीवन** उनके संघर्षग्रस्त देश के इतिहास से जुड़ा रहा है।
- His family had migrated to **Helmand from Paktia**.  
उनका परिवार **पक्तिा से हेलमंद** आकर बस गया था।
- The Afghanistan that he was born into was to change radically even as he started his early education in his village.  
जिस **अफगानिस्तान** में उनका जन्म हुआ, वह तब बदल रहा था जब उन्होंने अपने गाँव में प्रारंभिक शिक्षा शुरू की।
- Among the waves of Afghans who left their homes after **Soviet intervention** began in **December 1979**, were **Mr. Muttaqi and his family** from Helmand.  
**दिसंबर 1979 में सोवियत हस्तक्षेप शुरू होने के बाद घर छोड़ने वाले अफगानों की लहरों में श्री मुत्ताकी और उनका परिवार भी हेलमंद से शामिल थे।**
- He shifted to the **Afghan refugee camps** that had come up near **Peshawar, Pakistan**.  
वे **पेशावर, पाकिस्तान** के पास बने **अफगान शरणार्थी शिविरों** में चले गए।
- The refugees also provided young fighters for resisting the **Soviet invasion**, and **Mr. Muttaqi** was one of the teenagers who joined the **anti-Soviet jihad** of the **1980s**, funded by the **CIA** and guided by **Pakistan's ISI**.  
इन **शरणार्थियों** ने **सोवियत आक्रमण** का विरोध करने के लिए **युवा लड़ाके** भी दिए, और **श्री मुत्ताकी** उन किशोरों में से एक थे जिन्होंने **1980 के दशक के सीआईए द्वारा वित्तपोषित और पाकिस्तान की आईएसआई द्वारा निर्देशित विरोधी-सोवियत जिहाद** में भाग लिया।
- It was during his years as a refugee in Pakistan that the young Pashtun fighter picked up **Urdu**, which he uses today with his **Pakistani and Indian interlocutors**.  
**पाकिस्तान में शरणार्थी** के रूप में अपने वर्षों के दौरान, उस युवा पश्तून योद्धा ने **उर्दू सीखी**, जिसका वह आज **पाकिस्तानी और भारतीय वार्ताकारों** के साथ उपयोग करता है।
- In **Peshawar**, seven political parties came up in the refugee camps (**the Peshawar Seven**).  
**पेशावर** में, शरणार्थी शिविरों में सात राजनीतिक दल उभरे (**पेशावर सेवन** के नाम से जाने जाते हैं)।
- Prominent leaders from these groups were **Gulbuddin Hekmatyar, Burhanuddin Rabbani, Abdul Rasul Sayyaf, Hazrat Sibghatullah Mojaddedi, Pir Sayed Ahmad Gailani, Maulana Mohammad Nabi Mohammadi, and Mohammed Yunus Khalis**.  
इन समूहों के प्रमुख नेता थे **गुलबुद्दीन हिकमतयार, बुरहानुद्दीन रब्बानी, अब्दुल रसूल सय्याफ, हजरत सिबघतुल्लाह मोजद्देदी, पीर सैयद अहमद गैलानी, मौलाना मोहम्मद नबी मोहम्मदी, और मोहम्मद यूनस खालिस**।
- Of them, **Maulana Mohammadi and Khalis** extended full support to the **Taliban** when the outfit was launched in the **1990s**.  
इनमें से **मौलाना मोहम्मदी और खालिस** ने **1990 के दशक में तालिबान** की स्थापना के समय उसे पूरा समर्थन दिया।
- **Mr. Muttaqi** joined the **Islamic Revolutionary Movement of Afghanistan** of **Maulana Mohammadi**, who had also groomed other Taliban leaders such as its founder **Mullah Omar**.  
**श्री मुत्ताकी** ने **मौलाना मोहम्मदी** के **इस्लामिक रिवोल्यूशनरी मूवमेंट ऑफ अफगानिस्तान** में शामिल हुए, जिन्होंने तालिबान के संस्थापक **मुल्ला उमर** जैसे अन्य नेताओं को भी प्रशिक्षित किया था।



- Like Mohammadi before them, **Mullah Omar, Mr. Muttaqi, and Hibatullah Akhundzada**, the current leader of the Taliban, studied in **madrasas that followed the curriculum of Darul Uloom Deoband**.  
मौलाना मोहम्मदी की तरह, मुल्ला उमर, श्री मुत्ताकी, और हibatुल्लाह अखुंदजादा (वर्तमान तालिबान प्रमुख) ने दारुल उलूम देवबंद के पाठ्यक्रम का पालन करने वाले मदरसों में अध्ययन किया।
- It was because of this link **Mr. Muttaqi** described **Deoband** as his '**Madar e Ilmi**'.  
इसी संबंध के कारण श्री मुत्ताकी ने देवबंद को अपना 'मदर-ए-इल्मी' कहा।
- Among all the **Taliban commanders, Mr. Muttaqi** is known for being a **negotiator**, a role that was given to him by the late **Mullah Omar**.  
सभी तालिबान कमांडरों में, श्री मुत्ताकी को एक वार्ताकार के रूप में जाना जाता है, जो भूमिका उन्हें स्वर्गीय मुल्ला उमर ने दी थी।
- Muttaqi is one of the few **Taliban leaders** who have survived all the violent phases of **Afghanistan's recent history**.  
मुत्ताकी उन कुछ तालिबान नेताओं में से एक हैं जिन्होंने अफगानिस्तान के हाल के हिंसक इतिहास के सभी चरणों में जीवित बचे हैं।
- As a young Taliban leader, he became the **Minister of Information and Culture** and **general spokesperson** of the Taliban in **1996** when the outfit took power.  
एक युवा तालिबान नेता के रूप में, वे 1996 में तालिबान के सूचना और संस्कृति मंत्री तथा मुख्य प्रवक्ता बने, जब संगठन ने सत्ता संभाली।
- He was serving as the **Minister of Education** when the **war with the U.S.** began in Afghanistan in **2001**, following the **9/11 attacks**, leading to the overthrow of the first Taliban regime.  
वे 2001 में 9/11 हमलों के बाद अमेरिका के साथ युद्ध शुरू होने पर शिक्षा मंत्री के रूप में कार्यरत थे, जिसके परिणामस्वरूप पहले तालिबान शासन का पतन हुआ।
- He survived the most intense phase of violence that continued till **negotiation was started with the Taliban** during the first term of **U.S. President Donald Trump (2017-18)**.  
उन्होंने हिंसा के सबसे तीव्र दौर से जीवित रहकर अमेरिकी राष्ट्रपति डोनाल्ड ट्रम्प (2017-18) के पहले कार्यकाल में तालिबान के साथ वार्ता की शुरुआत तक का समय देखा।

## Return to Kabul

### काबुल वापसी

- **Mr. Muttaqi** was part of the **U.S.-Taliban negotiation** and was present at the **signing of the deal in Doha on February 29, 2020**, when the Taliban delegation was led by **Mullah Abdul Ghani Baradar**.  
श्री मुत्ताकी अमेरिका-तालिबान वार्ता का हिस्सा थे और 29 फरवरी 2020 को दोहा में समझौते पर हस्ताक्षर के समय मौजूद थे, जब तालिबान प्रतिनिधिमंडल का नेतृत्व मुल्ला अब्दुल गनी बरादर कर रहे थे।
- Though the deal was opposed by the **Ashraf Ghani government**, the Taliban carried out a **hybrid war** and captured **Kabul by August 2021**.  
हालांकि इस समझौते का अशरफ गनी सरकार ने विरोध किया, लेकिन तालिबान ने संकर युद्ध छेड़कर अगस्त 2021 तक काबुल पर कब्जा कर लिया।
- **Mr. Muttaqi** then became the **Foreign Minister**.  
इसके बाद श्री मुत्ताकी विदेश मंत्री बन गए।
- Ever since, **Mr. Muttaqi** has travelled to **China, Russia, Pakistan, Doha, Dubai, Saudi Arabia, India**, and other countries.  
तब से, श्री मुत्ताकी ने चीन, रूस, पाकिस्तान, दोहा, दुबई, सऊदी अरब, भारत और अन्य देशों की यात्रा की है।
- Over the last **four years**, the most challenging aspect of his job has been **presenting Afghanistan as a rational actor** even as it continued to **ban women's education and employment**.  
पिछले चार वर्षों में उनके कार्य का सबसे चुनौतीपूर्ण पहलू यह रहा कि उन्होंने अफगानिस्तान को एक तार्किक राष्ट्र के रूप में प्रस्तुत किया, जबकि वहां महिलाओं की शिक्षा और रोजगार पर प्रतिबंध जारी रहा।
- He successfully negotiated the **release of American hostage Amir Amiri**, freed in **September 2025**, after discussions with **Adam Bohler, President Trump's Special Representative** on hostage affairs.



उन्होंने सितंबर 2025 में अमेरिकी बंधक आमिर अमीरी की रिहाई पर राष्ट्रपति ट्रम्प के बंधक मामलों के विशेष प्रतिनिधि एडम बोहलर से चर्चा के बाद सफल वार्ता की।

- Apart from the conflict with **Pakistan**, his biggest challenge remains that only **Russia** has so far given **diplomatic recognition** to the **Taliban government**.  
पाकिस्तान के साथ संघर्ष के अलावा, उनकी सबसे बड़ी चुनौती यह है कि अब तक केवल रूस ने तालिबान सरकार को कूटनीतिक मान्यता दी है।
- It remains to be seen if he can convince **other major powers** to recognise the **Taliban** as the **de jure rulers of Afghanistan**.  
यह देखना बाकी है कि क्या वह अन्य प्रमुख शक्तियों को तालिबान को अफगानिस्तान के वैध शासक के रूप में मान्यता देने के लिए मना सकते हैं।

# ‘Make a deal,’ Trump tells Zelenskyy as plea for Tomahawk misses mark

**GS II: Ukraine**

**Agence France-Presse**  
WASHINGTON

Donald Trump told Ukrainian President Volodymyr Zelenskyy on Friday to make a deal with Russia, pouring cold water on Kyiv’s hopes for Tomahawk missiles as the U.S. leader renews a push to settle the war.

Mr. Trump said as recently as last month that he believed Ukraine could take back all its territory – but a day after agreeing to meet Russian President Vladimir Putin for a new summit, the American had changed his tune, though



Volodymyr Zelenskyy

Mr. Zelenskyy did not rule out Mr. Trump changing his mind again in the future.

“Hopefully we’ll be able to get the war over with, without thinking about To-

mahawks,” Mr. Trump told journalists as he hosted Zelenskyy.

“It’s good that President Trump didn’t say ‘no,’ but for today, (he) didn’t say ‘yes’” to providing Kyiv with Tomahawks, Mr. Zelenskyy said on Friday.

After the meeting, Mr. Trump said on social media that their talks were “very interesting, and cordial, but I told him, as I likewise strongly suggested to President Putin, that it is time to stop the killing, and make a DEAL!”

Mr. Zelenskyy said after the meeting that Russia was “afraid” of the U.S.

made long-range Tomahawk cruise missiles, and that he was “realistic” about receiving the weapons from Washington.

## Empty-handed

Mr. Zelenskyy came to Washington after weeks of calls for Tomahawks, hoping to capitalize on Trump’s growing frustration with Mr. Putin after a summit in Alaska failed to produce a breakthrough.

But the Ukrainian left empty-handed as Mr. Trump eyes a fresh diplomatic breakthrough on the back of last week’s Gaza peace deal.

## ‘Make a deal,’ Trump tells Zelenskyy as plea for Tomahawk misses mark ‘डील करो,’ ट्रम्प ने ज़ेलेंस्की से कहा जब टोमहॉक मिसाइलों की मांग सफल नहीं हुई

- Donald Trump told **Ukrainian President Volodymyr Zelenskyy** on Friday to **make a deal with Russia**, pouring cold water on Kyiv’s hopes for **Tomahawk missiles** as the U.S. leader renews a push to settle the war.  
डोनाल्ड ट्रम्प ने शुक्रवार को यूक्रेनी राष्ट्रपति वलोडिमिर ज़ेलेंस्की (**Ukrainian President Volodymyr Zelenskyy**) से कहा कि रूस के साथ डील करें (**make a deal with Russia**), जिससे कीव (**Kyiv**) की टोमहॉक मिसाइलों (**Tomahawk missiles**) की उम्मीदों पर ठंडा पानी डाल दिया गया, क्योंकि अमेरिकी नेता युद्ध को सुलझाने के प्रयास को फिर से शुरू कर रहे हैं।
- Mr. Trump said as recently as last month that he believed Ukraine could take back all its territory — but a day after agreeing to meet **Russian President Vladimir Putin** for a new summit, the American had changed his tune, though Mr. Zelenskyy did not rule out Mr. Trump changing his mind again in the future.  
ट्रम्प ने पिछले महीने कहा था कि उनका मानना है कि यूक्रेन (**Ukraine**) अपना सारा क्षेत्र वापस ले सकता है



— लेकिन **रूसी राष्ट्रपति व्लादिमिर पुतिन (Russian President Vladimir Putin)** से नए शिखर सम्मेलन के लिए मिलने के एक दिन बाद, अमेरिकी नेता ने अपनी राय बदल दी, हालांकि ज़ेलेन्स्की ने भविष्य में ट्रम्प के फिर से मन बदलने की संभावना से इनकार नहीं किया।

- “Hopefully we’ll be able to get the war over with, without thinking about Tomahawks,” Mr. Trump told journalists as he hosted Zelenskyy.  
“उम्मीद है कि हम युद्ध को खत्म कर पाएंगे, टोमहॉक मिसाइलों के बारे में सोचे बिना,” ट्रम्प ने पत्रकारों से कहा जब उन्होंने ज़ेलेन्स्की की मेज़बानी की।
- “It’s good that President Trump didn’t say ‘no,’ but for today, (he) didn’t say ‘yes’” to providing Kyiv with Tomahawks, Mr. Zelensky said on Friday.  
“अच्छा है कि राष्ट्रपति ट्रम्प ने ‘नहीं’ नहीं कहा, लेकिन आज के लिए उन्होंने ‘हाँ’ भी नहीं कहा” टोमहॉक देने के मामले में, शुक्रवार को ज़ेलेन्स्की ने कहा।
- After the meeting, Mr. Trump said on social media that their talks were “very interesting, and cordial, but I told him, as I likewise strongly suggested to President Putin, that it is time to stop the killing, and make a DEAL!”  
बैठक के बाद, ट्रम्प ने सोशल मीडिया पर कहा कि उनकी बातचीत “बहुत रोचक और सौहार्दपूर्ण थी, लेकिन मैंने उन्हें कहा, जैसा कि मैंने राष्ट्रपति पुतिन को भी सुझाव दिया, कि अब हत्या रोकने और डील करने का समय है।”
- Mr. Zelenskyy said after the meeting that Russia was “afraid” of the **U.S.-made long-range Tomahawk cruise missiles**, and that he was “realistic” about receiving the weapons from Washington.  
बैठक के बाद ज़ेलेन्स्की ने कहा कि रूस **अमेरिका निर्मित लंबी दूरी की टोमहॉक क्रूज़ मिसाइलों (U.S.-made long-range Tomahawk cruise missiles)** से “डरता” है, और वह वॉशिंगटन से हथियार प्राप्त करने के बारे में “वास्तविक” हैं।

### Empty-handed खाली हाथ

- Mr. Zelensky came to Washington after weeks of calls for Tomahawks, hoping to capitalize on Trump’s growing frustration with Mr. Putin after a summit in Alaska failed to produce a breakthrough.  
ज़ेलेन्स्की **टोमहॉक के लिए कई हफ्तों की अपील के बाद वॉशिंगटन आए**, यह उम्मीद करते हुए कि अलास्का में शिखर सम्मेलन के बाद ट्रम्प की पुतिन के प्रति बढ़ती नाराजगी का फायदा उठा सकेंगे, लेकिन कोई सफलता नहीं मिली।
- But the Ukrainian left empty-handed as Mr. Trump eyes a fresh diplomatic breakthrough on the back of last week’s Gaza peace deal.  
लेकिन **यूक्रेनी (Ukrainian)** खाली हाथ लौटे क्योंकि ट्रम्प पिछले हफ्ते के **गाजा शांति समझौते (Gaza peace deal)** के आधार पर एक नई कूटनीतिक सफलता की संभावना पर नजर बनाए हुए हैं।

### GS Paper III: Economy, S&T, Environment, DM, &IS

**TOPICS COVERED**

**19\_10\_2025**

**1.**

**Manufacturers pass on GST cut benefits across 54 daily use items: Finance Minister**  
निर्माताओं ने 54 दैनिक उपयोग की वस्तुओं पर जीएसटी कटौती के लाभ उपभोक्ताओं तक पहुँचाए: वित्त मंत्री



2.	<b>IMO vote on net-zero shipping plan postponed</b> शून्य-उत्सर्जन शिपिंग योजना पर आईएमओ की वोटिंग स्थगित
3.	<b>Gudalur's violet revival: the kurinji blooms again</b> गुडालूर का बैंगनी पुनर्जागरण: कुरिंजी फिर से खिला
4.	<b>At IMO, 57 nations vote for delaying framework for carbon-free shipping</b> आईएमओ में, 57 देशों ने कार्बन-मुक्त नौवहन के ढांचे में देरी के पक्ष में मतदान किया
5.	<b>What are the new PF withdrawal guidelines?</b> नई पीएफ निकासी दिशा-निर्देश क्या हैं?
6.	<b>Why do elephants face a jumbo challenge?</b> हाथी एक विशाल चुनौती का सामना क्यों कर रहे हैं
7.	<b>The most ancient Indian wolf is set to be a new species</b> सबसे प्राचीन भारतीय भेड़िया एक नई प्रजाति बनने जा रहा है
8.	<b>Did lead offer humans a survival advantage?</b> क्या सीसे ने मनुष्यों को जीवित रहने का लाभ दिया था?
9.	<b>Many insects are moving from taboo to the table</b> कई कीड़े अब निषिद्ध से खाने की थाली तक पहुंच रहे हैं
10	<b>Undulating Field</b> लहराता हुआ क्षेत्र



# Manufacturers pass on GST cut benefits across 54 daily use items: Finance Minister

**GS III: Economy:**  
**Tag Taxation**

NEW DELHI

Two-wheelers, four-wheelers, and consumer durable items, including television sets, are among the 54 items of daily use where manufacturers have passed on the benefit of GST (Goods and Services Tax) cuts, Union Finance Minister Nirmala Sitharaman said on Saturday.

“Since September 22, we have been getting information from zonal teams on all items, of which we have been monitoring 54 items, where we wanted to ensure that the tax benefit is reaching the consumer. Not even in one item has the tax benefit not been passed to the consumer,” Ms. Sitharaman said at a press conference on the ‘GST Bachat Utsav’ (savings festival).

Three-wheeler despatches grew by 5.5% to 84,000 units from 79,000 units, year-on-year. Two-wheeler sales increased by 21.60 lakh units, with Hero MotoCorp Limited reporting the highest monthly sales. Passenger vehicle despatches touched 3.72 lakh units in September, and tractor sales more than doubled, she said.

Effective September 22, the government simplified the GST regime, reducing the four existing tax slabs – 5%, 12%, 18%, and 28% – to



Nirmala Sitharaman, with Piyush Goyal and Ashwini Vaishnaw, addressing a press conference, in New Delhi, on Saturday. ANI

two main slabs of 5% and 18%, with a special 40% rate for certain goods.

“There has been a flurry of buying and selling in those nine days,” the Finance Minister said, speaking of the nine days of Navaratri that culminate in Dasara.

Dealers in consumer durables reported doubling of sales on the very first day, that is, September 22. Manufacturers indicated that pre-bookings had begun and enquiries had surged. TV manufacturers reported 30%-35% increase in sales, as did makers of FMCG (fast moving consumer goods), including in personal care and nutrition items.

The actual decrease in some items was over and beyond the GST rate cuts, including in table and kitchen items, and utensils too, she said.

There was a 20% to 25%

growth in television sales, sparked by a growth in demand, and electronics manufacturing was now seeing double digit growth, the Union Minister for Electronics and Information Technology Ashwini Vaishnaw said. “In fact, there is now food deflation of about -2%,” he added.

The GST reform, along with major relief announced in Income Tax on February 1 this year, was a significant step towards encouraging savings and increasing disposable income for the people, Union Commerce Minister Piyush Goyal said.

“When infrastructure development and daily essentials become more affordable, the combined push from both supply and demand sides helps the economy grow faster, making India the fastest-growing large economy in the world,” Mr. Goyal said.

**Manufacturers pass on GST cut benefits across 54 daily use items: Finance Minister**

**निर्माताओं ने 54 दैनिक उपयोग की वस्तुओं पर जीएसटी कटौती के लाभ उपभोक्ताओं तक पहुँचाए: वित्त मंत्री**



- **Two-wheelers, four-wheelers, and consumer durable items**, including television sets, are among the **54 items of daily use** where manufacturers have passed on the benefit of **GST (Goods and Services Tax) cuts**, Union Finance Minister Nirmala Sitharaman said on **Saturday**.  
दोपहिया वाहन, चारपहिया वाहन और उपभोक्ता टिकाऊ वस्तुएँ, जिनमें टेलीविजन सेट भी शामिल हैं, उन **54 दैनिक उपयोग की वस्तुओं** में हैं, जहाँ निर्माताओं ने जीएसटी (वस्तु एवं सेवा कर) में कटौती का लाभ उपभोक्ताओं तक पहुँचाया है, ऐसा केंद्रीय वित्त मंत्री निर्मला सीतारमण ने शनिवार को कहा।
- “Since **September 22**, we have been getting information from **zonal teams** on all items, of which we have been monitoring **54 items**, where we wanted to ensure that the **tax benefit** is reaching the **consumer**.  
**22 सितंबर** से हमें सभी वस्तुओं पर क्षेत्रीय टीमों से जानकारी मिल रही है, जिनमें से हम **54 वस्तुओं** की निगरानी कर रहे हैं ताकि यह सुनिश्चित हो सके कि **कर का लाभ उपभोक्ताओं** तक पहुँच रहा है।
- Not even one item has the **tax benefit** not been passed to the **consumer**,” Ms. Sitharaman said at a press conference on the ‘**GST Bachat Utsav**’ (savings festival).  
एक भी वस्तु में ऐसा नहीं है जहाँ **कर का लाभ उपभोक्ता** तक न पहुँचा हो,” सुश्री सीतारमण ने ‘जीएसटी बचत उत्सव’ (सेविंग्स फेस्टिवल) पर आयोजित प्रेस कॉन्फ्रेंस में कहा।
- **Three-wheeler despatches** grew by **5.5%** to **84,000 units** from **79,000 units**, year-on-year. **तीन पहिया वाहनों की बिक्री** साल-दर-साल **5.5% बढ़कर 84,000 इकाइयों** तक पहुँची, जो पहले **79,000 इकाइयाँ** थीं।
- **Two-wheeler sales** increased by **21.60 lakh units**, with **Hero MotoCorp Limited** reporting the **highest monthly sales**.  
दोपहिया वाहनों की बिक्री में **21.60 लाख इकाइयों** की वृद्धि हुई, जिसमें **हीरो मोटोकॉर्प लिमिटेड** ने सबसे अधिक मासिक बिक्री दर्ज की।
- **Passenger vehicle despatches** touched **3.72 lakh units** in **September**, and **tractor sales** more than **doubled**, she said.  
सितंबर में **पैसेंजर वाहनों की बिक्री 3.72 लाख इकाइयों** तक पहुँची और **ट्रैक्टरों की बिक्री** दोगुने से अधिक हो गई, उन्होंने कहा।
- Effective **September 22**, the government **simplified the GST regime**, reducing the **four existing tax slabs — 5%, 12%, 18%, and 28% — to two main slabs of 5% and 18%**, with a **special 40% rate** for certain goods.  
**22 सितंबर** से प्रभावी रूप से सरकार ने **जीएसटी प्रणाली को सरल बनाया**, और **मौजूदा चार कर स्लैब — 5%, 12%, 18%, और 28% — घटाकर दो मुख्य स्लैब 5% और 18% किए**, साथ ही कुछ वस्तुओं के लिए **विशेष 40% दर** रखी।
- “There has been a **flurry of buying and selling** in those **nine days**,” the **Finance Minister** said, speaking of the **nine days of Navaratri** that culminate in **Dasara**.  
वित्त मंत्री ने कहा कि उन **नौ दिनों में खरीद और बिक्री की तेज़ी** रही, जो **नवरात्रि के नौ दिन** थे और जिनका समापन **दशहरा** पर हुआ।
- **Dealers in consumer durables** reported **doubling of sales** on the **very first day**, that is, **September 22**.  
उपभोक्ता टिकाऊ वस्तुओं के डीलरों ने पहले ही दिन, यानी **22 सितंबर** को **बिक्री के दोगुना** होने की सूचना दी।
- **Manufacturers** indicated that **pre-bookings had begun** and **enquiries had surged**.  
निर्माताओं ने बताया कि **प्री-बुकिंग शुरू हो चुकी थी** और **पूछताछ में तेज़ी** आई थी।
- **TV manufacturers** reported a **30%-35% increase in sales**, as did makers of **FMCG (fast moving consumer goods)**, including in **personal care and nutrition items**.  
**टीवी निर्माताओं ने 30%-35% बिक्री वृद्धि दर्ज की**, ऐसा ही **एफएमसीजी (तेजी से बिकने वाले उपभोक्ता उत्पाद)** के निर्माताओं ने भी कहा, जिनमें **पर्सनल केयर और पोषण उत्पाद** शामिल हैं।
- The actual **decrease in some items** was **over and beyond the GST rate cuts**, including in **table and kitchen items, and utensils** too, she said.  
उन्होंने कहा कि कुछ वस्तुओं में **जीएसटी दरों में कटौती से भी अधिक कमी** हुई, जिनमें **टेबल, किचन की वस्तुएँ और बर्तन** भी शामिल हैं।
- There was a **20% to 25% growth in television sales**, sparked by a **growth in demand**, and **electronics manufacturing** was now seeing **double digit growth**, the **Union Minister for Electronics and Information Technology Ashwini Vaishnaw** said.  
**टीवी बिक्री में 20% से 25% की वृद्धि हुई**, जो **मांग में वृद्धि** से प्रेरित थी, और **इलेक्ट्रॉनिक्स विनिर्माण** अब



दो अंकों की वृद्धि देख रहा है, ऐसा केंद्रीय इलेक्ट्रॉनिक्स और सूचना प्रौद्योगिकी मंत्री अश्विनी वैष्णव ने कहा।

- “In fact, there is now **food deflation** of about -2%,” he added. उन्होंने आगे कहा, “वास्तव में अब खाद्य पदार्थों में लगभग -2% की मूल्य गिरावट (deflation) देखी जा रही है।”
- The **GST reform**, along with **major relief announced in Income Tax on February 1** this year, was a **significant step** towards **encouraging savings and increasing disposable income** for the people, **Union Commerce Minister Piyush Goyal** said.  
जीएसटी सुधार, और इस वर्ष 1 फरवरी को आयकर में घोषित प्रमुख राहत, लोगों के लिए बचत को प्रोत्साहित करने और खर्च योग्य आय बढ़ाने की दिशा में एक महत्वपूर्ण कदम था, ऐसा केंद्रीय वाणिज्य मंत्री पीयूष गोयल ने कहा।
- “When **infrastructure development and daily essentials** become **more affordable**, the combined push from both **supply and demand sides** helps the **economy grow faster**, making **India the fastest-growing large economy** in the world,” **Mr. Goyal** said.  
गोयल ने कहा, “जब बुनियादी ढांचा विकास और दैनिक आवश्यक वस्तुएँ अधिक सुलभ हो जाती हैं, तो आपूर्ति और मांग दोनों पक्षों से मिला संयुक्त प्रोत्साहन अर्थव्यवस्था को तेज़ी से बढ़ने में मदद करता है, जिससे भारत दुनिया की सबसे तेज़ी से बढ़ती बड़ी अर्थव्यवस्था बन जाता है।”

## IMO vote on net-zero shipping plan postponed

### GS III: Environment

**Jacob Koshy**  
NEW DELHI

Pressured by the United States, several member countries of the International Maritime Organization (IMO) postponed a vote on a strategic plan to

move the shipping industry away from the use of fossil fuel and become ‘net-zero’ by 2050.

In April, a sub-committee of the IMO had approved a framework to bring in new fuel standard for ships and a global pricing

mechanism for carbon emissions. It was decided then that countries would formally vote in a meeting in October to bring these measures into force beginning 2027.

At that time, 63 countries voted ‘yes’ (including

the 27 European Union members, Brazil, China, India, Canada, the U.K., Korea and Japan) and 16, including the United States, against it.

**FULL REPORT**  
» PAGE 5

### IMO vote on net-zero shipping plan postponed शून्य-उत्सर्जन शिपिंग योजना पर आईएमओ की वोटिंग स्थगित

- Pressured by the **United States**, several **member countries** of the **International Maritime Organization (IMO)** postponed a **vote** on a **strategic plan** to move the **shipping industry** away from the use of **fossil fuel** and become ‘**net-zero**’ by 2050.  
संयुक्त राज्य अमेरिका के दबाव में, अंतर्राष्ट्रीय समुद्री संगठन (आईएमओ) के कई सदस्य देशों ने शिपिंग उद्योग को जीवाश्म ईंधन के उपयोग से दूर ले जाकर 2050 तक ‘शून्य-उत्सर्जन’ (नेट-जीरो) बनाने की रणनीतिक योजना पर होने वाली वोटिंग स्थगित कर दी।
- In **April**, a **sub-committee of the IMO** had approved a **framework** to bring in **new fuel standard for ships** and a **global pricing mechanism for carbon emissions**.  
अप्रैल में, आईएमओ की एक उप-समिति ने जहाज़ों के लिए नए ईंधन मानक और कार्बन उत्सर्जन के लिए वैश्विक मूल्य निर्धारण तंत्र लाने के लिए एक ढांचा स्वीकृत किया था।
- It was decided then that **countries** would formally **vote in a meeting in October** to bring these **measures into force beginning 2027**.



तब यह निर्णय लिया गया था कि देश अक्टूबर में एक बैठक में औपचारिक रूप से मतदान करेंगे ताकि ये उपाय 2027 से लागू किए जा सकें।

- At that time, 63 countries voted 'yes' (including the 27 European Union members, Brazil, China, India, Canada, the U.K., Korea and Japan) and 16, including the United States, against it.

उस समय, 63 देशों ने 'हाँ' में मतदान किया (जिनमें 27 यूरोपीय संघ के सदस्य, ब्राज़ील, चीन, भारत, कनाडा, यू.के., कोरिया और जापान शामिल थे) और 16 देशों, जिनमें संयुक्त राज्य अमेरिका भी शामिल था, ने विरोध में मतदान किया।

## Gudalur's violet revival: the kurinji blooms again

GS III: Environment

**K. Jeshi**  
COIMBATORE

Gudalur is shrouded in mist and kurinji. These clusters of bell-shaped flowers have burst over the hills after eight years, painting them violet.

"What is special is that it has bloomed at Tamil Nadu's newly notified reserve forest in Gudalur, the Nilgiris," says Supriya Sahu, Additional Chief Secretary, Department of Environment, Climate Change and Forests. The kurinji is not just a rare flower but also an indicator of climate change. The flowering offers an excellent barometer of the grasslands. Where there are healthy grasslands, there is mass flowering, while disturbances lead to patchy flowering. "When you provide protection and conserve the area, kurinji will certainly bloom and will bring along with it a lot of wildlife," she adds.

Ms. Sahu says the Tamil Nadu government is on a mission to create new forest areas. "In the last four-and-a-half years, over 90 new forests have been notified in Tamil Nadu which is unprecedented. These are legacy projects because they have been notified

under the Tamil Nadu Forest Act to increase the green cover of the State," she says. "These flowers have a lot of meaning to the indigenous communities who know the timing of the bloom. It's a fantastic sign of the biodiversity coming back to the area – something the indigenous communities can take pride in."

One of the rarest flowers in the world, the neelakurinji (*Strobilanthes kunthiana*) blooms once every 12 years in the high-altitude grasslands of the Western Ghats. In Gudalur, the mass bloom is of another species of kurinji, *Strobilanthes sessilis*, which blooms once in eight years. Both are grassland species but isolated to different altitudes: neelakurinji occurs in grasslands of altitude above 1,300 metres, and *sessilis* in the lower altitudes.

"Kurinji blooms are fascinating," says E. Kunhikrishnan, an expert on the Western Ghats, adding that there are as many as 60 species of these flowers that are endemic to the Western Ghats and they do not grow anywhere else in the world. "While the neelakurinji is the most famous and charismatic,



**Enticing species:** *Strobilanthes sessilis* that blooms once in eight years. SATHYAMOORTHY M.

there is karinkurinji that blooms annually and several others that bloom in the periodicity of four years, eight years, 10 years (over 20 species), and 12 years."

The mass flowering often provides a feast for butterflies, honeybees and other insects. The purple flowers hold a large amount of nectar, which especially attract the eastern honeybee. N. Venkatesh Prabhu, District Forest Officer of Gudalur Gene Pool, a key biodiversity conservation site, says "Nadugani is a thriving biodiversity zone with over 100 species of trees endemic to the Western Ghats. Sightings of elephant herds and tigers are common. It is a haven for bird watchers.

Hornbills are sighted in good numbers as well as butterfly congregations. Our botanist has documented the kurinji flowering of Nadugani forest cover, which is spread across 600 acres."

According to V. Sundaresan, botanist at Gudalur Gene Pool, the kurinji blooms can be seen in purple, blue, white, or pink colours. "For every single colour, there will be 10 shades varying from dark to light. There are 33 varieties of kurinji in the Nilgiris," he adds.

### Mysterious flora

Naturalist A.K. Pradeep from Kottayam in Kerala, who has a neelakurinji named after him (*Strobilanthes pradeepiana*), calls

it a deeply mysterious and enticing floral species. He has followed kurinji flowers all the way to Tapti in Gujarat where the Western Ghats taper and to Agasthya mountain ranges in Ponmudi, near Thiruvananthapuram, to photograph and document various species of kurinji. His study over two decades proved that of the 450 kurinji species the world over, 150 were in India. He says, "Endemism is the main characteristic of the kurinji. I have photographed the Munnar hills carpeted by the breathtaking *kunthiana* blooms. Mass blooming is indicative of a healthy grassland and a thriving wildlife."

Mr. Pradeep recalls how in 2011, Udhagamandalam's Doddabetta, where *Strobilanthes homotropa* (that flowers every 10 years) bloomed in thousands, was reduced to a couple of plants in the next season in 2021. "It needs favourable conditions for germination. Climate change, uncontrolled tourism, and growth of invasive species have an adverse impact. The species seen in one area cannot be found in another. This is precisely what makes the kurinji hills a storehouse of

organic wealth," Mr. Pradeep says. "In the Nilgiris, Kodaikanal and Munnar, we lost a major part of the grasslands because of the invasion of black wattle, a species we introduced from Australia," says Professor Kunhikrishnan.

Kurinji plants flower only once in a lifetime, a phenomenon seen in certain bamboo species that flower only once in 40 or 60 years. Once it flowers, its dateline with death is set. The next generation starts from the germination of the seeds. "The gregarious blooms, bring spurts of happiness, and vanish. It's Nature's mystery," he says. Since the plant species is hugely dependent on microclimatic conditions, the blooming is an indicator of its habitat diversity and presence of alpine conditions for its survival. "The blooms help study the ecology, altitude, alpine climate at high elevations near the equator among others. The grasslands are unique, and a quick evolution is happening there. The plant's species diversity indicates its ability to evolve and adapt. These pockets need preserved. Uncontrolled tourism has to be avoided," says Professor Kunhikrishnan.

## Gudalur's violet revival: the kurinji blooms again

### गुडालूर का बैंगनी पुनर्जागरण: कुरिंजी फिर से खिला

- Gudalur is shrouded in mist and kurinji. These clusters of bell-shaped flowers have burst over the hills after eight years, painting them violet.  
गुडालूर धुंध और कुरिंजी से ढका हुआ है। ये घंटी के आकार के फूलों के गुच्छे आठ साल बाद पहाड़ियों पर खिले हैं, जिससे वे बैंगनी रंग में रंग गए हैं।
- "What is special is that it has bloomed at Tamil Nadu's newly notified reserve forest in Gudalur, the Nilgiris," says Supriya Sahu, Additional Chief Secretary, Department of Environment, Climate Change and Forests.



“जो खास बात है वह यह है कि यह तमिलनाडु के नव अधिसूचित आरक्षित वन गुडालूर, नीलगिरी में खिला है,” ऐसा कहती हैं सुप्रिया साहू, अतिरिक्त मुख्य सचिव, पर्यावरण, जलवायु परिवर्तन और वन विभाग।

- The kurinji is not just a rare flower but also an indicator of **climate change**.  
कुरिंजी केवल एक दुर्लभ फूल नहीं है बल्कि जलवायु परिवर्तन का एक संकेतक भी है।
- The flowering offers an excellent **barometer of the grasslands**. Where there are healthy grasslands, there is mass flowering, while disturbances lead to patchy flowering.  
फूल खिलना घास के मैदानों का एक उत्कृष्ट संकेतक है। जहां स्वस्थ घास के मैदान होते हैं वहां बड़े पैमाने पर फूल खिलते हैं, जबकि व्यवधान होने पर फूल टुकड़ों में खिलते हैं।
- “When you provide protection and conserve the area, kurinji will certainly bloom and will bring along with it a lot of wildlife,” she adds.  
“जब आप क्षेत्र की सुरक्षा और संरक्षण करते हैं, तो कुरिंजी निश्चित रूप से खिलेगा और अपने साथ बहुत सारे वन्यजीव भी लाएगा,” वह जोड़ती हैं।
- Ms. Sahu says the **Tamil Nadu government** is on a mission to create new forest areas.  
सुश्री साहू कहती हैं कि तमिलनाडु सरकार नए वन क्षेत्रों के निर्माण के मिशन पर है।
- “In the last four-and-a-half years, over **90 new forests** have been notified in Tamil Nadu which is unprecedented.  
“पिछले साढ़े चार वर्षों में, तमिलनाडु में 90 से अधिक नए वन अधिसूचित किए गए हैं, जो अभूतपूर्व है।
- These are **legacy projects** because they have been notified under the **Tamil Nadu Forest Act** to increase the **green cover** of the State,” she says.  
ये विरासत परियोजनाएँ हैं क्योंकि इन्हें राज्य के हरित आवरण को बढ़ाने के लिए तमिलनाडु वन अधिनियम के तहत अधिसूचित किया गया है,” वह कहती हैं।
- “These flowers have a lot of meaning to the **indigenous communities** who know the timing of the bloom.  
“इन फूलों का मूलवासी समुदायों के लिए बहुत महत्व है जो खिलने के समय को जानते हैं।
- It’s a fantastic sign of the **biodiversity** coming back to the area — something the indigenous communities can take pride in.”  
यह इस क्षेत्र में जैव विविधता की वापसी का एक शानदार संकेत है — जिस पर मूलवासी समुदाय गर्व कर सकते हैं।”
- One of the **rarest flowers** in the world, the **neelakurinji (Strobilanthes kunthiana)** blooms once every **12 years** in the **high-altitude grasslands of the Western Ghats**.  
दुनिया के सबसे दुर्लभ फूलों में से एक, नीलकुरिंजी (Strobilanthes kunthiana) हर 12 साल में एक बार पश्चिमी घाट के ऊँचे घास के मैदानों में खिलता है।
- In Gudalur, the mass bloom is of another species of kurinji, **Strobilanthes sessilis**, which blooms once in **eight years**.  
गुडालूर में, बड़े पैमाने पर खिलना कुरिंजी की एक अन्य प्रजाति Strobilanthes sessilis का है, जो हर आठ साल में एक बार खिलता है।
- Both are **grassland species** but isolated to different altitudes: **neelakurinji** occurs above **1,300 metres**, and **sessilis** in the lower altitudes.  
दोनों घासभूमि प्रजातियाँ हैं लेकिन अलग-अलग ऊँचाइयों पर पाई जाती हैं: नीलकुरिंजी 1,300 मीटर से ऊपर के घास के मैदानों में और सेसिलिस निचली ऊँचाइयों पर।
- “Kurinji blooms are fascinating,” says **E. Kunhikrishnan**, an expert on the Western Ghats.  
“कुरिंजी का खिलना आकर्षक है,” ऐसा कहते हैं ई. कुन्धिकृष्णन, जो पश्चिमी घाट के विशेषज्ञ हैं।
- He adds that there are as many as **60 species** of these flowers that are **endemic to the Western Ghats** and they do not grow anywhere else in the world.  
वह जोड़ते हैं कि इन फूलों की लगभग 60 प्रजातियाँ हैं जो पश्चिमी घाट की स्थानिक हैं और दुनिया में कहीं और नहीं उगतीं।
- “While the **neelakurinji** is the most famous and charismatic, there is **karinkurinji** that blooms annually and several others that bloom in the periodicity of **four, eight, ten, and twelve years** (over 20 species).”  
“जहां नीलकुरिंजी सबसे प्रसिद्ध और आकर्षक है, वहीं करिकुरिंजी हर साल खिलता है और कई अन्य चार, आठ, दस और बारह वर्षों के अंतराल पर खिलते हैं (20 से अधिक प्रजातियाँ)।”
- The mass flowering often provides a feast for **butterflies, honeybees and other insects**.  
बड़े पैमाने पर खिलना अक्सर तितलियों, मधुमक्खियों और अन्य कीड़ों के लिए भोज प्रदान करता है।



- The purple flowers hold a large amount of **nectar**, which especially attracts the **eastern honeybee**.  
बैंगनी फूलों में अमृत की बड़ी मात्रा होती है, जो विशेष रूप से पूर्वी मधुमक्खी को आकर्षित करती है।
- N. Venkatesh Prabhu**, District Forest Officer of **Gudalur Gene Pool**, a key biodiversity conservation site, says “**Nadugani** is a thriving biodiversity zone with over **100 species of trees endemic to the Western Ghats**.  
एन. वेंकटेश प्रभु, गुडालूर जीन पूल के जिला वन अधिकारी, जो एक प्रमुख जैव विविधता संरक्षण स्थल है, कहते हैं, “नदुगानी एक समृद्ध जैव विविधता क्षेत्र है जहां पश्चिमी घाट की 100 से अधिक वृक्ष प्रजातियाँ पाई जाती हैं।
- Sightings of **elephant herds and tigers** are common. It is a haven for **bird watchers**.  
हाथियों के झुंड और बाघों के दृश्य आम हैं। यह पक्षी प्रेमियों के लिए स्वर्ग है।
- Hornbills** are sighted in good numbers as well as **butterfly congregations**.  
हॉर्नबिल्ल्स की अच्छी संख्या में दृष्टि होती है और साथ ही तितलियों के झुंड भी देखे जाते हैं।
- “Our botanist has documented the kurinji flowering of Nadugani forest cover, which is spread across **600 acres**.”  
“हमारे वनस्पति वैज्ञानिक ने 600 एकड़ में फैले नदुगानी वन क्षेत्र में कुरिंजी के खिलने का दस्तावेजीकरण किया है।”
- According to **V. Sundaresan**, botanist at **Gudalur Gene Pool**, the kurinji blooms can be seen in **purple, blue, white, or pink colours**.  
वी. सुन्दरासन, गुडालूर जीन पूल के वनस्पति वैज्ञानिक के अनुसार, कुरिंजी के फूल बैंगनी, नीले, सफेद या गुलाबी रंगों में देखे जा सकते हैं।
- “For every single colour, there will be **10 shades varying from dark to light**. There are **33 varieties of kurinji** in the **Nilgiris**,” he adds.  
“प्रत्येक रंग के लिए 10 अलग-अलग शेड होंगे जो गहरे से हल्के तक होंगे। नीलगिरी में कुरिंजी की 33 किस्में हैं,” वह जोड़ते हैं।

### Mysterious flora रहस्यमयी वनस्पति

- Naturalist **A.K. Pradeep** from **Kottayam in Kerala**, who has a **neelakurinji** named after him (**Strobilanthes pradeepiana**), calls...  
केरल के कोट्टायम से प्रकृतिवादी ए.के. प्रदीप, जिनके नाम पर एक नीलकुरिंजी (**Strobilanthes pradeepiana**) का नाम रखा गया है, कहते हैं...
- It is a deeply mysterious and enticing floral species.  
यह एक गहराई से रहस्यमयी और आकर्षक पुष्प प्रजाति है।
- He has followed kurinji flowers all the way to **Tapti in Gujarat** where the **Western Ghats taper** and to **Agasthya mountain ranges in Ponmudi**, near **Thiruvananthapuram**, to photograph and document various species of kurinji.  
उन्होंने गुजरात के ताप्ती तक, जहां पश्चिमी घाट संकरे होते हैं, और तिरुवनंतपुरम के पास पोनमुडी के अगस्त्य पर्वत श्रृंखलाओं तक कुरिंजी फूलों का अनुसरण, फोटोग्राफी और दस्तावेजीकरण किया है।
- His study over **two decades** proved that of the **450 kurinji species** the world over, **150 were in India**.  
उनके दो दशकों के अध्ययन से यह सिद्ध हुआ कि दुनिया भर में कुरिंजी की 450 प्रजातियों में से 150 भारत में हैं।
- He says, “**Endemism** is the main characteristic of the kurinji.  
वे कहते हैं, “स्थानिकता (**Endemism**) कुरिंजी की मुख्य विशेषता है।
- I have photographed the **Munnar hills** carpeted by the breathtaking **kunthiana blooms**.  
मैंने मुनार की पहाड़ियों की तस्वीरें ली हैं जो मनमोहक कुंथियाना फूलों से ढकी थीं।
- Mass blooming is indicative of a **healthy grassland** and a **thriving wildlife**.  
बड़े पैमाने पर खिलना स्वस्थ घासभूमि और समृद्ध वन्यजीवों का संकेत है।”
- Mr. Pradeep recalls how in **2011**, **Udhagamandalam's Doddabeta**, where **Strobilanthes homotropa** (that flowers every **10 years**) bloomed in thousands, was reduced to a couple of plants in the next season in **2021**.  
श्री प्रदीप याद करते हैं कि 2011 में उधगमंडलम के डोडुबेट्टा में, जहां **Strobilanthes homotropa** (जो



हर 10 वर्ष में खिलता है) हजारों की संख्या में खिला था, 2021 में अगली ऋतु में केवल कुछ पौधों तक सिमट गया।

- “It needs favourable conditions for **germination**. **Climate change**, **uncontrolled tourism**, and **growth of invasive species** have an adverse impact.  
“इसे **अंकुरण के लिए अनुकूल परिस्थितियों** की आवश्यकता होती है। **जलवायु परिवर्तन**, **अनियंत्रित पर्यटन**, और **आक्रामक प्रजातियों की वृद्धि** का इस पर नकारात्मक प्रभाव पड़ता है।
- The species seen in one area cannot be found in another.  
एक क्षेत्र में दिखाई देने वाली प्रजाति को दूसरे क्षेत्र में नहीं पाया जा सकता।
- This is precisely what makes the **kurinji hills a storehouse of organic wealth**,” Mr. Pradeep says.  
यही कारण है कि **कुरिंजी की पहाड़ियाँ जैविक संपदा का भंडार** बन जाती हैं,” श्री प्रदीप कहते हैं।
- “In the **Nilgiris, Kodaikanal and Munnar**, we lost a major part of the grasslands because of the **invasion of black wattle**, a species we introduced from **Australia**,” says **Professor Kunhikrishnan**.  
“नीलगिरी, कोडाइकनाल और मुनार में, हमने घासभूमियों का एक बड़ा हिस्सा **ब्लैक वॉटल** के **आक्रमण** के कारण खो दिया, जो हमने **ऑस्ट्रेलिया** से लाई थी,” कहते हैं **प्रोफेसर कुन्हिकृष्णन**।
- **Kurinji plants flower only once in a lifetime**, a phenomenon seen in certain **bamboo species** that flower only once in **40 or 60 years**.  
**कुरिंजी पौधे जीवन में केवल एक बार खिलते हैं**, यह वही घटना है जो कुछ **बांस प्रजातियों** में देखी जाती है जो हर **40 या 60 वर्षों** में एक बार खिलती हैं।
- Once it flowers, its **dateline with death** is set. The next generation starts from the **germination of the seeds**.  
एक बार जब यह खिलता है, इसका **मृत्यु समय** तय हो जाता है। अगली पीढ़ी **बीजों के अंकुरण** से शुरू होती है।
- “The gregarious blooms, bring spurts of happiness, and vanish. It’s **Nature’s mystery**,” he says.  
“**सामूहिक खिलना**, खुशी के क्षण लाता है और फिर गायब हो जाता है। यह **प्रकृति का रहस्य** है,” वह कहते हैं।
- Since the plant species is hugely dependent on **microclimatic conditions**, the blooming is an indicator of its **habitat diversity** and **presence of alpine conditions** for its survival.  
क्योंकि यह पौधा प्रजाति **सूक्ष्म जलवायु परिस्थितियों** पर अत्यधिक निर्भर है, इसका खिलना इसके **आवासीय विविधता** और **जीवित रहने के लिए अल्पाइन परिस्थितियों की उपस्थिति** का संकेतक है।
- “The blooms help study the **ecology, altitude, alpine climate at high elevations near the equator** among others.  
“ये फूल **पारिस्थितिकी, ऊँचाई, और भूमध्य रेखा के पास ऊँचे स्थानों पर अल्पाइन जलवायु** जैसी चीजों का अध्ययन करने में मदद करते हैं।
- The **grasslands are unique**, and a **quick evolution** is happening there.  
**घासभूमियाँ अद्वितीय** हैं और वहाँ **तेज़ विकास (evolution)** हो रहा है।
- The plant’s **species diversity** indicates its ability to **evolve and adapt**.  
पौधे की **प्रजातीय विविधता** इसकी **विकास और अनुकूलन** की क्षमता को दर्शाती है।
- “These pockets need to be preserved. **Uncontrolled tourism** has to be avoided,” says **Professor Kunhikrishnan**.  
“इन क्षेत्रों का **संरक्षण आवश्यक** है। **अनियंत्रित पर्यटन** से बचना चाहिए,” कहते हैं **प्रोफेसर कुन्हिकृष्णन**।



# At IMO, 57 nations vote for delaying framework for carbon-free shipping

Vote on implementation of the framework aimed at moving shipping industry away from fossil fuel has been postponed for a year amid U.S. President's 'outrage'; Trump administration had issued threats against countries that had supported it

**GS III: Environment**  
**Jacob Koshy**  
NEW DELHI

**P**ressed by the United States, member countries of the International Maritime Organization (IMO) postponed a vote on a strategic plan to move the shipping industry away from the use of fossil fuel and become "net-zero" by 2050.

In April, a sub-committee of the IMO approved a framework to bring in a new fuel standard for ships and a global pricing mechanism for carbon emissions. It was decided then that countries would formally vote in a meeting in October to bring these measures into force beginning 2027.

At that time, 63 countries voted 'yes' (including the 27 European Union members, Brazil, China, India, Canada, the U.K., Korea and Japan) and 16,



**Contentious issue:** In April, a sub-committee of the IMO approved a framework to bring in a new fuel standard for ships. AFP

including the United States, against it.

#### U.S. threats

While countries such as Saudi Arabia and Russia have been opposed to the framework, the United States administration since then continues to issue explicit threats against countries that had supported the framework.

Ahead of the vote in

London on Friday, U.S. President Donald Trump posted on Truth Social: "I am outraged that the International Maritime Organization is voting in London this week to pass a global Carbon Tax. The United States will NOT stand for this Global Green New Scam Tax on Shipping, and will not adhere to it in any way, shape, or form. We will not tolerate in-

creased prices on American Consumers OR, the creation of a Green New Scam Bureaucracy to spend YOUR money on their Green dreams. Stand with the United States, and vote NO in London tomorrow!"

When proceedings began on October 14, deliberations reportedly became fractious. Ultimately, Singapore brought in a proposal to delay a decision for a year. Saudi Arabia proposed a vote. This resulted in 57 countries voting in favour of delay; 49 against it; and 21 not voting.

*The Hindu* could not confirm which way India voted.

"We regret that IMO members followed Singapore's initial proposal to delay the adoption of the framework by 12 months, which Saudi Arabia called to a vote. This is unacceptable given the urgency we

face in light of accelerating climate change," Ralph Regenvanu, Minister for Climate Change, Republic of Vanuatu, who was present at the meeting, said in a statement.

"The IMO's failure to adopt the framework this week marks a failure of this United Nations agency to act decisively on climate change. This makes the road to Bèlem and beyond more difficult. But we know that we have international law on our side and will continue to fight for our people and the planet," he added.

#### Shipping emissions

The 2023 IMO GHG (greenhouse gas) Strategy – the umbrella framework – envisages, in particular, a minimum 40% reduction in carbon intensity of international shipping (to reduce CO<sub>2</sub> emissions per transport work) by 2030.

## At IMO, 57 nations vote for delaying framework for carbon-free shipping आईएमओ में, 57 देशों ने कार्बन-मुक्त नौवहन के ढांचे में देरी के पक्ष में मतदान किया

- Vote on implementation of the framework aimed at moving the shipping industry away from fossil fuel has been postponed for a year amid **U.S. President's 'outrage'**; **Trump administration** had issued threats against countries that had supported it.  
नौवहन उद्योग को जीवाश्म ईंधन से दूर ले जाने वाले ढांचे के कार्यान्वयन पर मतदान को एक वर्ष के लिए स्थगित कर दिया गया है, अमेरिकी राष्ट्रपति के 'आक्रोश' के बीच; ट्रम्प प्रशासन ने उन देशों को धमकी दी थी जिन्होंने इसका समर्थन किया था।
- Pressured by the **United States**, member countries of the **International Maritime Organization (IMO)** postponed a vote on a **strategic plan** to move the shipping industry away from the use of fossil fuel and become "**net-zero**" by 2050.  
संयुक्त राज्य अमेरिका के दबाव में, अंतर्राष्ट्रीय समुद्री संगठन (IMO) के सदस्य देशों ने नौवहन उद्योग को जीवाश्म ईंधन के उपयोग से दूर ले जाने और 2050 तक "नेट-जीरो" बनने की रणनीतिक योजना पर मतदान को स्थगित कर दिया।
- In **April**, a sub-committee of the IMO approved a framework to bring in a **new fuel standard for ships** and a **global pricing mechanism for carbon emissions**.  
अप्रैल में, आईएमओ की एक उप-समिति ने जहाजों के लिए नए ईंधन मानक और कार्बन उत्सर्जन के लिए वैश्विक मूल्य निर्धारण तंत्र को लाने के लिए एक ढांचे को मंजूरी दी।
- It was decided then that countries would formally vote in a meeting in **October** to bring these measures into force beginning **2027**.



तब यह तय किया गया था कि देश अक्टूबर में एक बैठक में औपचारिक रूप से मतदान करेंगे ताकि ये उपाय 2027 से लागू किए जा सकें।

- At that time, 63 countries voted 'yes' (including the 27 European Union members, Brazil, China, India, Canada, the U.K., Korea and Japan) and 16, including the United States, against it.  
उस समय, 63 देशों ने 'हाँ' में मतदान किया (जिसमें 27 यूरोपीय संघ के सदस्य, ब्राज़ील, चीन, भारत, कनाडा, यू.के., कोरिया और जापान शामिल थे) और 16 देशों, जिनमें संयुक्त राज्य अमेरिका भी शामिल था, ने विरोध में मतदान किया।

## U.S. threats

### अमेरिकी धमकियाँ

- While countries such as **Saudi Arabia and Russia** have been opposed to the framework, the **United States administration** since then continues to issue **explicit threats** against countries that had supported the framework.  
जहाँ सऊदी अरब और रूस जैसे देश इस ढांचे के विरोध में रहे हैं, वहीं संयुक्त राज्य प्रशासन तब से उन देशों के खिलाफ स्पष्ट धमकियाँ देता आ रहा है जिन्होंने इस ढांचे का समर्थन किया था।
- Ahead of the vote in **London on Friday, U.S. President Donald Trump** posted on **Truth Social**: "I am outraged that the International Maritime Organization is voting in London this week to pass a global **Carbon Tax**.  
**शुक्रवार को लंदन में मतदान से पहले, अमेरिकी राष्ट्रपति डोनाल्ड ट्रम्प ने ट्रुथ सोशल पर पोस्ट किया:** "मैं आक्रोशित हूँ कि अंतर्राष्ट्रीय समुद्री संगठन इस सप्ताह लंदन में एक वैश्विक कार्बन टैक्स पारित करने के लिए मतदान कर रहा है।
- The United States will NOT stand for this **Global Green New Scam Tax on Shipping**, and will not adhere to it in any way, shape, or form.  
संयुक्त राज्य अमेरिका इस वैश्विक हरित ठगी कर को किसी भी रूप या तरीके से स्वीकार नहीं करेगा।
- We will not tolerate increased prices on **American consumers** OR the creation of a **Green New Scam Bureaucracy** to spend YOUR money on their **Green dreams**. Stand with the United States, and vote NO in London tomorrow!"  
हम अमेरिकी उपभोक्ताओं पर बढ़ी कीमतों या उनके हरित सपनों पर आपका पैसा खर्च करने के लिए किसी हरित ठगी नौकरशाही के निर्माण को बर्दाश्त नहीं करेंगे। संयुक्त राज्य अमेरिका के साथ खड़े हों, और कल लंदन में ना में मतदान करें!"
- When proceedings began on **October 14**, deliberations reportedly became fractious.  
जब 14 अक्टूबर को कार्यवाही शुरू हुई, तो चर्चा कथित रूप से तनावपूर्ण हो गई।
- Ultimately, **Singapore** brought in a proposal to **delay a decision for a year**. **Saudi Arabia** proposed a vote.  
अंततः, सिंगापुर ने निर्णय को एक वर्ष के लिए स्थगित करने का प्रस्ताव रखा। सऊदी अरब ने मतदान का प्रस्ताव दिया।
- This resulted in **57 countries voting in favour of delay; 49 against it; and 21 not voting**. इसके परिणामस्वरूप 57 देशों ने देरी के पक्ष में, 49 ने विरोध में, और 21 देशों ने मतदान नहीं किया।
- The Hindu** could not confirm which way **India** voted.  
द हिंदू यह पुष्टि नहीं कर सका कि भारत ने किस प्रकार मतदान किया।
- "We regret that IMO members followed **Singapore's initial proposal** to delay the adoption of the framework by **12 months**, which **Saudi Arabia** called to a vote.  
"हमें खेद है कि आईएमओ के सदस्य देशों ने सिंगापुर के प्रारंभिक प्रस्ताव का पालन करते हुए 12 महीने के लिए ढांचे को अपनाने में देरी की, जिसे सऊदी अरब ने मतदान के लिए बुलाया।"
- "This is unacceptable given the **urgency of accelerating climate change**," said **Ralph Regenvanu, Minister for Climate Change, Republic of Vanuatu**, who was present at the meeting.  
"जलवायु परिवर्तन की तीव्रता को देखते हुए यह अस्वीकार्य है," ऐसा कहा राल्फ रेजेनवानु, वनुआतु गणराज्य के जलवायु परिवर्तन मंत्री, जो बैठक में उपस्थित थे।
- "The IMO's failure to adopt the framework this week marks a **failure of this United Nations agency** to act decisively on climate change.  
"इस सप्ताह ढांचे को अपनाने में आईएमओ की विफलता, संयुक्त राष्ट्र एजेंसी की जलवायु परिवर्तन पर निर्णायक कार्रवाई करने में विफलता को दर्शाती है।



**TELEGRAM CHANNEL:** <https://t.me/patrioticIAS>

**YOUTUBE CHANNEL:** <https://www.youtube.com/@PatrioticIAS>

**CONTACT: 9971932488**



- This makes the road to **Bélem and beyond more difficult**. But we know that we have **international law** on our side and will continue to fight for our people and the planet," he added.  
यह बेलें और आगे की राह को और कठिन बना देता है। लेकिन हमें पता है कि हमारे पास अंतर्राष्ट्रीय कानून का समर्थन है और हम अपने लोगों और ग्रह के लिए संघर्ष जारी रखेंगे," उन्होंने जोड़ा।

### Shipping emissions नौवहन उत्सर्जन

- The **2023 IMO GHG (greenhouse gas) Strategy** — the umbrella framework — envisages, in particular, a minimum **40% reduction in carbon intensity** of international shipping (to reduce **CO2 emissions per transport work**) by 2030.  
**2023 आईएमओ जीएचजी (ग्रीनहाउस गैस) रणनीति** — जो एक व्यापक ढांचा है — विशेष रूप से 2030 तक अंतर्राष्ट्रीय नौवहन की कार्बन तीव्रता में न्यूनतम 40% की कमी (प्रति परिवहन कार्य CO2 उत्सर्जन को कम करने) की परिकल्पना करती है।

PATRIOTIC IAS



# What are the new PF withdrawal guidelines?

Why have the norms been changed?  
What has been the response? Why are Opposition parties opposing it?

**GS III: Social Security**

**A.M. Jigeeesh**

**The story so far:**

**A** meeting of the Central Board of Trustees (CBT) of the Employees Provident Fund Organisation (EPFO) held in Delhi on October 13 announced a number of measures for partial withdrawal of PF funds, which the government claimed was to enhance the “ease of living” of an EPFO subscriber.

**What are the new provisions?**

The CBT approved the merger of “13 complex provisions” for withdrawal into a single, streamlined rule under three categories – essential needs (illness, education, marriage), housing needs and special circumstances. Till now, a member could withdraw only the employee contribution to the PF and its interest ranging from 50-100%. Now, the member can withdraw from the employer contribution as well. The decision faced flak from Opposition parties, trade unions and even employers’ organisations. Though employees can withdraw up to 100% of the eligible balance in the PF including employee and employer share during their service, a new provision has been made that 25% of the contributions in an account should be maintained as minimum balance at all times. The CBT also decided to change the conditions for availing premature final settlement. If a person is leaving the job, he/she

The government argues that the new rules will ensure a better final Provident Fund settlement, but trade union activists point out that the new provisions will ‘dismantle’ the safety net

months. The final pension can be withdrawn only after 36 months, from the present two months. “75% of the amount can be withdrawn immediately after leaving the job, and the full amount can be withdrawn after being unemployed for one year,” the government said.

cannot withdraw the full PF amount within two months as is the norm now. Now the person can withdraw the amount only after 12

**What is the government’s argument?**

The government said that frequent withdrawals earlier caused breaks in service, leading to rejection of many pension cases. It argues that at the time of final settlement, employees were left with very little money. “The above provisions will ensure continuity of the employee’s service, a better final PF settlement amount, and financial security for the family,” the government said. The government also claimed that it will help the member to enjoy the higher rate of interest offered by the EPFO along with compounding benefits to accumulate a high value retirement corpus. Earlier, withdrawal for marriage or house purchase was allowed only after 5-7 years and the government said now it can be done after just one year. “Withdrawal limits for education or illness have also been made more flexible. Additionally, in any special circumstances or emergencies, the full eligible amount can be withdrawn up to twice a year without any questions asked,” it said.

**What is the Opposition saying?**

Opposition MPs Manickam Tagore and Saket Gokhale said in separate statements that the Centre is being cruel to pensioners and EPFO subscribers. “Pensioners and job-losers are being punished for needing their own savings...,” Mr. Tagore said on social media. Both MPs held that the new rules are not for the benefit of workers as the worker will have to wait to get access to his or her hard-earned savings. Mr. Gokhale called the new rule “draconian” and said persons who lose their jobs will not be able to meet their expenses for a full year when their PF withdrawal is blocked.

**What is the position of trade unions?**

The All-India Trade Union Congress General Secretary, Amarjeet Kaur, demanded scrapping of the rules. “Financial prudence in the face of privatisation is a rude joke played on the unemployed,” she said. She said 87% of the EPFO members have less than ₹1 lakh and 50% of them hold only less than ₹20,000, as per EPFO’s own data. “The low levels of financial stability are directly attributed to the low wages of majority members. This being the case, holding back 25% of the savings as minimum balance is nothing but preying on the weak,” she alleged. K.E. Raghunathan, former member of the CBT representing employers, said the new rules are deeply concerning and regressive. According to him, PF savings are not meant to be treated as recurring deposits for short-term liquidity. “They are structured to provide dignity and financial protection at the end of a worker’s career. By allowing repeated full withdrawals, we risk leaving millions with negligible retirement savings and no fallback when income ceases,” he said, adding that the decision is not empowerment – it is erosion. “The temptation to withdraw will rise, and the long-term consequences will be irreversible. We are effectively dismantling the safety net that generations have relied upon,” he added.

**What are the new PF withdrawal guidelines?**

**नई पीएफ निकासी दिशा-निर्देश क्या हैं?**

• A meeting of the **Central Board of Trustees (CBT)** of the **Employees Provident Fund Organisation (EPFO)** held in **Delhi** on **October 13**

announced a number of measures for partial withdrawal of PF funds, which the government claimed was to enhance the “ease of living” of an EPFO subscriber.

**कर्मचारी भविष्य निधि संगठन (EPFO) के केंद्रीय न्यासी मंडल (CBT) की 13 अक्टूबर को दिल्ली में हुई बैठक में पीएफ फंड की आंशिक निकासी के लिए कई कदमों की घोषणा की गई, जिसे सरकार ने EPFO सदस्य के “जीवन की सहजता” बढ़ाने के रूप में बताया।**

**What are the new provisions?**

**नए प्रावधान क्या हैं?**

• The **CBT** approved the merger of “**13 complex provisions**” for withdrawal into a single, streamlined rule under three categories — **essential needs (illness, education, marriage), housing needs and special circumstances.**

**CBT ने निकासी से जुड़े**

“**13 जटिल प्रावधानों**” को मिलाकर तीन श्रेणियों — **मूलभूत आवश्यकताएं (बीमारी, शिक्षा, विवाह), आवासीय आवश्यकताएं और विशेष परिस्थितियां** — के तहत एक एकीकृत नियम में बदलने को मंजूरी दी।



- Till now, a member could withdraw only the **employee contribution** to the PF and its interest ranging from **50-100%**. Now, the member can withdraw from the **employer contribution** as well.  
अब तक सदस्य केवल **कर्मचारी अंशदान** और उस पर मिलने वाले **50-100% ब्याज** की निकासी कर सकता था। अब सदस्य **नियोक्ता अंशदान** से भी निकासी कर सकेगा।
- The decision faced **flak** from **Opposition parties, trade unions** and even **employers' organisations**.  
इस निर्णय की **विपक्षी दलों, ट्रेड यूनियनों** और यहां तक कि **नियोक्ता संगठनों** ने भी **आलोचना** की।
- Though employees can withdraw up to **100% of the eligible balance** in the PF including employee and employer share during their service, a new provision has been made that **25% of the contributions** in an account should be maintained as **minimum balance** at all times.  
हालांकि कर्मचारी अपनी सेवा के दौरान **कर्मचारी और नियोक्ता दोनों के अंशदान सहित पीएफ की 100% पात्र राशि** निकाल सकते हैं, लेकिन अब एक नया प्रावधान जोड़ा गया है कि खाते में **25% अंशदान को न्यूनतम शेष राशि** के रूप में बनाए रखना अनिवार्य होगा।
- The **CBT** also decided to change the conditions for availing **premature final settlement**.  
**CBT** ने **पूर्व-समाप्ति निकासी** की शर्तों में भी बदलाव करने का निर्णय लिया।
- If a person is leaving the job, he/she cannot withdraw the full PF amount within **two months** as is the norm now.  
यदि कोई व्यक्ति नौकरी छोड़ता है, तो वह अब की तरह **दो महीनों** के भीतर पूरा **पीएफ अमाउंट** नहीं निकाल सकेगा।
- Now the person can withdraw the amount only after **12 months**.  
अब व्यक्ति केवल **12 महीनों** के बाद ही राशि निकाल सकेगा।
- The final pension can be withdrawn only after **36 months**, from the present **two months**.  
**अंतिम पेंशन** केवल **36 महीनों** के बाद ही निकाली जा सकेगी, जबकि वर्तमान में यह अवधि **दो महीने** है।
- "**75% of the amount** can be withdrawn immediately after leaving the job, and the **full amount** can be withdrawn after being unemployed for **one year**," the government said.  
सरकार ने कहा, "नौकरी छोड़ने के तुरंत बाद **75% राशि** निकाली जा सकती है, और **एक वर्ष** तक बेरोजगार रहने के बाद **पूरी राशि** निकाली जा सकेगी।"

### What is the government's argument?

#### सरकार का तर्क क्या है?

- The government said that **frequent withdrawals** earlier caused **breaks in service**, leading to **rejection of many pension cases**.  
सरकार ने कहा कि पहले **बार-बार की गई निकासी** से सेवा में **रुकावट** आती थी, जिससे **कई पेंशन मामलों को अस्वीकार** करना पड़ा।
- It argues that at the time of **final settlement**, employees were left with very little money.  
सरकार का कहना है कि **अंतिम निपटान** के समय कर्मचारियों के पास बहुत **कम धनराशि** बचती थी।
- "The above provisions will ensure **continuity of the employee's service**, a **better final PF settlement amount**, and **financial security for the family**," the government said.  
सरकार ने कहा, "उपरोक्त प्रावधान **कर्मचारी की सेवा की निरंतरता**, **बेहतर अंतिम पीएफ निपटान राशि**, और **परिवार की आर्थिक सुरक्षा** सुनिश्चित करेंगे।"
- The government also claimed that it will help the member to enjoy the **higher rate of interest** offered by the **EPFO** along with **compounding benefits** to accumulate a **high value retirement corpus**.  
सरकार ने यह भी दावा किया कि इससे सदस्य को **EPFO** द्वारा **दिए जाने वाले उच्च ब्याज दर** और **चक्रवृद्धि लाभ** का फायदा मिलेगा, जिससे एक **उच्च मूल्यवान सेवानिवृत्ति कोष** तैयार हो सकेगा।
- Earlier, withdrawal for **marriage or house purchase** was allowed only after **5-7 years** and the government said now it can be done after just **one year**.  
पहले **विवाह या घर खरीदने** के लिए निकासी केवल **5-7 साल** बाद ही संभव थी, लेकिन सरकार ने कहा कि अब यह केवल **एक वर्ष** बाद की जा सकेगी।
- "Withdrawal limits for **education or illness** have also been made more flexible. Additionally, in any **special circumstances or emergencies**, the full eligible amount can be withdrawn **up to twice a year** without any questions asked," it said.  
सरकार ने कहा, "**शिक्षा या बीमारी** के लिए निकासी की सीमा को भी अधिक **लचीला** बनाया गया है। इसके



अलावा, किसी भी विशेष परिस्थिति या आपात स्थिति में, पूर्ण पात्र राशि को साल में दो बार तक बिना किसी प्रश्न के निकाला जा सकता है।”

- **What is the Opposition saying?**  
**विपक्ष क्या कह रहा है?**
- Opposition MPs **Manickam Tagore** and **Saket Gokhale** said in separate statements that the **Centre** is being **cruel to pensioners and EPFO subscribers**.  
विपक्षी सांसद **मणिकम टैगोर** और **साकेत गोखले** ने अलग-अलग बयानों में कहा कि **केंद्र सरकार पेंशनभोगियों और EPFO सदस्यों के प्रति क्रूर** हो रही है।
- “Pensioners and job-losers are being punished for needing their own savings...,” Mr. Tagore said on social media.  
श्री टैगोर ने सोशल मीडिया पर कहा, **“पेंशनभोगियों और नौकरी गंवाने वालों को अपनी ही बचत की जरूरत के लिए दंडित किया जा रहा है...”**
- Both MPs held that the new rules are not for the benefit of workers as the worker will have to wait to get access to his or her **hard-earned savings**.  
दोनों सांसदों ने कहा कि ये नए नियम **कर्मचारियों के हित में नहीं** हैं क्योंकि उन्हें अपनी **कड़ी मेहनत की बचत** तक पहुंचने के लिए इंतजार करना पड़ेगा।
- Mr. Gokhale called the new rule **“draconian”** and said persons who lose their jobs will not be able to meet their **expenses for a full year** when their PF withdrawal is blocked.  
श्री गोखले ने नए नियम को **“कठोर”** कहा और कहा कि जिनकी नौकरी चली जाती है, वे **पूरे एक वर्ष तक** अपने **खर्च पूरे नहीं कर पाएंगे** जब उनकी पीएफ निकासी रोक दी जाएगी।
- **What is the position of trade unions?**  
**ट्रेड यूनियनों की क्या स्थिति है?**
- The **All-India Trade Union Congress (AITUC)** General Secretary, **Amarjeet Kaur**, demanded **scrapping of the rules**.  
**अखिल भारतीय ट्रेड यूनियन कांग्रेस (AITUC)** की महासचिव **अमरजीत कौर** ने इन नियमों को **रद्द करने की मांग** की।
- **“Financial prudence in the face of privation is a rude joke played on the unemployed,”** she said.  
उन्होंने कहा, **“वंचना के समय वित्तीय संयम बेरोजगारों पर किया गया एक कठोर मज़ाक है।”**
- She said **87% of EPFO members** have less than **₹1 lakh** and **50%** of them hold only less than **₹20,000**, as per EPFO’s own data.  
उन्होंने कहा कि **EPFO के अपने आंकड़ों** के अनुसार, **87% सदस्य** के पास **₹1 लाख से कम** और **50% सदस्यों** के पास केवल **₹20,000 से कम** की राशि है।
- “The low levels of financial stability are directly attributed to the **low wages of majority members**. This being the case, holding back **25% of the savings as minimum balance** is nothing but **preying on the weak**,” she alleged.  
उन्होंने आरोप लगाया, **“वित्तीय स्थिरता का निम्न स्तर सीधे तौर पर अधिकांश सदस्यों के कम वेतन से जुड़ा है। ऐसे में 25% बचत को न्यूनतम शेष के रूप में रोकना कमजोरों का शोषण है।”**
- **K.E. Raghunathan**, former member of the **CBT** representing employers, said the new rules are deeply **concerning and regressive**.  
**CBT के पूर्व सदस्य और नियोक्ताओं के प्रतिनिधि के.ई. रघुनाथन** ने कहा कि नए नियम **गंभीर चिंता का विषय और प्रतिगामी** हैं।
- According to him, **PF savings** are not meant to be treated as **recurring deposits for short-term liquidity**.  
उनके अनुसार, **पीएफ बचत** को **अल्पकालिक तरलता के लिए आवर्ती जमा** के रूप में नहीं देखा जाना चाहिए।
- “They are structured to provide **dignity and financial protection** at the end of a worker’s career. By allowing repeated full withdrawals, we risk leaving millions with **negligible retirement savings** and **no fallback** when income ceases,” he said.  
उन्होंने कहा, **“यह योजना कर्मचारी के करियर के अंत में गरिमा और वित्तीय सुरक्षा देने के लिए बनाई गई है। बार-बार पूर्ण निकासी की अनुमति देने से हम लाखों लोगों को नगण्य सेवानिवृत्ति बचत और आय समाप्त होने पर कोई सहारा नहीं छोड़ने का जोखिम उठा रहे हैं।”**
- He added that the decision is not **empowerment — it is erosion**. “The temptation to withdraw will rise, and the long-term consequences will be **irreversible**. We are effectively **dismantling the safety net** that generations have relied upon,” he added.



उन्होंने जोड़ा कि यह निर्णय सशक्तिकरण नहीं — बल्कि क्षरण है। “निकासी की प्रवृत्ति बढ़ेगी, और इसके दीर्घकालिक परिणाम अपरिवर्तनीय होंगे। हम पीढ़ियों से चले आ रहे सुरक्षा कवच को नष्ट कर रहे हैं,” उन्होंने कहा।

## Why do elephants face a jumbo challenge?

What has the latest study thrown up? Why was the census conducted across four landscapes? Which are the best habitats for elephants? What are some of the issues the elephant population has to encounter? What can be done about elephant-human conflicts?

**GS III: Environment**

**Rahul Karmakar**

**The story so far:**

**T**he Wildlife Institute of India (WII) released its report, the ‘Status of Elephants in India’, on October 14. The estimation of 22,446 elephants across four landscapes elicited comparison with the 2017 figure of 29,964, although the report said the DNA-based method, used for the first time to estimate elephants, “may be treated as a new monitoring baseline for further research”.

**Why was the new methodology adopted?**

The first elephant population estimation was conducted in 1929 across the forests of the United Province, comprising present-day Uttar Pradesh and Uttarakhand. Estimates till 1978 relied on the direct total count method, involving the averaging of figures obtained from three direct visual counts conducted at 10-day intervals at the forest beat level. The inception of Project Elephant in 1992 led to a shift in population estimation practices every five years, employing diverse methods, including total count, tracking-based total count, registration count, water hole count, sample count, transect count, and dung count. The choice of method varied across sites for elephant population

The study points to rapid fragmentation of elephant habitats

monitoring, making comparison difficult. The Synchronised Elephant Census was conducted in 2005, 2010, and 2017, using total (direct) count, sample block count, line transect dung (indirect) count, and waterhole count. The limitations of this method led to the Synchronous All-India Elephant Estimation (SAIEE) method for 2021-25.

**What is SAIEE 2021-25?**

Asian elephants (*Elephas maximus*) occupy a fraction of their historical range in the Indian subcontinent. The last pre-SAIEE estimate in 2017 put their number at 29,964, down by 87 from the 2012 count. Now, the SAIEE has revealed that there are 22,446 elephants, a drastic drop of 7,518 over eight years. However, wildlife experts from WII and State Forest Departments advised against any comparison because the new programme sought to eliminate the drawbacks of the previous methods and could not be undertaken in areas such as the Andaman Islands (25 elephants in 2017), primarily due to a low budget. They said the SAIEE data would serve as the baseline for estimation using the method in future. SAIEE entailed dividing India into 100 sq. km cells and then into 4 sq. km grids, each uniquely coded so that subsequent inferences could be compared on the same spatial scale and extent. Enumerators surveyed 6,66,977 km on foot covering 1,88,030 trails and transects, and collected 21,056 elephant dung samples during the three-phase exercise. The focus of the first phase was on data collection with these components: carnivore and mega-herbivore sign encounters, ungulate (hoofed animals) abundance, vegetation status, human disturbance, and dung counts. Phase Two involved assessing habitat characteristics and anthropogenic impacts, such as vegetation cover, forest patch size, human footprint etc. Phase Three emphasised spatially explicit abundance estimation, with human impact and habitat characteristics factored in.

**How have the landscapes fared?**

The study was conducted across four elephant-bearing landscapes. The Western

Ghats landscape encompassing Karnataka, Kerala, and Tamil Nadu accounted for 11,934 elephants, which is 53.17% of the all-India estimate. Karnataka led the chart with 6,013 elephants, followed by Tamil Nadu with 3,136 and Kerala with 2,785 elephants. The North Eastern Hills and Brahmaputra Flood Plains, comprising seven (minus Sikkim) northeastern States and northern West Bengal, offered the second-best habitat with 22.22% of India's elephants. Assam topped the table here with 4,159 elephants. The other two landscapes – Shivalik Hills and Gangetic Plains (Uttarakhand, Uttar Pradesh, and Bihar) and Central India and Eastern Ghats comprising seven States, including Andhra Pradesh, Maharashtra, Telangana, Odisha, and southern West Bengal – recorded 9.18% and 8.42% of the country's total elephants. Uttarakhand recorded the most elephants (1,792) in these two landscapes, followed by Odisha with 912.

**What does the study portend?**

The study points to rapid fragmentation of elephant landscapes due to expanding commercial plantations (coffee and tea), invasive plants, farmland fencing, human encroachment, mining, and developmental projects. This fragmentation has prompted elephants to venture into areas devoid of the animal for at least 200 years, resulting in conflicts with humans lacking cultural coexistence experience and posing a threat to elephant populations. A case in point is Andhra Pradesh to which herds migrated from three adjoining States. The first herd moved from the Hosur-Dharmapuri forests of Tamil Nadu to Kuppam and Palamaner Forest Divisions of Chittoor district in 1980. More elephants from Tamil Nadu and Bannerghatta in Karnataka migrated between 1983 and 1986. While Karnataka harbours the highest number of wild elephants in India, it is also one of the major hotspots for human-elephant conflict. For instance, the contiguous forests of Nagarhole, Bandipur, and BRT Hills face threats from frequent forest fires, development projects and plantations of acacia and eucalyptus. Similar issues have escalated human-elephant conflicts in Kerala. Tamil Nadu's most critical habitats are the Nilgiris and Coimbatore Forest Division, where conflicts have claimed 150 human and 170 elephant lives so far. Experts underscore the need to engage with communities for sensitisation campaigns in elephant-occupied areas and newly colonised places.



**Numbering exercise:** Karnataka harbours the highest number of wild elephants. It is also one of the hotspots of human-elephant conflict. M.A. SRIRAM

### Why do elephants face a jumbo challenge?

हाथी एक विशाल चुनौती का सामना क्यों कर रहे हैं?

- The **Wildlife Institute of India (WII)** released its report, the ‘**Status of Elephants in India**’, on **October 14**. भारतीय वन्यजीव संस्थान (WII) ने 14 अक्टूबर को अपनी रिपोर्ट ‘भारत में हाथियों की स्थिति’ जारी की।
- The estimation of **22,446 elephants** across four landscapes elicited comparison with the **2017 figure of 29,964**, although the report said the **DNA-based method**, used for the first time to estimate elephants, “may be treated as a new monitoring baseline for further research”.



चार परिदृश्यों में 22,446 हाथियों का अनुमान 2017 के 29,964 के आंकड़े से तुलना के लिए प्रेरित हुआ, हालांकि रिपोर्ट में कहा गया कि पहली बार उपयोग की गई डीएनए-आधारित विधि को “आगे के शोध के लिए नए निगरानी मानक” के रूप में माना जा सकता है।

### Why was the new methodology adopted?

#### नई कार्यप्रणाली क्यों अपनाई गई?

- The first elephant population estimation was conducted in 1929 across the forests of the **United Province**, comprising present-day **Uttar Pradesh and Uttarakhand**.  
पहला हाथी जनसंख्या अनुमान 1929 में यूनाइटेड प्रोविंस के वनों में किया गया था, जिसमें वर्तमान उत्तर प्रदेश और उत्तराखंड शामिल थे।
- Estimates till 1978 relied on the **direct total count method**, involving the averaging of figures obtained from **three direct visual counts** conducted at 10-day intervals at the forest beat level.  
1978 तक के अनुमान प्रत्यक्ष कुल गणना विधि पर आधारित थे, जिसमें जंगल बीट स्तर पर 10-दिवसीय अंतराल में किए गए तीन प्रत्यक्ष दृश्य गणना के औसत शामिल थे।
- The inception of **Project Elephant in 1992** led to a shift in population estimation practices every five years, employing diverse methods including **total count, tracking-based total count, registration count, water hole count, sample count, transect count, and dung count**.  
1992 में प्रोजेक्ट एलिफेंट की शुरुआत के साथ जनसंख्या अनुमान पद्धतियों में हर पांच वर्ष में बदलाव आया, जिसमें कुल गणना, ट्रैकिंग-आधारित गणना, रजिस्ट्रेशन काउंट, वॉटर होल काउंट, सैंपल काउंट, ट्रांसेक्ट काउंट और गोबर गणना जैसी विधियां अपनाई गईं।
- The choice of method varied across sites for elephant population monitoring, making comparison difficult.  
हाथी जनसंख्या निगरानी के लिए विधि का चयन विभिन्न स्थलों पर अलग-अलग था, जिससे तुलना करना कठिन हो गया।
- The **Synchronised Elephant Census** was conducted in 2005, 2010, and 2017, using total (direct) count, sample block count, line transect dung (indirect) count, and waterhole count.  
सिंक्रोनाइज्ड एलिफेंट जनगणना 2005, 2010 और 2017 में की गई, जिसमें कुल (प्रत्यक्ष) गणना, सैंपल ब्लॉक काउंट, लाइन ट्रांसेक्ट गोबर (अप्रत्यक्ष) गणना और वॉटरहोल काउंट का उपयोग किया गया।
- The limitations of this method led to the **Synchronous All-India Elephant Estimation (SAIEE)** method for 2021-25.  
इस विधि की सीमाओं ने 2021-25 के लिए सिंक्रोस ऑल-इंडिया एलिफेंट एस्टीमेशन (SAIEE) विधि के विकास को प्रेरित किया।

### What is SAIEE 2021-25?

#### SAIEE 2021-25 क्या है?

- **Asian elephants (Elephas maximus)** occupy a fraction of their historical range in the Indian subcontinent.  
एशियाई हाथी (Elephas maximus) भारतीय उपमहाद्वीप में अपने ऐतिहासिक क्षेत्र के केवल एक हिस्से पर कब्जा करते हैं।
- The last pre-SAIEE estimate in 2017 put their number at **29,964**, down by **87** from the **2012 count**.  
2017 के अंतिम प्री-SAIEE अनुमान में उनकी संख्या 29,964 बताई गई, जो 2012 की गणना से 87 कम थी।
- Now, the **SAIEE** has revealed that there are **22,446 elephants**, a drastic drop of **7,518** over eight years.  
अब, SAIEE ने खुलासा किया है कि 22,446 हाथी हैं, जो आठ वर्षों में 7,518 की बड़ी गिरावट दर्शाता है।
- However, wildlife experts advised against any comparison because the new programme sought to eliminate the drawbacks of previous methods.  
हालांकि, वन्यजीव विशेषज्ञों ने किसी भी तुलना से परहेज करने की सलाह दी क्योंकि नया कार्यक्रम पिछली विधियों की कमियों को समाप्त करने के उद्देश्य से था।
- The **SAIEE** data would serve as the **baseline** for estimation using this method in future.  
SAIEE डेटा भविष्य में इस विधि से अनुमान लगाने के लिए आधार रेखा के रूप में कार्य करेगा।



- Enumerators surveyed **6,66,977 km** on foot covering **1,88,030 trails and transects**, and collected **21,056 elephant dung samples** during the three-phase exercise.  
गणनाकर्ताओं ने **6,66,977 किमी** पैदल चलकर **1,88,030 ट्रेल्स और ट्रांसेक्ट्स** को कवर किया और तीन-चरणीय अभ्यास के दौरान **21,056 हाथियों के गोबर के नमूने** एकत्र किए।

### How have the landscapes fared?

#### परिदृश्यों का प्रदर्शन कैसा रहा?

- The study was conducted across **four elephant-bearing landscapes**.  
यह अध्ययन **चार हाथी-वासी परिदृश्यों** में किया गया।
- The **Western Ghats landscape** encompassing **Karnataka, Kerala, and Tamil Nadu** accounted for **11,934 elephants (53.17%)** of the all-India estimate.  
**पश्चिमी घाट परिदृश्य**, जिसमें **कर्नाटक, केरल और तमिलनाडु** शामिल हैं, में देश के कुल अनुमानित हाथियों का **53.17% (11,934)** पाया गया।
- **Karnataka** led the chart with **6,013 elephants**, followed by **Tamil Nadu (3,136)** and **Kerala (2,785)**.  
**कर्नाटक 6,013 हाथियों** के साथ सबसे आगे रहा, उसके बाद **तमिलनाडु (3,136)** और **केरल (2,785)** रहे।
- The **North Eastern Hills and Brahmaputra Flood Plains** offered the **second-best habitat** with **22.22%** of India's elephants, led by **Assam (4,159 elephants)**.  
**उत्तर-पूर्वी पहाड़ियां और ब्रह्मपुत्र बाढ़ मैदान** ने **22.22%** हाथियों के साथ **दूसरा सबसे अच्छा आवास** प्रदान किया, जिसका नेतृत्व **असम (4,159 हाथी)** ने किया।
- The other two landscapes — **Shivalik Hills and Gangetic Plains**, and **Central India and Eastern Ghats** — recorded **9.18%** and **8.42%** respectively.  
अन्य दो परिदृश्य — **शिवालिक पहाड़ियां और गंगा के मैदान**, तथा **मध्य भारत और पूर्वी घाट** — ने क्रमशः **9.18%** और **8.42%** दर्ज किया।

### What does the study portend?

#### अध्ययन क्या संकेत देता है?

- The study points to **rapid fragmentation of elephant habitats** due to **commercial plantations, invasive plants, farmland fencing, human encroachment, mining, and developmental projects**.  
अध्ययन **व्यावसायिक बागानों, आक्रामक पौधों, कृषि भूमि की बाड़बंदी, मानव अतिक्रमण, खनन और विकास परियोजनाओं** के कारण **हाथी आवासों के तेजी से विखंडन** की ओर संकेत करता है।
- This has prompted elephants to **venture into new areas**, resulting in **human-elephant conflicts**.  
इसने हाथियों को **नए क्षेत्रों में जाने** के लिए प्रेरित किया है, जिससे **मानव-हाथी संघर्ष** बढ़े हैं।
- For instance, **Andhra Pradesh** saw herds migrating from **Tamil Nadu and Karnataka** between **1980 and 1986**.  
उदाहरण के लिए, **आंध्र प्रदेश** ने **1980 से 1986** के बीच **तमिलनाडु और कर्नाटक** से झुंडों को प्रवास करते देखा।
- While **Karnataka** harbours the highest number of wild elephants, it is also one of the major hotspots for **human-elephant conflict**.  
जहां **कर्नाटक** में सबसे अधिक जंगली हाथी हैं, वहीं यह **मानव-हाथी संघर्ष** का एक प्रमुख केंद्र भी है।
- **Tamil Nadu's Nilgiris and Coimbatore divisions** have seen **150 human and 170 elephant deaths** so far due to such conflicts.  
**तमिलनाडु के नीलगिरि और कोयंबटूर वन प्रभागों** में अब तक ऐसे संघर्षों में **150 मनुष्यों और 170 हाथियों** की मौत हो चुकी है।
- Experts underscore the need to engage with communities for **sensitisation campaigns** in elephant-occupied and newly colonised areas.  
विशेषज्ञ **हाथी-निवास और नए बसे क्षेत्रों में संवेदनशीलता अभियानों** के लिए समुदायों को शामिल करने की आवश्यकता पर जोर देते हैं।



## The most ancient Indian wolf is set to be a new species

GS III: Environment

Divya Gandhi

A discreet, charismatic denizen of scrubland and grasslands, the Indian wolf (*Canis lupus pallipes*), whose population has dwindled to just around 3,000 individuals in India and Pakistan, is likely to be classified as a new species by the International Union for Conservation of Nature (IUCN).

The Indian wolf was first placed within the umbrella genus of the grey wolf that

roamed swathes of Asia. However, it has the oldest living lineage of the world's wolves.

The canine has also been listed as "vulnerable", bringing it much-needed attention as well as incentives to protect it and conserve its rapidly shrinking habitat.

This animal faces many threats, Y.V. Jhala, former dean of the Wildlife Institute of India and now a senior scientist of the Indian National Science Academy,

explained. They are poisoned for preying on livestock, their natural prey base is vastly depleted in its fragile habitat, and the semi-arid areas they inhabit are destroyed by highways and renewable energy projects, Dr. Jhala told *The Hindu*.

"A den site I studied in Kutch is now engulfed by the Adani Solar Farm."

The wolf's persecution is curious, as they aren't known to attack humans. "There have been two re-

cent spates of wolf-human conflict, one in 1996 and the other last year in Bahraich district [in Uttar Pradesh]," Dr. Jhala said.

According to reports, since September, six people, including four children, were killed and 30 others were injured in wolf attacks in Bahraich. Meanwhile, almost the entire pack was shot to death.

"There has been a call for over two decades to have it be declared a distinct species," Abi Vanak,

director of the Centre for Policy Design at the Ashoka Trust for Research in Ecology, Bengaluru, told *The Hindu*.

'Best models'

"The Indian wolf is already under Schedule 1 of the Wildlife Protection Act. The wolf, like the bustards and other denizens of the open natural ecosystems, do not need strict protected areas. Rather they serve as the best models for co-existence, and this is what

needs to be incentivised. With the downgrading of the wolf to 'vulnerable' (I don't call it upgrading), hopefully more international attention and funds can flow towards its conservation, and the protection of its habitats."

Going forward, Dr. Jhala said, it's important to acknowledge the IUCN assessment by developing a national policy and management plan for the unique, ancient Indian wolf.

### The most ancient Indian wolf is set to be a new species सबसे प्राचीन भारतीय भेड़िया एक नई प्रजाति बनने जा रहा है

- A discreet, charismatic denizen of scrubland and grasslands, the **Indian wolf (*Canis lupus pallipes*)**, whose population has dwindled to just around **3,000 individuals** in **India and Pakistan**, is likely to be classified as a **new species** by the **International Union for Conservation of Nature (IUCN)**.  
झाड़ियों और घास के मैदानों का एक संयमी और करिश्माई निवासी, भारतीय भेड़िया (*Canis lupus pallipes*), जिसकी आबादी भारत और पाकिस्तान में केवल 3,000 व्यक्तियों तक घट गई है, को प्रकृति संरक्षण के लिए अंतर्राष्ट्रीय संघ (IUCN) द्वारा एक नई प्रजाति के रूप में वर्गीकृत किए जाने की संभावना है।
- The Indian wolf was first placed within the umbrella genus of the **grey wolf** that roamed swathes of **Asia**.  
भारतीय भेड़िए को शुरू में एशिया के विशाल क्षेत्रों में घूमने वाले ग्रे वुल्फ (भूरे भेड़िए) की मुख्य प्रजाति (**genus**) के अंतर्गत रखा गया था।
- However, it has the **oldest living lineage** of the world's wolves.  
हालांकि, इसमें दुनिया के भेड़ियों की सबसे प्राचीन जीवित वंशावली है।
- The canine has also been listed as "**vulnerable**", bringing it much-needed attention as well as incentives to protect it and conserve its rapidly shrinking habitat.  
इस कैनाइन (भेड़िए) को "असुरक्षित (**vulnerable**)" के रूप में सूचीबद्ध किया गया है, जिससे इसे आवश्यक ध्यान और अपने तेजी से सिकुड़ते आवास की रक्षा और संरक्षण के लिए प्रोत्साहन मिला है।
- This animal faces many threats, **Y.V. Jhala**, former dean of the **Wildlife Institute of India** and now a senior scientist of the **Indian National Science Academy**, explained.  
इस जानवर को कई खतरों का सामना करना पड़ता है, जैसा कि भारतीय वन्यजीव संस्थान (**Wildlife Institute of India**) के पूर्व डीन और अब भारतीय राष्ट्रीय विज्ञान अकादमी के वरिष्ठ वैज्ञानिक वाई.वी. झाला ने बताया।
- They are **poisoned** for preying on livestock, their natural prey base is vastly depleted in its fragile habitat, and the semi-arid areas they inhabit are destroyed by **highways and renewable energy projects**, Dr. Jhala told *The Hindu*.  
उन्हें पशुधन पर हमला करने के कारण ज़हर देकर मार दिया जाता है, उनका प्राकृतिक शिकार आधार उनके नाजुक आवास में बहुत कम हो गया है, और जिन अर्ध-शुष्क क्षेत्रों में वे रहते हैं, उन्हें हाईवे और नवीकरणीय ऊर्जा परियोजनाओं से नष्ट किया जा रहा है, डॉ. झाला ने *द हिंदू* को बताया।
- "**A den site I studied in Kutch is now engulfed by the Adani Solar Farm.**"  
"मैंने कच्छ में जिस मांद स्थल का अध्ययन किया था, वह अब अदानी सोलर फार्म द्वारा घिर गया है।"
- The wolf's persecution is curious, as they aren't known to **attack humans**.  
भेड़ियों का उत्पीड़न अजीब है, क्योंकि वे मनुष्यों पर हमला करने के लिए नहीं जाने जाते।
- "There have been two recent spates of **wolf-human conflict**, one in **1996** and the other last year in **Bahraich district (Uttar Pradesh)**," Dr. Jhala said.  
"हाल ही में भेड़िया-मानव संघर्ष की दो घटनाएँ हुई हैं, एक 1996 में और दूसरी पिछले साल बहराइच जिला (उत्तर प्रदेश) में," डॉ. झाला ने कहा।



- According to reports, since **September**, **six people**, including **four children**, were killed and **30 others injured** in wolf attacks in **Bahraich**.  
रिपोर्टों के अनुसार, सितंबर से, बहराइच में भेड़ियों के हमलों में चार बच्चों सहित छह लोग मारे गए और **30 अन्य घायल हुए**।
- Meanwhile, almost the entire **pack was shot to death**.  
इस बीच, लगभग पूरे **भेड़िया झुंड (pack)** को गोली मारकर मार दिया गया।
- “There has been a call for over **two decades** to have it be declared a **distinct species**,” **Abi Vanak**, director of the **Centre for Policy Design at the Ashoka Trust for Research in Ecology**, Bengaluru, told *The Hindu*.  
**पिछले दो दशकों से इसे एक विशिष्ट प्रजाति (distinct species) घोषित करने की मांग की जा रही है, अबी वनक, इकोलॉजी में शोध हेतु अशोका ट्रस्ट (ATREE), बेंगलुरु के नीति डिजाइन केंद्र के निदेशक ने द हिंदू को बताया।**

### ‘Best models’ ‘सर्वश्रेष्ठ मॉडल्स’

- “The Indian wolf is already under **Schedule 1** of the **Wildlife Protection Act**.  
“**भारतीय भेड़िया** पहले से ही **वन्यजीव संरक्षण अधिनियम (Wildlife Protection Act)** की **अनुसूची 1** के अंतर्गत आता है।
- The wolf, like the **bustards** and other denizens of the open natural ecosystems, do not need **strict protected areas**.  
भेड़िया, **ग्रेट इंडियन बस्टर्ड** और अन्य **खुले प्राकृतिक पारिस्थितिकी तंत्रों** के निवासियों की तरह, **सख्त संरक्षित क्षेत्रों** की आवश्यकता नहीं रखता।
- Rather they serve as the **best models for coexistence**, and this is what needs to be incentivised.  
बल्कि वे **सहअस्तित्व के सर्वोत्तम मॉडल** के रूप में काम करते हैं, और इसी को प्रोत्साहित करने की आवश्यकता है।



GS III: S&T

### Did lead offer humans a survival advantage?

A study has reported that exposure to lead among hominids dates back over 2 million years. Researchers found traces of lead in fossil teeth from *Australopithecus africanus*, *Paranthropus robustus*, *Homo neanderthalensis*, and others. Tests revealed lead disrupted neural development when a now-extinct version of the *NOVA1* gene was absent. The findings suggest lead exposure may have shaped neurological and social traits, with the modern human variant of *NOVA1* possibly providing more protection.

- With the **downgrading** of the wolf to ‘**vulnerable**’ (I don’t call it upgrading), hopefully more **international attention and funds** can flow towards its **conservation** and the **protection of its habitats**.”

भेड़िए को ‘**असुरक्षित (vulnerable)**’ के रूप में **नीचे वर्गीकृत (downgrade)** करने से (मैं इसे उन्नयन नहीं कहता), उम्मीद है कि इसके **संरक्षण (conservation)** और **आवास की रक्षा (habitat protection)** की ओर अधिक **अंतरराष्ट्रीय ध्यान और धन** प्रवाहित हो सकता है।”

- Going forward, **Dr. Jhala** said, it’s important to acknowledge the **IUCN assessment** by developing a **national policy and management plan** for the unique, ancient **Indian wolf**.

आगे बढ़ते हुए, **डॉ. झाला** ने कहा कि **IUCN के मूल्यांकन** को स्वीकार करना महत्वपूर्ण है, और इसके लिए **विशिष्ट, प्राचीन भारतीय भेड़िए हेतु एक राष्ट्रीय नीति (national policy)** और **प्रबंधन योजना (management plan)** तैयार की जानी चाहिए।

### Did lead offer humans a survival advantage?

**क्या सीसे ने मनुष्यों को जीवित रहने का लाभ दिया था?**

- A study has reported that **exposure to lead** among **hominids** dates back over **2 million years**.



एक अध्ययन में बताया गया है कि होमिनिड्स (hominids) में सीसे के संपर्क (exposure to lead) का इतिहास 20 लाख साल से अधिक पुराना है।

- Researchers found traces of lead in fossil teeth from **Australopithecus africanus**, **Paranthropus robustus**, **Homo neanderthalensis**, and others.  
शोधकर्ताओं ने ऑस्ट्रालोपिथेकस अफ्रीकानस (**Australopithecus africanus**), पैरैन्थ्रोपस रोबस्टस (**Paranthropus robustus**), होमो निएंडरथालेंसिस (**Homo neanderthalensis**) और अन्य के जीवाश्म दाँतों (fossil teeth) में सीसे के निशान (traces of lead) पाए।
- Tests revealed lead disrupted neural development when a now-extinct version of the **NOVA1 gene** was absent.  
परीक्षणों से पता चला कि जब अब विलुप्त हो चुकी **NOVA1** जीन का संस्करण अनुपस्थित था, तब सीसे ने तंत्रिका विकास (neural development) को बाधित किया।
- The findings suggest lead exposure may have shaped neurological and social traits, with the modern human variant of **NOVA1** possibly providing more protection.  
इन निष्कर्षों से पता चलता है कि सीसे के संपर्क (lead exposure) ने तंत्रिका और सामाजिक गुणों को आकार दिया हो सकता है, और **NOVA1** जीन के आधुनिक मानव संस्करण ने संभवतः अधिक सुरक्षा (more protection) प्रदान की होगी।

PATRIOTIC IAS



# Microbial link between arsenic in soil, lower rice yield uncovered

New research reveals that rice paddy microbes, and not soil arsenic levels alone, dictate arsenic toxicity and crop losses; managing microbial balance may thus be key to protecting the yield and its safety

GS III: S&T

Ashmita Gupta

**R**esearch published in *Proceedings of the National Academy of Sciences* recently has warned that the type of microbes in rice paddies can determine whether arsenic, a notorious carcinogen and plant toxin, builds up in rice grains and triggers drastic crop losses.

The study has identified an important balance between arsenic-methylating bacteria, which convert inorganic arsenic into the toxic organic forms, versus demethylating archaea, which can undo this process. Where the methylating bacteria dominate, rice plants absorb the compound dimethylarsinic acid (DMA) and its more toxic derivative, dimethylated monothioarsenate (DMMTA). These compounds pose health risks to humans as well as induce straighthead disease.

“Straighthead needs to be considered as a physiological disorder rather than a disease in the absence of any infectious agent,” rice pathologist Sridhar Ranganathan, who wasn’t involved in the study, said.

“The symptoms are erect panicles with unfilled grains, often remaining green. Due to empty grains affecting the weight of the panicles, the ear-bearing tillers don’t droop down and remain green and upright, as can be seen with unaffected healthy plants bearing normally filled matured grains in which the plants droop down showing symptoms of initiation of senescence

## Arsenic whisperers

Scientists identify 17 key microbes whose abundance can accurately predict rice arsenic risk

- A study has found that microbe composition in rice paddies affects whether toxic arsenic compounds accumulate in rice grains

- Arsenic-methylating bacteria increase levels of DMA and its derivative DMMTA, causing straighthead disease

- A new study has found soils younger than 700 years have more methylating microbes while older soils host protective demethylating archaea

- When the ratio of methylating to demethylating microbes exceeds 1.5, straighthead disease risk was found to rise

- Newly cultivated paddies in the US, southern Europe, and northeast China were found to face heightened arsenic vulnerability

- The study’s authors urge monitoring of arsenic speciation and microbial balance alongside interventions like midseason drainage



of the leaves and the grains.”

While long dismissed as a local agronomic issue, straighthead disease is now recognised as a global threat. In parts of the US and China, farmers have reported significant outbreaks, often in newly established or rotated paddies. West Bengal in India and Bangladesh have also previously reported straighthead disease.

The condition can result in up to 70% yield losses in severely affected areas. It occurs even when the total arsenic level in the soil is relatively low because the real problem is arsenic speciation, i.e. the chemical form arsenic takes in the soil and plant. The new study has found that the microbial communities that dominate in the paddies determine this specia-

tion. The research team, led by Peng Wang at Nanjing Agricultural University in China, analysed rice paddies of different ages in China, unearthing a surprising pattern. Soils younger than 700 years were dominated by arsenic-methylating bacteria, so the rice grown there accumulated more DMA and DMMTA and the fields were more prone to straighthead disease outbreaks. Soils older than 700 years had more demethylating archaea, which broke down DMA and reduced the compounds’ buildup.

The researchers combined these field data with controlled soil incubation tests, genetic analyses, and a global survey of 801 paddy soil microbiomes. Eventually, they identified 11 methylating microbes and

six demethylating archaea whose abundance could accurately predict arsenic risk.

In the paper, the team also reported that newly cultivated paddy regions like the U.S., southern Europe, and northeast China showed high ratios of methylating to demethylating microbes, rendering them particularly vulnerable to straighthead outbreaks. Ancient rice-growing regions had stronger demethylating communities instead. When the ratio of methylating to demethylating microbes exceeded 1.5, the risk of straighthead disease was found to rise sharply.

India is the world’s second-largest producer and consumer of rice. While much of the farming occurs in old, legacy paddies with relatively balanced

microbial communities, several States have had new or reclaimed paddy fields established in the last few decades. These fields may be at greater risk, per the new study.

Experts said the research also intersects with climate change. Higher temperatures and altered flooding regimes are expected to increase the soils’ arsenic content (whether from natural sources or anthropogenic), and could tip the microbial balance towards the more harmful varieties. For a country where rice contributes nearly 40% of the population’s caloric intake, the crop’s safety and productivity are crucial.

Dr. Ranganathan said that even if the crop can’t be saved in a single cropping season, agronomic interventions can mitigate risks. According to the research paper, draining the rice fields midseason can ‘suppress’ the methylating microbes by reintroducing oxygen into the soils. Silicon fertilisation has also been known to reduce rice plants’ arsenic uptake. He also said crop rotation strategies can be adjusted to avoid destabilising microbial communities.

At the policy level, the findings highlight the need to monitor arsenic speciation, and not just total arsenic levels, as part of food safety regulations. Current standards, including those of the UN Food and Agriculture Organisation’s ‘Codex Alimentarius’, focus on inorganic arsenic, leaving gaps around methylated species like DMMTA.

Ashmita Gupta is a science writer

## Microbial link between arsenic in soil, lower rice yield uncovered

### मिट्टी में आर्सेनिक और कम चावल उत्पादन के बीच माइक्रोबियल लिंक उजागर

- New research reveals that **rice paddy microbes**, and not **soil arsenic levels alone**, dictate **arsenic toxicity** and **crop losses**; managing **microbial balance** may thus be key to protecting the **yield** and its **safety**.  
नए शोध से पता चला है कि धान के खेतों के सूक्ष्मजीव (rice paddy microbes) ही आर्सेनिक विषाक्तता (arsenic toxicity) और फसल हानि (crop losses) को नियंत्रित करते हैं, केवल मिट्टी में आर्सेनिक स्तर



(soil arsenic levels) नहीं। इस प्रकार, सूक्ष्मजीव संतुलन (microbial balance) को प्रबंधित करना उत्पादन (yield) और इसकी सुरक्षा (safety) को बचाने की कुंजी हो सकता है।

- Research published in **Proceedings of the National Academy of Sciences** recently has warned that the type of **microbes in rice paddies** can determine whether **arsenic**, a notorious **carcinogen** and **plant toxin**, builds up in **rice grains** and triggers **drastic crop losses**.

हाल ही में **नेशनल एकेडमी ऑफ साइंसेज (Proceedings of the National Academy of Sciences)** में प्रकाशित शोध ने चेतावनी दी है कि **धान के खेतों के सूक्ष्मजीव (microbes in rice paddies)** यह तय कर सकते हैं कि क्या **आर्सेनिक (arsenic)**, जो एक कुख्यात **कार्सिनोजन (carcinogen)** और **पौधों के लिए विष (plant toxin)** है, **धान के दानों (rice grains)** में जमा होगा और **गंभीर फसल हानि (crop losses)** करेगा।

- The study has identified an important balance between **arsenic-methylating bacteria**, which convert **inorganic arsenic** into the **toxic organic forms**, versus **demethylating archaea**, which can undo this process.

इस अध्ययन ने **आर्सेनिक-मिथाइलिंग बैक्टीरिया (arsenic-methylating bacteria)**, जो **अकार्बनिक आर्सेनिक (inorganic arsenic)** को **विषाक्त जैविक रूपों (toxic organic forms)** में बदलते हैं, और **डिमिथाइलिंग आर्किया (demethylating archaea)**, जो इस प्रक्रिया को उलट सकते हैं, के बीच महत्वपूर्ण संतुलन की पहचान की है।

- Where the **methylating bacteria** dominate, **rice plants** absorb the compound **dimethylarsinic acid (DMA)** and its more toxic derivative, **dimethylated monothioarsenate (DMMTA)**.

जहाँ **मिथाइलिंग बैक्टीरिया (methylating bacteria)** अधिक होते हैं, वहाँ **धान के पौधे (rice plants)** यौगिक **डायमिथाइलआर्सेनिक एसिड (DMA)** और इसके अधिक विषाक्त रूप **डायमिथाइलेटेड मोनोथियोआर्सेनेट (DMMTA)** को अवशोषित करते हैं।

- These compounds pose **health risks** to humans as well as induce **straighthead disease**. ये यौगिक मनुष्यों के लिए **स्वास्थ्य जोखिम (health risks)** पैदा करते हैं और **स्ट्रेटहेड रोग (straighthead disease)** भी उत्पन्न करते हैं।
- “**Straighthead** needs to be considered as a **physiological disorder** rather than a disease in the absence of any **infectious agent**,” rice pathologist **Sridhar Ranganathan**, who wasn’t involved in the study, said.

“**स्ट्रेटहेड (Straighthead)** को किसी भी **संक्रामक एजेंट (infectious agent)** के अभाव में रोग के बजाय **शारीरिक विकार (physiological disorder)** माना जाना चाहिए,” अध्ययन में शामिल नहीं रहे धान रोग विशेषज्ञ **श्रीधर रंगनाथन (Sridhar Ranganathan)** ने कहा।

- “The symptoms are **erect panicles with unfilled grains**, often remaining green. Due to empty grains affecting the weight of the panicles, the **ear-bearing tillers** don’t droop down and remain green and upright, as can be seen with unaffected healthy plants bearing normally filled matured grains in which the plants droop down showing symptoms of **initiation of senescence** of the leaves and the grains.”

“लक्षण हैं **अपूर्ण दानों वाले सीधा खड़ा मुआवज़ा (erect panicles with unfilled grains)**, जो अक्सर हरा रहता है। खाली दानों के कारण **कर्णवाहक टिलर (ear-bearing tillers)** झुकते नहीं हैं और हरे और सीधे रहते हैं, जैसा कि स्वस्थ पौधों में देखा जा सकता है जिनमें पूर्ण दाने हैं और पौधे झुकते हैं, पत्तियों और दानों की **पुरानी अवस्था (initiation of senescence)** का संकेत देते हैं।”

- While long dismissed as a local **agronomic issue**, straighthead disease is now recognised as a **global threat**.

जबकि इसे लंबे समय तक स्थानीय **कृषि समस्या (agronomic issue)** माना गया था, स्ट्रेटहेड रोग अब **वैश्विक खतरा (global threat)** माना जाता है।

- In parts of the **US** and **China**, farmers have reported significant outbreaks, often in newly established or rotated paddies.

**अमेरिका (US)** और **चीन (China)** के कुछ हिस्सों में, किसानों ने महत्वपूर्ण प्रकोप की रिपोर्ट की है, अक्सर नए या रोटेट किए गए खेतों में।

- **West Bengal** in India and **Bangladesh** have also previously reported straighthead disease. भारत के **पश्चिम बंगाल (West Bengal)** और **बांग्लादेश (Bangladesh)** ने भी पहले स्ट्रेटहेड रोग की रिपोर्ट की है।

- The condition can result in up to **70% yield losses** in severely affected areas. यह स्थिति गंभीर प्रभावित क्षेत्रों में **70% तक फसल हानि (70% yield losses)** कर सकती है।



- It occurs even when the total **arsenic level** in the soil is relatively low because the real problem is **arsenic speciation**, i.e., the **chemical form arsenic** takes in the **soil and plant**. यह तब भी होता है जब मिट्टी में कुल **आर्सेनिक स्तर (arsenic level)** कम होता है क्योंकि असली समस्या **आर्सेनिक प्रजातिकी (arsenic speciation)** है, यानी **आर्सेनिक का रासायनिक रूप (chemical form arsenic)** जो **मिट्टी (soil)** और **पौधे (plant)** में लेता है।
- The new study has found that the **microbial communities** that dominate in the paddies determine this **speciation**.  
नए अध्ययन में पाया गया है कि **धान के खेतों में प्रमुख सूक्ष्मजीव समुदाय (microbial communities)** इस **प्रजातिकी (speciation)** को निर्धारित करते हैं।
- The research team, led by **Peng Wang** at **Nanjing Agricultural University** in China, analysed rice paddies of different ages in China, unearthing a surprising pattern.  
चीन के **नानजिंग एग्रीकल्चरल यूनिवर्सिटी (Nanjing Agricultural University)** के **पेंग वांग (Peng Wang)** द्वारा नेतृत्व किए गए शोध दल ने चीन में विभिन्न उम्र के धान के खेतों का विश्लेषण किया और एक आश्चर्यजनक पैटर्न उजागर किया।
- Soils younger than **700 years** were dominated by **arsenic-methylating bacteria**, so the rice grown there accumulated more **DMA** and **DMMTA** and the fields were more prone to **straighthead disease outbreaks**.  
700 साल से कम उम्र की मिट्टियाँ **आर्सेनिक-मिथाइलिंग बैक्टीरिया (arsenic-methylating bacteria)** द्वारा अधिक नियंत्रित थीं, इसलिए वहाँ उगाई गई धान में अधिक **DMA** और **DMMTA** जमा हो गया और खेत अधिक **स्ट्रेटहेड रोग प्रकोप (straighthead disease outbreaks)** के प्रति संवेदनशील थे।
- Soils older than **700 years** had more **demethylating archaea**, which broke down **DMA** and reduced the compounds' buildup.  
700 साल से अधिक उम्र की मिट्टियों में अधिक **डिमिथाइलिंग आर्किया (demethylating archaea)** थे, जिन्होंने **DMA** को तोड़ा और यौगिकों के जमाव को कम किया।
- The researchers combined these field data with **controlled soil incubation tests, genetic analyses, and a global survey of 801 paddy soil microbiomes**.  
शोधकर्ताओं ने इन क्षेत्रीय आंकड़ों को **नियंत्रित मिट्टी संवर्धन परीक्षण (controlled soil incubation tests)**, **आनुवंशिक विश्लेषण (genetic analyses)** और **801 धान की मिट्टी माइक्रोबायोम का वैश्विक सर्वेक्षण (global survey of 801 paddy soil microbiomes)** के साथ मिलाया।
- Eventually, they identified **11 methylating microbes** and **six demethylating archaea** whose abundance could accurately predict **arsenic risk**.  
अंततः, उन्होंने **11 मिथाइलिंग सूक्ष्मजीव (methylating microbes)** और **6 डिमिथाइलिंग आर्किया (demethylating archaea)** की पहचान की, जिनकी संख्या **आर्सेनिक जोखिम (arsenic risk)** की सटीक भविष्यवाणी कर सकती थी।
- In the paper, the team also reported that newly cultivated **paddy regions** like the **U.S., southern Europe, and northeast China** showed high ratios of **methylating to demethylating microbes**, rendering them particularly vulnerable to **straighthead outbreaks**.  
पत्र में, टीम ने यह भी बताया कि नए उगाए गए **धान क्षेत्र (paddy regions)** जैसे **यूएस (U.S.), दक्षिणी यूरोप (southern Europe), और पूर्वोत्तर चीन (northeast China)** में **मिथाइलिंग और डिमिथाइलिंग सूक्ष्मजीवों का अनुपात (methylating to demethylating microbes)** अधिक था, जिससे वे विशेष रूप से **स्ट्रेटहेड प्रकोप (straighthead outbreaks)** के प्रति संवेदनशील थे।
- Ancient rice-growing regions had stronger **demethylating communities** instead.  
प्राचीन धान उगाने वाले क्षेत्रों में इसके बजाय मजबूत **डिमिथाइलिंग समुदाय (demethylating communities)** थे।
- When the ratio of **methylating to demethylating microbes** exceeded **1.5**, the risk of **straighthead disease** was found to rise sharply.  
जब **मिथाइलिंग और डिमिथाइलिंग सूक्ष्मजीवों का अनुपात (methylating to demethylating microbes)** 1.5 से अधिक हो गया, तो **स्ट्रेटहेड रोग (straighthead disease)** का जोखिम तेज़ी से बढ़ गया।
- India is the world's **second-largest producer and consumer of rice**.  
भारत दुनिया का **दूसरा सबसे बड़ा धान उत्पादक और उपभोक्ता (second-largest producer and consumer of rice)** है।
- While much of the farming occurs in **old, legacy paddies** with relatively balanced **microbial communities**, several States have had **new or reclaimed paddy fields** established in the last few decades.



जबकि अधिकांश खेती पुराने, परंपरागत खेतों (old, legacy paddies) में होती है जिनमें तुलनात्मक रूप से संतुलित सूक्ष्मजीव समुदाय (microbial communities)

## Many insects are moving from taboo to the table

GS III: S&T



**SPEAKING OF SCIENCE**

**D. Balasubramanian**

We depend on insects in many ways for producing food for the world's population. They pollinate our crop plants, break down decaying plant and animal matter, and are natural pest controllers. We also consume honey from honeybees.

Insects are all around us. However, many of us would be reluctant to indulge in entomophagy, to eat insects or their larvae. One reason for this is probably neophobia, the fear of trying out anything new.

At the same time, humans are currently worried about the overexploitation of the planet. There is a need for foods that pro-

vide high-quality calories without consuming large amounts of natural resources. Insects fit the bill. Their protein content is typically 40% by dry weight, the fat content 20-30%, and they also have minerals like potassium and iron.

Nearly a fourth of the world's population already eats edible insects. Some insects are regarded as delicacies. Mexican escamole, known as the "caviar of the desert", tastes like richly buttered baby corn but is the fried pupae and larvae of the velvety tree ant. The chef Sheril Kirshenbaum discussed tasteful insect menus in a 2023 episode of 'Serving Up Science' on PBS.

In India, edible insects are consumed among Indigenous communities in the Northeast States, Odisha, and in the Western Ghats. The practice is rooted in



Edible palm weevil larvae at a traditional food market in Puerto Francisco de Orellana, Ecuador. GETTY IMAGES

nutritional needs, cultural habits, and folk medicine. Tribal and rural populations in the Northeast reputedly consume more than 100 edible insect species for their protein, and they are also sold in local markets. Fried, roasted, or cooked, certain beetles, moths, hornets, and water bugs are preferred – although flies are not.

Collecting insects from

nature may not be sustainable, as insect populations may be depleted. Some groups have thus taken up semi-domestication, where insects and their larvae are nurtured and harvested by humans.

Ethnobiologists at the Nagaland University in Lumami have been studying traditional methods of insect farming and how they can be adapted to cultivat-

ing new species.

The Chakhesang and Angami tribes of Nagaland and Manipur consider the Asian giant hornet a delicacy, including roasted adults and fried larvae. This hornet is now semi-domesticated. Its cultivation begins by locating a nest, which is transported to a 1-metre-deep rearing pit that is loosely filled with soil. The empty nest is anchored to a pole just above the pit and covered with loose soil. A queen soon arrives with worker hornets, which begin enlarging the nest below the ground. The result is a large multi-layered structure resembling an inverted pyramid. For the harvest, adult hornets are smoked out and the larvae are extracted.

Tribal groups around the Annamalai Hills in Tamil Nadu use weaver ants as a culinary and medicinal resource. Leaf nests con-

taining eggs, larvae, and adults are roasted and then stone-ground to create a spiced soup. Similar preparations utilising the nests of other wasps, termites, and bees are also consumed as health supplements to alleviate respiratory and gastrointestinal ailments.

The World Health Organization has opined that insects in diets may be the key to achieving sustainable food production. Insect processing strategies may make them more acceptable. Grasshopper, locusts, and cricket powder (or flour) are now used as a protein supplement. As dietary trends evolve, as we get used to dryland millets and grow curious about lab-grown meats, we may well have insects on our plates soon.

*This article has been coauthored with Sushil Chandani*

### Many insects are moving from taboo to the table

### कई कीड़े अब निषिद्ध से खाने की थाली तक पहुंच रहे हैं

- We depend on **insects** in many ways for producing **food** for the world's population. हम विश्व की **जनसंख्या (population)** के लिए **भोजन (food)** उत्पादन में कई तरीकों से **कीड़ों (insects)** पर निर्भर करते हैं।
- They pollinate our **crop plants**, break down **decaying plant and animal matter**, and are natural **pest controllers**. वे हमारे **फसल पौधों (crop plants)** को परागित करते हैं, **सड़ते हुए पौधों और जानवरों के पदार्थ (decaying plant and animal matter)** को तोड़ते हैं, और प्राकृतिक **कीट नियंत्रक (pest controllers)** हैं।
- We also consume **honey** from **honeybees**. हम **मधुमक्खियों (honeybees)** से **शहद (honey)** भी खाते हैं।
- Insects are all around us. However, many of us would be reluctant to indulge in **entomophagy**, to eat **insects** or their **larvae**. कीड़े हमारे चारों ओर हैं। हालांकि, हम में से कई लोग **एंटोमोफैगी (entomophagy)**, यानी **कीड़े (insects)** या उनके **लार्वा (larvae)** खाने में हिचकिचाते हैं।
- One reason for this is probably **neophobia**, the fear of trying out anything new. इसके लिए एक कारण संभवतः **नियोफोबिया (neophobia)** है, यानी कुछ नया आजमाने का डर।
- At the same time, humans are currently worried about the **overexploitation of the planet**. साथ ही, मनुष्य वर्तमान में **ग्रह के अति-उपयोग (overexploitation of the planet)** को लेकर चिंतित हैं।
- There is a need for **foods** that provide high-quality **calories** without consuming large amounts of **natural resources**. ऐसे **भोजन (foods)** की आवश्यकता है जो अधिक मात्रा में **प्राकृतिक संसाधनों (natural resources)** का उपयोग किए बिना उच्च गुणवत्ता वाली **कैलोरी (calories)** प्रदान करें।



## Insects fit the bill.

कीड़े इस आवश्यकता को पूरा करते हैं।

- Their **protein content** is typically 40% by dry weight, the **fat content** 20-30%, and they also have minerals like **potassium** and **iron**.  
उनमें शुष्क वजन के हिसाब से **प्रोटीन (protein content)** लगभग 40% होता है, **वसा (fat content)** 20-30%, और इसमें **पोटेशियम (potassium)** और **लोहा (iron)** जैसे खनिज भी होते हैं।
- Nearly a fourth of the world's population already eats **edible insects**.  
दुनिया की लगभग एक चौथाई जनसंख्या पहले से ही **खाद्य कीड़े (edible insects)** खाती है।
- Some **insects** are regarded as **delicacies**. Mexican **escamole**, known as the “**caviar of the desert**”, tastes like richly buttered **baby corn** but is the fried **pupae and larvae** of the **velvety tree ant**.  
कुछ **कीड़े (insects)** को **विनम्र व्यंजन (delicacies)** माना जाता है। मेक्सिकन **एस्कामोल (escamole)**, जिसे “**रेगिस्तान का कैवियार (caviar of the desert)**” कहा जाता है, का स्वाद मक्खन लगे **बेबी कॉर्न (baby corn)** जैसा होता है लेकिन यह **फ्राइड प्यूपा और लार्वा (pupae and larvae)** होते हैं **मखमली पेड़ की चींटी (velvety tree ant)** के।
- The chef **Sheril Kirshenbaum** discussed tasteful **insect menus** in a 2023 episode of ‘**Serving Up Science**’ on **PBS**.  
शेफ **शेरिल किर्शनबॉम (Sheril Kirshenbaum)** ने 2023 में **PBS** पर ‘**Serving Up Science**’ के एक एपिसोड में स्वादिष्ट **कीड़ा मेनू (insect menus)** पर चर्चा की।
- In India, **edible insects** are consumed among **Indigenous communities** in the **Northeast States, Odisha, and the Western Ghats**.  
भारत में **खाद्य कीड़े (edible insects)** को **स्वदेशी समुदायों (Indigenous communities)** द्वारा **पूर्वोत्तर राज्य, ओडिशा और पश्चिमी घाट (Northeast States, Odisha, and Western Ghats)** में खाया जाता है।
- The practice is rooted in **nutritional needs, cultural habits, and folk medicine**.  
यह प्रथा **पोषण संबंधी आवश्यकताओं (nutritional needs)**, **सांस्कृतिक आदतों (cultural habits)**, और **लोक चिकित्सा (folk medicine)** में निहित है।
- Tribal and rural populations in the Northeast reputedly consume more than **100 edible insect species** for their **protein**, and they are also sold in **local markets**.  
पूर्वोत्तर के जनजातीय और ग्रामीण लोग अपने **प्रोटीन (protein)** के लिए कथित तौर पर **100 से अधिक खाद्य कीड़े (100 edible insect species)** खाते हैं, और इन्हें **स्थानीय बाजारों (local markets)** में भी बेचा जाता है।
- Fried, roasted, or cooked, certain **beetles, moths, hornets, and water bugs** are preferred — although **flies** are not.  
तले हुए, भुने हुए या पके हुए, कुछ **बीटल्स, मॉथ, हॉर्नेट और वाटर बग (beetles, moths, hornets, and water bugs)** पसंद किए जाते हैं — हालांकि **मक्खियाँ (flies)** नहीं।
- Collecting **insects from nature** may not be sustainable, as **insect populations** may be depleted.  
प्राकृतिक रूप से **कीड़ों (insects)** को इकट्ठा करना टिकाऊ नहीं हो सकता, क्योंकि **कीट जनसंख्या (insect populations)** कम हो सकती है।
- Some groups have thus taken up **semi-domestication**, where **insects and their larvae** are nurtured and harvested by humans.  
कुछ समूहों ने इसलिए **अर्ध-पशुपालन (semi-domestication)** अपनाया है, जहां **कीड़े और उनके लार्वा (insects and their larvae)** को मानव द्वारा पाला और संसाधित किया जाता है।
- Ethnobiologists at the **Nagaland University in Lumami** have been studying traditional methods of **insect farming** and how they can be adapted to cultivating **new species**.  
**नागालैंड विश्वविद्यालय, लुमामी (Nagaland University in Lumami)** के **एथनोबायोलॉजिस्ट (Ethnobiologists)** पारंपरिक **कीट पालन (insect farming)** के तरीके और उन्हें **नई प्रजातियों (new species)** की खेती में कैसे अपनाया जा सकता है, इसका अध्ययन कर रहे हैं।
- The **Chakhesang and Angami tribes** of **Nagaland and Manipur** consider the **Asian giant hornet** a **delicacy**, including roasted adults and fried larvae.  
**नागालैंड और मणिपुर (Nagaland and Manipur)** के **चकहसंग और अंगामी जनजाति (Chakhesang and Angami tribes)** **एशियाई जाइंट हॉर्नेट (Asian giant hornet)** को **विनम्र व्यंजन (delicacy)** मानते हैं, जिसमें भुने हुए वयस्क और तले हुए लार्वा शामिल हैं।



- This **hornet** is now **semi-domesticated**. Its cultivation begins by locating a **nest**, which is transported to a **1-metre-deep rearing pit** that is loosely filled with **soil**.  
यह **हॉर्नेट (hornet)** अब **अर्ध-पशुपालन (semi-domesticated)** में है। इसकी खेती एक **घोंसला (nest)** खोजने से शुरू होती है, जिसे **1 मीटर गहरे पालन गड्ढे (1-metre-deep rearing pit)** में स्थानांतरित किया जाता है, जो ढीले **मिट्टी (soil)** से भरा होता है।
- The empty **nest** is anchored to a **pole** just above the pit and covered with **loose soil**.  
खाली **घोंसले (nest)** को गड्ढे के ऊपर एक **खंभे (pole)** से स्थिर किया जाता है और इसे **ढीली मिट्टी (loose soil)** से ढक दिया जाता है।
- A **queen** soon arrives with **worker hornets**, which begin enlarging the **nest below the ground**.  
एक **रानी (queen)** जल्दी ही **काम करने वाले हॉर्नेट्स (worker hornets)** के साथ आती है, जो **भूमि के नीचे घोंसले (nest below the ground)** का विस्तार करना शुरू करते हैं।
- The result is a large **multilayered structure** resembling an **inverted pyramid**.  
परिणामस्वरूप एक बड़ा **बहु-स्तरीय ढांचा (multilayered structure)** बनता है, जो **उल्टे पिरामिड (inverted pyramid)** जैसा दिखता है।
- For the **harvest**, adult **hornets** are smoked out and the **larvae** are extracted.  
**कटाई (harvest)** के लिए, वयस्क **हॉर्नेट्स (hornets)** को धुआं देकर बाहर निकाला जाता है और **लार्वा (larvae)** को निकाला जाता है।
- Tribal groups around the **Annamalai Hills in Tamil Nadu** use **weaver ants** as a **culinary and medicinal resource**.  
**तमिलनाडु के अन्नामलाई पहाड़ियों (Annamalai Hills in Tamil Nadu)** के जनजातीय समूह **वीवर एंट्स (weaver ants)** का उपयोग **खाद्य और औषधीय संसाधन (culinary and medicinal resource)** के रूप में करते हैं।
- Leaf **ests** containing **eggs, larvae, and adults** are roasted and then stone-ground to create a **spiced soup**.  
पत्तियों के **घोंसले (nests)** जिनमें **अंडे, लार्वा और वयस्क (eggs, larvae, and adults)** होते हैं, उन्हें भूनकर और फिर पत्थर से पीसकर **मसालेदार सूप (spiced soup)** बनाया जाता है।
- Similar preparations utilizing the **nests of other wasps, termites, and bees** are also consumed as **health supplements** to alleviate **respiratory and gastrointestinal ailments**.  
अन्य **भैरे, दीमक और मधुमक्खियों के घोंसलों (nests of other wasps, termites, and bees)** का उपयोग कर इसी तरह की तैयारी **स्वास्थ्य अनुपूरक (health supplements)** के रूप में की जाती है, जो **श्वसन और पाचन तंत्र की बीमारियों (respiratory and gastrointestinal ailments)** को कम करने में मदद करती है।
- The **World Health Organization** has opined that **insects in diets** may be the key to achieving **sustainable food production**.  
**विश्व स्वास्थ्य संगठन (World Health Organization)** का मत है कि **आहार में कीड़े (insects in diets)** सतत **भोजन उत्पादन (sustainable food production)** प्राप्त करने की कुंजी हो सकते हैं।
- **Insect processing strategies** may make them more acceptable.  
**कीट प्रसंस्करण रणनीतियाँ (insect processing strategies)** उन्हें और अधिक स्वीकार्य बना सकती हैं।
- **Grasshopper, locusts, and cricket powder (or flour)** are now used as a **protein supplement**.  
अब **तिलचट्टे, टिड्डे और क्रिकेट पाउडर (Grasshopper, locusts, and cricket powder or flour)** को **प्रोटीन अनुपूरक (protein supplement)** के रूप में उपयोग किया जाता है।
- As dietary trends evolve, as we get used to **dryland millets** and grow curious about **lab-grown meats**, we may well have **insects on our plates** soon.  
जैसे-जैसे आहार की प्रवृत्तियाँ बदलती हैं, जैसे हम **सूखी भूमि की बाजरा (dryland millets)** के आदी होते हैं और **प्रयोगशाला में उगाया गया मांस (lab-grown meats)** के बारे में जिज्ञासु होते हैं, हम जल्द ही **कीड़े को अपनी थाली में (insects on our plates)** देख सकते हैं।



# Undulating field

Why does the earth's magnetic field have 'weak spots'?

GS III: S&T

Researchers analysed data from the European Space Agency's 'Swarm' mission and recently reported that the South Atlantic Anomaly, the region of weakest intensity in the earth's magnetic field, has expanded since 2014.

Today, according to the data, it covers about 0.9% more of the earth's surface than it did in 2014.

The field has weak spots because the molten iron and nickel circulating in the earth's outer core don't move uniformly.

Their motion generates the field in a process called the geodynamo. Since the flow

is uneven, there are regions where the magnetic flux is concentrated and others where it spreads out. The earth's field is reorganised as the fluid core moves, and the weak regions can expand, shrink or migrate over decades without threatening the planet's overall magnetic shield or indicating a magnetic reversal. Indeed, the study's authors have stressed that despite the Anomaly's apparent expansion, there is no reason for alarm since such changes are part of the natural variation of the geomagnetic field.

Readers may send their questions / answers to [science@thehindu.co.in](mailto:science@thehindu.co.in)

## Undulating Field लहराता हुआ क्षेत्र

• Researchers analysed data from the European Space Agency's 'Swarm' mission and recently reported that the South Atlantic Anomaly, the region of weakest intensity in the earth's magnetic field, has expanded since 2014.

शोधकर्ताओं ने यूरोपीय अंतरिक्ष एजेंसी के 'स्वार्म' मिशन (European Space Agency's 'Swarm' mission) के डेटा का विश्लेषण किया और हाल ही में रिपोर्ट किया कि साउथ अटलांटिक एनॉमली (South Atlantic Anomaly), पृथ्वी के चुंबकीय क्षेत्र (magnetic field) में सबसे कमजोर क्षेत्र, 2014 के बाद से फैल गया है।

• Today, according to the data, it covers about 0.9% more of the earth's surface than it did in 2014.

आज, डेटा के अनुसार, यह पृथ्वी की सतह का 2014 की तुलना में लगभग 0.9% अधिक (0.9% more) हिस्सा ढकता है।

• The field has weak spots because the molten iron and nickel circulating in the earth's outer core don't move uniformly.

क्षेत्र में कमजोर स्थल (weak spots) हैं क्योंकि पृथ्वी के बाहरी केंद्र (outer core) में घूम रहे पिघला हुआ लोहा और निकल (molten iron and nickel) समान रूप से नहीं चलते।

- Their motion generates the field in a process called the geodynamo. उनकी गति एक प्रक्रिया में क्षेत्र का निर्माण (geodynamo) करती है जिसे जियोडायनामो (geodynamo) कहा जाता है।
- Since the flow is uneven, there are regions where the magnetic flux is concentrated and others where it spreads out. चूंकि प्रवाह असमान (uneven) है, ऐसे क्षेत्र हैं जहाँ चुंबकीय प्रवाह (magnetic flux) केंद्रित होता है और अन्य क्षेत्र जहाँ यह फैलता है।
- The earth's field is reorganised as the fluid core moves, and the weak regions can expand, shrink or migrate over decades without threatening the planet's overall magnetic shield or indicating a magnetic reversal. जैसे-जैसे तरल केंद्र (fluid core) चलता है, पृथ्वी का क्षेत्र पुनर्गठित होता है, और कमजोर क्षेत्र (weak regions) दशकों में फैल सकते हैं, सिकुड़ सकते हैं या स्थानांतरित हो सकते हैं बिना ग्रह की कुल चुंबकीय ढाल (magnetic shield) को खतरे में डाले या किसी चुंबकीय पलटाव (magnetic reversal) का संकेत दिए।
- Indeed, the study's authors have stressed that despite the Anomaly's apparent expansion, there is no reason for alarm since such changes are part of the natural variation of the geomagnetic field. वास्तव में, अध्ययन के लेखकों ने जोर देकर कहा कि एनॉमली के स्पष्ट विस्तार के बावजूद, चिंता की कोई आवश्यकता नहीं (no reason for alarm) है क्योंकि ऐसे परिवर्तन भू-चुंबकीय क्षेत्र (geomagnetic field) के प्राकृतिक परिवर्तन (natural variation) का हिस्सा हैं।