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CONTACT: 9971932488



PATRIOTIC IAS

THE HINDU NEWSPAPER

DAILY CURRENT AFFAIRS

04 AUGUST 2025

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04_08_2025 DAILY CURRENT AFFAIRS

TOPICS COVERED (PCS Special)

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

Tibetan flair



PCS

Lost home: The Tibetan settlement at Odeyarapalya, also known as Dhondenling in Chamaraajanagar, Karnataka on Sunday. The site is under restoration at present. The structures are part of a larger Tibetan landscape in the area including several monasteries. K. MURALI KUMAR

Looms of legacy



PCS

Weaving wonders: Union Coal and Mines Minister G. Kishan Reddy participating in the inauguration of a week-long celebration to mark National Handloom Day at Shilparamam in Hyderabad on Sunday. National Handloom Day will be celebrated on August 7. SIDDHANT THAKUR



SWADESHI MOVEMENT (1903–1911)

◆ **Swadeshi**, meaning “of one’s own country,” was both a **boycott of British goods** and a **promotion of Indian-made products**.

- It symbolized **economic self-sufficiency**, **national dignity**, and **resistance** against British imperialism.
- Its political context was deeply tied to the **Partition of Bengal (1905)**, introduced by **Lord Curzon**.

PHASES OF THE SWADESHI MOVEMENT

Period	Phase Type	Characteristics
1903–1905	Moderate Phase	Led by Moderate leaders like Gopal Krishna Gokhale, Surendranath Banerjea, and Dadabhai Naoroji. Focused on petitions, protests, and public meetings.
1905–1908	Extremist Phase	Led by Bal Gangadhar Tilak, Bipin Chandra Pal, and Lala Lajpat Rai (Lal-Bal-Pal) . Advocated mass mobilisation, boycott of British goods, and national education.
1908–1911	Revolutionary Phase	Rise of underground movements and armed resistance by revolutionaries like Aurobindo Ghosh, Khudiram Bose, and Barindra Ghosh .

ROOT CAUSES OF THE SWADESHI MOVEMENT

1. Curzonian Administration (1899–1905)

Lord Curzon’s repressive and autocratic policies laid the foundation of unrest among Indians. Key policies include:

2. Calcutta Municipal Corporation Act, 1899

- **Reduced Indian control** in local self-governance.
- Decreased the **number of elected Indian members** and increased **official nominees**, thereby undermining public representation.
- This frustrated the educated Bengali middle class.



3. Indian Universities Act, 1904

- Curzon believed that universities were becoming "**factories of sedition**".
 - The Act:
 - **Reduced autonomy** of universities.
 - Gave the **Governor-General the power** to veto university decisions.
 - **Government nominees outnumbered elected members** in Senate/Syndicate.
 - Objective: Control education to curb **nationalist sentiments** and promote **imperial loyalty**.
 - Result: Massive opposition by nationalist leaders and educationists.
-

4. Indian Official Secrets (Amendment) Act, 1904

- Strengthened the **British colonial state's power** to suppress dissent.
 - **Curtailed press freedom** by punishing the publication of material deemed "against the interests of the state."
 - Editors and writers could be jailed without fair trial.
-

5. Partition of Bengal – October 16, 1905

- Official reason: Bengal (with over 78 million people) was "too large to administer".
- **Real motive:** Implement "**Divide and Rule**" policy.

Key Features:

- Bengal split into:
 - **Eastern Bengal & Assam** (Muslim majority)
 - **Western Bengal** (Hindu majority)

Political Impact:

- Undermined unity among **Bengali-speaking population**.
- Attempted to **weaken nationalist leadership** (mostly upper-caste Bengali Hindus).
- East Bengal was carved to **counteract the INC** by **cultivating Muslim support**.

TOPICS COVERED (GS Paper I: History, Society and Geography)

1. Yatris force tourists to remove shoes in Meghalaya cave, stir controversy

मेघालय की गुफा में यात्रियों ने पर्यटकों को जूते उतारने पर मजबूर किया



जिससे विवाद खड़ा हो गया

Yatris force tourists to remove shoes in Meghalaya cave, stir controversy

GS I: Geography

Press Trust of India
MAWSYNRAM

Tourists visiting the Mawjymbuin cave in Meghalaya's Mawsynram were reportedly asked to remove their shoes and refrain from taking photographs by organisers of a Hindu religious yatra on Sunday, triggering criticism from various quarters, including local tribal groups.

Over 250 yatris arrived

at the natural sandstone cave to offer prayers, drawing strong resentment from the Dorbar Shnong (village council) and many members of the local tribal community.

Locals have consistently objected to attempts to designate the cave as a religious site, insisting it is a geological heritage location, not a shrine.

Debojit, a tourist from Kolkata, said he and his family

were shocked when they were forced to comply with the restrictions.

"We came as tourists, but were treated in a manner we found unacceptable. I have lodged a complaint with the village elders," he said.

The Meghalaya High Court in a recent order permitted the Hindu religious procession to proceed up to the cave provided it did not disturb public order.

Yatris force tourists to remove shoes in Meghalaya cave, stir controversy

मेघालय की गुफा में यात्रियों ने पर्यटकों को जूते उतारने पर मजबूर किया

जिससे विवाद खड़ा हो गया

Controversy Over Hindu Yatra at Mawjymbuin Cave मावज्यमबुइन गुफा में हिंदू यात्रा को लेकर विवाद

- Tourists visiting the Mawjymbuin cave in Meghalaya's Mawsynram were reportedly asked to remove their shoes and refrain from taking photographs by organisers of a Hindu religious yatra on Sunday, triggering criticism from various quarters, including local tribal groups.

मेघालय के माँसिनराम स्थित मावज्यमबुइन गुफा में घूमने आए पर्यटकों से रविवार को हिंदू धार्मिक यात्रा के आयोजकों द्वारा जूते उतारने और फोटो न खींचने को कहा गया, जिससे स्थानीय जनजातीय समूहों सहित विभिन्न पक्षों से आलोचना हुई।

- Over 250 yatris arrived at the natural sandstone cave to offer prayers, drawing strong resentment from the Dorbar Shnong (village council) and many members of the local tribal community.
250 से अधिक यात्रियों ने प्राकृतिक बलुआ पत्थर की गुफा में पूजा के लिए पहुंचकर डोरबार शनोंग (ग्राम परिषद) और स्थानीय जनजातीय समुदाय के कई सदस्यों की कड़ी नाराजगी को जन्म दिया।

- Locals have consistently objected to attempts to designate the cave as a religious site, insisting it is a geological heritage location, not a shrine.

स्थानीय लोग लगातार इस बात का विरोध करते रहे हैं कि गुफा को धार्मिक स्थल के रूप में नामित करने की कोशिश की जा रही है, जबकि उनका कहना है कि यह एक भूवैज्ञानिक धरोहर स्थल है, कोई मंदिर नहीं।

- Debojit, a tourist from Kolkata, said he and his family were shocked when they were forced to comply with the restrictions.

कोलकाता से आए पर्यटक देबोजित ने कहा कि जब उन्हें और उनके परिवार को इन नियमों का पालन करने के लिए मजबूर किया गया, तो वे हैरान रह गए।

- "We came as tourists, but were treated in a manner we found unacceptable. I have lodged a complaint with the village elders," he said.

उन्होंने कहा, "हम पर्यटक के रूप में आए थे, लेकिन हमारे साथ जो व्यवहार किया गया, वह अस्वीकार्य था। मैंने गांव के बुजुर्गों से शिकायत दर्ज की है।"

- The Meghalaya High Court, in a recent order, permitted the Hindu religious procession to proceed up to the cave provided it did not disturb public order.



मेघालय उच्च न्यायालय ने अपने हालिया आदेश में हिंदू धार्मिक जुलूस को गुफा तक जाने की अनुमति दी, बशर्ते कि वह सार्वजनिक व्यवस्था में बाधा न डाले।

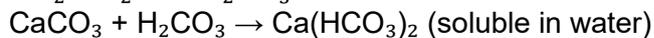
KARST TOPOGRAPHY

- Karst topography refers to a **landscape formed due to the chemical weathering (solution) of soluble rocks**, primarily limestone, but also dolomite and gypsum, by natural acidic water.
- It derives its name from the **Karst region of Slovenia**.
- Dominated by features like **sinkholes, caves, disappearing rivers, and underground drainage**.

Rocks Involved

- **Mainly: Limestone (CaCO₃)**
- **Others: Dolomite (CaMg(CO₃)₂), Gypsum (CaSO₄·2H₂O)**

These rocks are **soluble in carbonic acid (H₂CO₃)**, which forms when rainwater (H₂O) combines with atmospheric CO₂:



Necessary Conditions for Karst Formation

- **Thick beds of soluble rocks (limestone)**
- **Well-jointed, permeable rock structures**
- **Plentiful rainfall with slightly acidic water**
- **Presence of underground drainage**

Major Karst Features

A. Surface Features

1. **Sinkholes (Dolines)**
 - Circular depressions formed by solution or collapse
 - Types: **Solution sinkholes** and **Collapse sinkholes**
2. **Uvalas**
 - Irregular compound depressions formed by merging of multiple sinkholes
3. **Poljes**
 - Large, flat-floored depressions with underground drainage
 - Often used for cultivation
4. **Limestone Pavement**
 - Flat exposed surface of limestone, broken into blocks (clints) and fissures (grikes)
5. **Swallow Holes/Ponors**
 - Points where surface rivers disappear underground

B. Sub-surface Features

1. **Caves (Caverns)**
 - Formed due to long-term dissolution of rock along joints and bedding planes
2. **Stalactites**
 - Icicle-like structures hanging **from the ceiling** of caves (formed by dripping water depositing calcite)
3. **Stalagmites**
 - Conical structures **rising from the cave floor**, formed from dripwater
4. **Columns or Pillars**
 - Formed when stalactites and stalagmites meet
5. **Flowstones**
 - Sheet-like deposits formed by water flowing over cave walls or floors



Examples of Karst Landscapes

Country	Location
India	Cherrapunji (Meghalaya), Bastar (Chhattisgarh), parts of Karnataka, Himachal Pradesh, and Eastern Odisha
Slovenia	Original Karst region
China	Guilin (UNESCO World Heritage)
USA	Mammoth Cave, Kentucky
Croatia	Dinaric Karst region

TOPICS COVERED (GS Paper II: Polity, Governance, And International Relations)

1. Philippines President to visit India as two sides look to deepen maritime ties

फिलीपींस के राष्ट्रपति भारत दौरे पर आएंगे दोनों पक्ष समुद्री संबंधों को गहरा करने पर विचार कर रहे हैं

2. Govt. may push for passage of key sports Bill in LS amid deadlock over debate on SIR

एसआईआर पर बहस को लेकर गतिरोध के बीच सरकार लोकसभा में प्रमुख खेल विधेयक पारित कराने पर जोर दे सकती है

3. Stop selling Chinamega dambogey tpush Siang project'

चाइनामेगा डंबोगी टपुश सियांग परियोजना को बेचना बंद करो'

4. Another Slip-Up by India in the Trade Pact with the U.K

भारत द्वारा ब्रिटेन के साथ व्यापार समझौते में एक और चूक

5. How does the World Bank classify countries by income?

विश्व बैंक देशों को आय के अनुसार कैसे वर्गीकृत करता है?



6. How will the railway to Sairang help in regional connectivity?

सैरांग तक रेलवे से क्षेत्रीय संपर्क में किस प्रकार मदद मिलेगी?

Philippines President to visit India as two sides look to deepen maritime ties

GS II: India-Philippines

Kallol Bhattacharjee
NEW DELHI

In a move aimed at deepening maritime cooperation with the Southeast Asian region, India will host Philippines President Ferdinand Romualdez Marcos Jr. from August 4 to 8. This will be the first visit by President Marcos Jr., son of the former President Ferdinand Marcos, who visited India in 1976.

The External Affairs Ministry said the visit would formally begin with the ceremonial reception at the Rashtrapati Bhavan which would be followed by a visit by President Marcos Jr. to the memorial of Mahatma Gandhi at Rajghat.

Mr. Marcos Jr. will hold delegation-level talks with Prime Minister Narendra Modi with the two sides signing multiple agreements and MoUs. On August 7, he will visit Bengaluru.



Bilateral brief: External Affairs Minister Jaishankar with Philippine Secretary of Foreign Affairs Enrique A. Manalo in March 2025. PTI

The visit is being viewed as the culmination of sustained political-level dialogue even as they strengthened maritime cooperation as both Philippines and India are strong proponents of freedom of navigation in the South China Sea.

Mr. Modi had met Mr. Marcos Jr. on the sidelines of 21st ASEAN-India Summit and the 19th East Asia Summit in Vientiane, Lao

PDR in October 2024. They had also met on the sidelines of the 20th ASEAN-India Summit in Jakarta in September 2023. Earlier, Mr. Modi had congratulated President Marcos Jr. after his electoral victory in 2022.

External Affairs Minister S. Jaishankar had met Secretary of Foreign Affairs of the Philippines Enrique A. Manalo on March 18, 2025 when Mr. Manalo partici-

ated in the Raisina Dialogue in New Delhi. The Ministers also met in Vientiane, on July 25, 2024, on the sidelines of the ASEAN-India Foreign Ministers' meeting. Mr. Jaishankar had visited the Philippines from March 25-27, 2025. He met Secretary Manalo and the Secretary of National Defence of the Philippines, Teodoro Gilbert, and called on President Marcos Jr. during the visit.

The upcoming five-day visit is drawing attention as it starts soon after several Indian Navy destroyers reached the Port of Manila on August 1 to conduct joint patrol of the West Philippine Sea with the Philippine Navy. Armed Forces of Philippines Chief General Romeo Brawner Jr. told local media that the presence of the Indian destroyers was a "clear demonstration" of mutual resolve to guard the maritime domain.

Philippines President to visit India as two sides look to deepen maritime ties

फिलीपींस के राष्ट्रपति भारत दौरे पर आएंगे

दोनों पक्ष समुद्री संबंधों को गहरा करने पर विचार कर रहे हैं

India-Philippines Maritime Cooperation

and Visit of President Marcos Jr.

भारत-फिलीपींस समुद्री सहयोग और राष्ट्रपति मार्कोस जूनियर की यात्रा

- In a move aimed at deepening maritime cooperation with the Southeast Asian region, India will host **Philippines President Ferdinand Romualdez Marcos Jr. from August 4 to 8.**

दक्षिण-पूर्व एशियाई क्षेत्र के साथ समुद्री सहयोग को गहरा करने के उद्देश्य से, भारत 4 से 8 अगस्त तक फिलीपींस के राष्ट्रपति फर्डिनेंड रोमाल्देज मार्कोस जूनियर की मेज़बानी करेगा।

- This will be the **first visit** by President Marcos Jr., son of the former President Ferdinand Marcos, who visited India in 1976.

यह राष्ट्रपति मार्कोस जूनियर की भारत की पहली यात्रा होगी, जो पूर्व राष्ट्रपति फर्डिनेंड मार्कोस के पुत्र हैं, जिन्होंने 1976 में भारत की यात्रा की थी।

The **External Affairs Ministry** said the visit would formally begin with the **ceremonial reception** at the **Rashtrapati Bhavan**, which would be followed by a visit to the **memorial of Mahatma Gandhi** at **Rajghat**.

विदेश मंत्रालय ने बताया कि यात्रा की औपचारिक शुरुआत **राष्ट्रपति भवन** में **स्वागत समारोह** से होगी, जिसके बाद **महात्मा गांधी स्मारक, राजघाट** का दौरा किया जाएगा।

- Mr. Marcos Jr. will hold **delegation-level talks** with **Prime Minister Narendra Modi** with the two sides signing **multiple agreements and MoUs**.



श्री मार्कोस जूनियर, प्रधानमंत्री नरेंद्र मोदी के साथ प्रतिनिधिमंडल स्तर की वार्ता करेंगे और दोनों पक्ष कई समझौते और एमओयू पर हस्ताक्षर करेंगे।

- On **August 7**, he will visit **Bengaluru**. वह **7 अगस्त** को **बंगलुरु** का दौरा करेंगे।
- The visit is being viewed as the **culmination of sustained political-level dialogue** even as they strengthened **maritime cooperation** as both Philippines and India are strong proponents of **freedom of navigation** in the **South China Sea**. इस यात्रा को **लगातार जारी राजनीतिक स्तर के संवाद** की परिणति के रूप में देखा जा रहा है, क्योंकि भारत और फिलीपींस दोनों ही **दक्षिण चीन सागर में नौवहन की स्वतंत्रता** के प्रबल समर्थक हैं और उन्होंने **समुद्री सहयोग** को भी मज़बूत किया है
- Mr. Modi had met Mr. Marcos Jr. on the sidelines of the **21st ASEAN-India Summit and the 19th East Asia Summit in Vientiane, Lao PDR in October 2024**. श्री मोदी ने श्री मार्कोस जूनियर से **अक्टूबर 2024** में **लाओ पीडीआर के विएनतियाने** में आयोजित **21वें आसियान-भारत शिखर सम्मेलन** और **19वें पूर्वी एशिया शिखर सम्मेलन** के दौरान मुलाकात की थी। They had also met on the sidelines of the **20th ASEAN-India Summit in Jakarta in September 2023**. उन्होंने **सितंबर 2023** में **जकार्ता** में **20वें आसियान-भारत शिखर सम्मेलन** के दौरान भी मुलाकात की थी।
- Earlier, Mr. Modi had **congratulated** President Marcos Jr. after his **electoral victory in 2022**. इससे पहले श्री मोदी ने **2022** में **चुनावी जीत** के बाद **राष्ट्रपति मार्कोस जूनियर** को **बधाई** दी थी।
- **External Affairs Minister S. Jaishankar** had met **Secretary of Foreign Affairs of the Philippines Enrique A. Manalo** on **March 18, 2025** when Mr. Manalo participated in the **Raisina Dialogue in New Delhi**. **विदेश मंत्री एस. जयशंकर** ने **18 मार्च 2025** को **नई दिल्ली** में **रायसीना संवाद** में भाग लेने आए **फिलीपींस के विदेश मंत्री एनरिक ए. मैनालो** से मुलाकात की थी।
- The Ministers also met in **Vientiane, on July 25, 2024**, on the sidelines of the **ASEAN-India Foreign Ministers' meeting**. मंत्रियों की मुलाकात **25 जुलाई 2024** को **विएनतियाने** में **आसियान-भारत विदेश मंत्रियों की बैठक** के दौरान भी हुई थी।
- Mr. Jaishankar had visited the **Philippines from March 25-27, 2025**. He met **Secretary Manalo** and the **Secretary of National Defence of the Philippines, Teodoro Gilbert**, and called on **President Marcos Jr.** during the visit. श्री जयशंकर ने **25 से 27 मार्च 2025** तक **फिलीपींस** का दौरा किया था, जहां उन्होंने **मंत्री मैनालो** और **फिलीपींस के राष्ट्रीय रक्षा सचिव टियोडोरो गिल्बर्ट** से मुलाकात की थी और **राष्ट्रपति मार्कोस जूनियर** से शिष्टाचार भेंट भी की थी।

The upcoming **five-day visit** is drawing attention as it starts soon after several **Indian Navy destroyers** reached the **Port of Manila** on **August 1** to conduct **joint patrol** of the **West Philippine Sea** with the **Philippine Navy**. आगामी **पाँच दिवसीय यात्रा** पर ध्यान आकर्षित हो रहा है क्योंकि यह यात्रा **1 अगस्त** को कई **भारतीय नौसेना विध्वंसक पोतों** के **मनीला बंदरगाह** पहुँचने और **पश्चिम फिलीपीन सागर में फिलीपींस नौसेना** के साथ **संयुक्त गश्त शुरू** करने के तुरंत बाद शुरू हो रही है।
- **Armed Forces of Philippines Chief General Romeo Brawner Jr.** told local media that the presence of the **Indian destroyers** was a “**clear demonstration**” of **mutual resolve** to guard the **maritime domain**. **फिलीपींस सशस्त्र बल प्रमुख जनरल रोमियो ब्राउनर जूनियर** ने स्थानीय मीडिया को बताया कि **भारतीय विध्वंसक पोतों की उपस्थिति, समुद्री क्षेत्र की रक्षा के लिए आपसी संकल्प का “स्पष्ट प्रदर्शन”** है।



Govt. may push for passage of key sports Bill in LS amid deadlock over debate on SIR

GS II: Bills

The Hindu Bureau
NEW DELHI

The government is likely to push for the passage of a key sports Bill in the Lok Sabha on Monday, amid a deadlock in Parliament over the Opposition demand for a discussion on the special intensive revision of the electoral rolls in poll-bound Bihar, which the government has refused to accede to.

The Lower House has listed the National Sports Governance Bill, which envisages greater transparency in the functioning of sports bodies, for consideration and passage.

Resolution in RS

The Rajya Sabha has listed for passage on Monday a resolution from Union Home Minister Amit Shah on the extension of President's Rule in Manipur by another six months with effect from August 13.



Opposition MPs protesting in the Well as Lok Sabha Speaker Om Birla conducts the proceedings in the House. SANSAD TV/PTI

Other than a two-day discussion on the Pahalgam terror attack and Operation Sindoor in both the Houses, no significant business was transacted so far in the Monsoon Session of Parliament. Rajya Sabha Chairman Jagdeep Dhankhar's resignation on the very first day of the session added to the chaos.

Government sources, however, claim that if the Opposition does not pause its protests, it will get the

National Sports Governance Bill passed in the din. Another Bill listed for consideration and passage in the Lok Sabha is the National Anti-Doping (Amendment) Bill.

The government's legislative agenda include the Readjustment of Representation of Scheduled Tribes in Assembly Constituencies of the State of Goa Bill, 2024, the Merchant Shipping Bill, 2024 and the Indian Ports Bill, 2025.

refused to accede to.

सोमवार को लोकसभा में सरकार द्वारा एक प्रमुख खेल विधेयक को पारित कराने की संभावना है, जबकि संसद में चुनाव की ओर बढ़ रहे बिहार में मतदाता सूची की विशेष गहन समीक्षा पर चर्चा की विपक्ष की मांग को लेकर गतिरोध बना हुआ है, जिसे सरकार ने मानने से इनकार कर दिया है।

- The **Lower House** has listed the **National Sports Governance Bill**, which envisages **greater transparency** in the functioning of **sports bodies**, for **consideration and passage**.

लोकसभा ने राष्ट्रीय खेल प्रशासन विधेयक को सूचीबद्ध किया है, जो खेल संगठनों के संचालन में अधिक पारदर्शिता सुनिश्चित करने की परिकल्पना करता है, ताकि इस पर विचार और पारित किया जा सके।

Resolution in RS

राज्यसभा में प्रस्ताव

- The **Rajya Sabha** has listed for passage on **Monday** a resolution from **Union Home Minister Amit Shah** on the **extension of President's Rule** in **Manipur** by another **six months** with effect from **August 13**.

राज्यसभा ने सोमवार को गृह मंत्री अमित शाह द्वारा प्रस्तुत मणिपुर में राष्ट्रपति शासन को 13 अगस्त से छह महीने के लिए बढ़ाने संबंधी प्रस्ताव को पारित करने के लिए सूचीबद्ध किया है।

Govt. may push for passage of key sports Bill in LS amid deadlock over debate on SIR

एसआईआर पर बहस को लेकर गतिरोध के बीच सरकार लोकसभा में प्रमुख खेल विधेयक पारित कराने पर जोर दे सकती है

Government Push for Key Sports Bill Amid Parliamentary Deadlock
संसदीय गतिरोध के बीच सरकार द्वारा प्रमुख खेल विधेयक को पारित कराने की कोशिश

- The government is likely to push for the passage of a **key sports Bill** in the **Lok Sabha on Monday**, amid a **deadlock** in Parliament over the Opposition demand for a discussion on the **special intensive revision of the electoral rolls** in **poll-bound Bihar**, which the government has



- Other than a **two-day discussion** on the **Pahalgam terror attack** and **Operation Sindoor** in both the Houses, no **significant business** was transacted so far in the **Monsoon Session** of Parliament.
पहललगाम आतंकवादी हमले और ऑपरेशन सिंदूर पर दोनों सदनों में हुई दो दिवसीय चर्चा को छोड़कर, संसद के मानसून सत्र में अब तक कोई महत्वपूर्ण कार्यवाही नहीं हुई है।
Rajya Sabha Chairman Jagdeep Dhankhar's resignation on the very **first day** of the session added to the **chaos**.
सत्र के पहले ही दिन राज्यसभा के सभापति जगदीप धनखड़ के इस्तीफे ने अराजकता को और बढ़ा दिया।
- **Government sources**, however, claim that if the **Opposition** does not pause its **protests**, it will get the **National Sports Governance Bill** passed in the **day**.
हालांकि, सरकारी सूत्रों का कहना है कि यदि विपक्ष अपने विरोध को स्थगित नहीं करता, तो सरकार कोलाहल के बीच राष्ट्रीय खेल प्रशासन विधेयक पारित करवा देगी।
- Another Bill listed for consideration and passage in the **Lok Sabha** is the **National Anti-Doping (Amendment) Bill**.
लोकसभा में विचार और पारित करने के लिए राष्ट्रीय प्रतिबंधित औषधि-रोधी (संशोधन) विधेयक भी सूचीबद्ध है।

Government's Legislative Agenda सरकार का विधायी एजेंडा

- The government's legislative agenda includes the **Readjustment of Representation of Scheduled Tribes in Assembly Constituencies of the State of Goa Bill, 2024**, the **Merchant Shipping Bill, 2024** and the **Indian Ports Bill, 2025**.
सरकार के विधायी एजेंडे में गोवा राज्य की विधानसभा निर्वाचन क्षेत्रों में अनुसूचित जनजातियों के प्रतिनिधित्व का पुनः समायोजन विधेयक, 2024, मर्चेंट शिपिंग विधेयक, 2024 और भारतीय बंदरगाह विधेयक, 2025 शामिल हैं।

'Stop selling China mega dam bogey to push Siang project'

The Hindu Bureau
GUWAHATI
GSI: India-China
Activists and farmers in Arunachal Pradesh have urged the Union government not to invoke China's planned hydropower project on the Yarlung Tsangpo in Tibet to push ahead with the proposed 11,500-megawatt Siang Upper Multipurpose Project (SUMP) on the Siang river.

The Yarlung Tsangpo is the upper stream of the Siang, which flows into Arunachal Pradesh and later meets two other rivers in Assam to form the Brahmaputra.

The Medog Hydropower Station in Tibet, being pursued by China, is expected to generate 60,000 MW of electricity. While Beijing claims it is a clean energy initiative, both India and Bangladesh have expressed concerns about the downstream impact of the project.

"Instead of creating fear over the Medog project, the Government of India should consult with its Chinese counterpart to get an accurate status of the project before pushing the SUMP through," Ebo Mili, a lawyer and anti-dam activist from Arunachal Pradesh's Dibang Valley, said while addressing the press in New Delhi on Saturday.

The ₹1.13-lakh-crore project is expected to submerge 27 villages, displace over 1.5 lakh members of Adi tribe

The press conference was organised by the Siang Indigenous Farmers' Forum (SIFF), their legal advisors, and anti-dam activists from Uttarakhand.

The SUMP is expected to submerge 27 villages and displace over 1.5 lakh members of the Adi tribe, in addition to impacting forest cover, farmland, and sites of cultural importance. Arunachal Pradesh Chief Minister Pema Khandu has defended the project as a "defensive measure" against potential threats from the Medog project, which he termed a ticking "time bomb".

However, SIFF president Lamok Padun alleged that local village chiefs were being coerced into signing agreements for the pre-feasibility report (PFR) through pressure tactics.

SIFF's legal adviser Bhanu Tatak alleged that the Union and State governments were militarising the Siang region to curb mobilisation.

"The government is resorting to violent means to gag us," she said.

Stop selling Chinamega dam bogey to push Siang project'

चाइनामेगा डंबोगी टपुश सियांग परियोजना को बेचना बंद करो'

Resistance to Siang Upper Multipurpose Project (SUMP) over China's Hydropower Plans

चीन की जलविद्युत योजनाओं को लेकर सियांग अपर मल्टीपरपज़ प्रोजेक्ट (SUMP) का विरोध

- Activists and farmers in **Arunachal Pradesh** have urged the **Union government** not to invoke **China's planned hydropower project** on the **Yarlung Tsangpo** in **Tibet** to push ahead with the proposed **11,500-megawatt Siang Upper Multipurpose Project (SUMP)** on the **Siang river**.

अरुणाचल प्रदेश के कार्यकर्ताओं और किसानों ने **केंद्र सरकार** से आग्रह किया है कि वह **तिब्बत** में **यारलुंग सांगपो** पर चीन की योजनाबद्ध जलविद्युत परियोजना का हवाला देकर **11,500 मेगावाट सियांग अपर मल्टीपरपज़ प्रोजेक्ट (SUMP)** को आगे बढ़ाने की कोशिश न करे।

The **Yarlung Tsangpo** is the **upper stream** of the **Siang**, which flows into **Arunachal Pradesh** and later meets **two other rivers** in **Assam** to



form the Brahmaputra.

यारलुंग सांगपो, सियांग नदी की ऊपरी धारा है, जो अरुणाचल प्रदेश में बहती है और बाद में असम की दो अन्य नदियों से मिलकर ब्रह्मपुत्र बनाती है।

- The **Medog Hydropower Station in Tibet**, being pursued by **China**, is expected to generate **60,000 MW** of electricity.

तिब्बत में मेडोग जलविद्युत स्टेशन, जिसे चीन विकसित कर रहा है, से 60,000 मेगावाट बिजली उत्पन्न होने की उम्मीद है।

- While **Beijing** claims it is a **clean energy initiative**, both **India and Bangladesh** have expressed concerns about the **downstream impact** of the project.

जबकि बीजिंग इसे स्वच्छ ऊर्जा पहल बताता है, भारत और बांग्लादेश दोनों ने इस परियोजना के निचली धारा पर प्रभाव को लेकर चिंता जताई है।

- "Instead of creating fear over the Medog project, the **Government of India** should consult with its **Chinese counterpart** to get an **accurate status** of the project before pushing the SUMP through," said **Ebo Mili**, a **lawyer and anti-dam activist** from **Arunachal Pradesh's Dibang Valley**, while addressing the press in **New Delhi on Saturday**.

"मेडोग परियोजना पर डर फैलाने के बजाय, भारत सरकार को SUMP को आगे बढ़ाने से पहले अपने चीनी समकक्ष से परियोजना की सही स्थिति जानने के लिए बातचीत करनी चाहिए," अरुणाचल प्रदेश के दिबांग घाटी के वकील और बांध विरोधी कार्यकर्ता एबो मिली ने शनिवार को नई दिल्ली में पत्रकारों से कहा।

The press conference was organised by the **Siang Indigenous Farmers' Forum (SIFF)**, their **legal advisors**, and **anti-dam activists** from **Uttarakhand**.

यह प्रेस कॉन्फ्रेंस सियांग इंडिजिनस फार्मर्स फोरम (SIFF), उनके कानूनी सलाहकारों, और उत्तराखंड के बांध विरोधी कार्यकर्ताओं द्वारा आयोजित की गई थी।

- The **SUMP** is expected to **submerge 27 villages** and **displace over 1.5 lakh members of the Adi tribe**, in addition to impacting **forest cover, farmland**, and **sites of cultural importance**.

SUMP से 27 गांवों के डूबने और आदि जनजाति के 1.5 लाख से अधिक लोगों के विस्थापित होने की संभावना है, साथ ही यह वन क्षेत्र, कृषि भूमि और सांस्कृतिक महत्व के स्थलों को भी प्रभावित करेगा।

- **Arunachal Pradesh Chief Minister Pema Khandu** has defended the project as a "**defensive measure**" against potential threats from the **Medog project**, which he termed a **ticking "time bomb"**.

अरुणाचल प्रदेश के मुख्यमंत्री पेमा खांडू ने इस परियोजना को मेडोग परियोजना से संभावित खतरे के खिलाफ एक "रक्षात्मक उपाय" बताते हुए इसका बचाव किया और इसे एक "टिक-टिक करती टाइम बम" बताया।

- However, **SIFF president Lamok Padun** alleged that **local village chiefs** were being **coerced** into signing **agreements for the pre-feasibility report (PFR)** through **pressure tactics**.

हालांकि, SIFF अध्यक्ष लामोक पदुन ने आरोप लगाया कि स्थानीय गांव प्रमुखों को दबाव की रणनीतियों के ज़रिये पूर्व-व्यवहार्यता रिपोर्ट (PFR) के लिए समझौतों पर हस्ताक्षर करने के लिए मजबूर किया जा रहा है।

- **SIFF's legal adviser Bhanu Tatak** alleged that the **Union and State governments** were **militarising the Siang region** to **curb mobilisation**.

SIFF की कानूनी सलाहकार भानु टाटक ने आरोप लगाया कि केंद्र और राज्य सरकारें सियांग क्षेत्र का सैन्यीकरण कर रही हैं ताकि जन आंदोलन को दबाया जा सके।

- "The government is resorting to **violent means to gag us**," she said.

उन्होंने कहा, "सरकार हमें चुप कराने के लिए हिंसक तरीकों का सहारा ले रही है।"



Another slip up by India in the trade pact with the U.K.

GS II: India-UK

GS III: Free Trade Agreement

The India-United Kingdom Comprehensive Economic and Trade Agreement (CETA) raises several questions regarding India's commitments in the CETA's intellectual property chapter (Chapter 13). A problematic article in this chapter is Article 13.6, "Understandings Regarding TRIPS and Public Health Measures", in particular its first paragraph: "The Parties recognise the preferable and optimal route to promote and ensure access to medicines is through voluntary mechanisms, such as voluntary licensing which may include technology transfer on mutually agreed terms" (<http://bit.ly/46zLEzj>).

India's agreeing to this provision would result in dilution of its position on two critical issues. First, India consistently backed the use of compulsory licensing as opposed to voluntary licensing, to address high prices of patented medicines. Second, India argued that advanced countries must transfer technologies to developing countries on "favourable terms", for their industrialisation, and also for reducing their carbon footprints.

Issue of pricing

High prices of patented medicines are a serious anomaly of the patent system, due to excessive rent-seeking by patentees. Compulsory licensing of patented medicines can vastly improve the affordability of high-priced medicines by facilitating the production of such medicines. This was experienced following the grant of compulsory licence to Natco Pharma in 2012 for producing an anti-cancer medicine, sorafenib tosylate. The price came down to less than ₹8,800 for a month's treatment, from the ₹2,80,428 charged by the owner of the patent on the medicine, Bayer Corporation (<http://bit.ly/4lV7c4l>).

For remedying such instances of excessive rent-seeking, India's law-makers included compulsory licensing as a key safeguard while amending the Patents Act to make it compatible with the World Trade Organization's (WTO) Agreement on Trade Related Aspects of



Biswajit Dhar

is former Professor of Economics at the Jawaharlal Nehru University



K.M. Gopakumar

is Senior Researcher and Legal Adviser, Third World Network

There is a dilution of India's backing of the more effective compulsory licensing to address the high prices of patented medicines

Intellectual Property Rights (TRIPS). Both Houses of the Parliament unanimously adopted this legislation after a Joint Parliamentary Committee had carefully considered its provisions (<http://bit.ly/4l7Zlul>).

Grant of compulsory licence

India's TRIPS-consistent Patents Act allows grant of compulsory licence to anyone interested in producing a patented product in India, three years after the grant of a patent. This licence can be granted if: reasonable requirements of the public with respect to the patented invention are not satisfied; or the patented invention is not available to the public at reasonably affordable price, or the patented invention is not "worked" in the territory of India, implying, it has not been commercially exploited in the country (<http://bit.ly/4l7Zlul>).

Patent rules monitor "working" requirement and, accordingly, patentees must submit the working status of their inventions. They had to do so annually until this requirement was diluted through India's FTA with the European Free Trade Association, with India agreeing that the periodicity of reporting "shall not be less than 3 years" (<http://bit.ly/4o4NCxU>). This dilution, has now been reinforced through the CETA, and it takes away an important ground for issuing compulsory licences.

By backing voluntary licensing to address the problem of access to medicines, India has, de facto, given up its position as a strong votary of compulsory licensing in the WTO. A coalition of developing countries, including India earned the right to issue compulsory licences through the Doha Declaration on the TRIPS Agreement and Public Health in 2001, despite strident opposition from advanced countries. The Declaration emphasised, "each Member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted" (<http://bit.ly/3lUwjiW>).

Voluntary licences cannot ensure access to affordable medicines due to the weak bargaining position of domestic companies in developing

countries vis-à-vis dominant pharmaceutical corporations. Médecins Sans Frontières (MSF), a medical humanitarian organisation, observed that using the terms of voluntary licences, pharmaceutical corporations can set various limitations, including to control the supply of active pharmaceutical ingredients, besides imposing restrictions on licensees. Therefore, options for getting affordable access are compromised when voluntary licences are used (<http://bit.ly/3U0j6aQ>). The MSF's observations were proven when Cipla produced the anti-COVID drug, remdesivir, in India under a voluntary licence from Gilead Sciences, the owner of the patent on the medicine. The price of remdesivir fixed by Cipla for India was, in purchasing power terms, higher than that Gilead had charged in the United States.

India's demand will be affected

The CETA undermines India's demand for technology transfer "on favourable terms" in several multilateral forums. This demand was first made through the United Nations General Assembly Resolution on the New International Economic Order (NIEO) in 1974. A key aspect of the NIEO was the call for facilitated technology transfer from advanced to developing countries to promote the industrialisation efforts of the developing countries (<http://bit.ly/4l7jRRl>). However, despite their best efforts, little progress was seen regarding technology transfer.

The disappointment of developing countries was reflected in India's Fourth Biennial Update Report to the United Nations Framework Convention on Climate Change in 2024: "Despite substantial national efforts and investments, barriers like slow international technology transfer and intellectual property rights (IPR) hinder the rapid adoption of [climate friendly] technologies" (<http://bit.ly/3HlITfU>).

As India has compromised its long-held position that technology transfer to developing countries must be on "favourable terms", its demand for climate-friendly technologies from advanced countries could lose its sting.

Another Slip-Up by India in the Trade Pact with the U.K

भारत द्वारा ब्रिटेन के साथ व्यापार समझौते में एक और चूक

India-United Kingdom Comprehensive Economic and Trade Agreement (CETA) भारत-ब्रिटेन व्यापक आर्थिक और व्यापार समझौता (CETA)

- The India-United Kingdom Comprehensive Economic and Trade Agreement (CETA) raises several questions regarding India's commitments in the [CETA's intellectual property chapter \(Chapter 13\)](#).
भारत-ब्रिटेन व्यापक आर्थिक और व्यापार समझौता (CETA) के बौद्धिक संपदा अध्याय (अध्याय 13) में भारत की प्रतिबद्धताओं को लेकर कई प्रश्न उठते हैं।
- A problematic article in this chapter is **Article 13.6**, "Understandings Regarding TRIPS and Public Health Measures", in particular its **first paragraph**.
इस अध्याय का एक **चिंताजनक अनुच्छेद 13.6** है, जिसका शीर्षक है "TRIPS और सार्वजनिक स्वास्थ्य उपायों के संबंध में समझ", विशेष रूप से इसका **पहला अनुच्छेद**।
- "The Parties recognise the preferable and optimal route to promote and ensure access to medicines is through voluntary mechanisms, such as voluntary licensing which may include technology transfer on mutually agreed terms".
"पक्ष यह मानते हैं कि दवाओं तक पहुंच को बढ़ावा देने और सुनिश्चित करने का **सर्वोत्तम तरीका स्वैच्छिक तंत्रों** के माध्यम से है, जैसे कि **स्वैच्छिक लाइसेंसिंग**, जिसमें आपसी सहमति की शर्तों पर प्रौद्योगिकी हस्तांतरण भी शामिल हो सकता है।"



- India's agreeing to this provision would result in **dilution of its position** on two critical issues.
भारत का इस प्रावधान को मानना **दो महत्वपूर्ण मुद्दों पर इसकी स्थिति को कमजोर** कर देगा।
 - First, India consistently backed the use of **compulsory licensing** as opposed to voluntary licensing, to address **high prices of patented medicines**.
पहला, भारत ने **स्वैच्छिक लाइसेंसिंग** की बजाय **अनिवार्य लाइसेंसिंग** का लगातार समर्थन किया है ताकि **पेटेंट वाली दवाओं की ऊंची कीमतों** का समाधान किया जा सके।
 - Second, India argued that advanced countries must transfer technologies to developing countries on "**favourable terms**", for **industrialisation** and for reducing their **carbon footprints**.
दूसरा, भारत ने तर्क दिया कि उन्नत देशों को विकासशील देशों को "**अनुकूल शर्तों**" पर प्रौद्योगिकी स्थानांतरित करनी चाहिए, ताकि **औद्योगीकरण** हो सके और **कार्बन उत्सर्जन** में कमी लाई जा सके।

Issue of Pricing

कीमत निर्धारण का मुद्दा

- High prices of patented medicines** are a serious anomaly of the patent system, due to **excessive rent-seeking by patentees**.
पेटेंट वाली दवाओं की ऊंची कीमतें पेटेंट प्रणाली की एक गंभीर विसंगति हैं, जो **पेटेंट धारकों की अत्यधिक लाभ-लालसा** के कारण होती हैं।
- Compulsory licensing** of patented medicines can vastly improve the **affordability** of high-priced medicines by facilitating their production.
अनिवार्य लाइसेंसिंग महंगी दवाओं की **सुलभता** को बढ़ाकर उनके उत्पादन को संभव बना सकती है।
- This was experienced following the grant of **compulsory licence to Natco Pharma in 2012 for producing an anti-cancer medicine, sorafenib tosylate**.
यह अनुभव तब हुआ जब **2012 में Natco Pharma** को एक कैंसर-रोधी दवा **sorafenib tosylate** के उत्पादन के लिए **अनिवार्य लाइसेंस** दिया गया था।
- The **price came down to less than ₹8,800** for a month's treatment, from the **₹2,80,428 charged by the patent owner, Bayer Corporation**.
उस दवा की कीमत **₹2,80,428** से घटकर **₹8,800 से कम** हो गई, जिसे पहले **Bayer Corporation** द्वारा एक महीने के इलाज के लिए लिया जाता था।
- For remedying such instances of **excessive rent-seeking**, India's law-makers included **compulsory licensing** as a **key safeguard** while amending the Patents Act.
इस प्रकार की **अत्यधिक लाभ-लालसा** की घटनाओं से निपटने के लिए, भारत के विधायकों ने **पेटेंट अधिनियम में संशोधन करते समय अनिवार्य लाइसेंसिंग** को एक **महत्वपूर्ण सुरक्षा उपाय** के रूप में शामिल किया।
- The amendment was to make it compatible with the **World Trade Organization's (WTO) TRIPS Agreement**.
यह संशोधन **विश्व व्यापार संगठन (WTO)** के **TRIPS समझौते** के अनुरूप बनाने के लिए किया गया था।
- Both Houses of the Parliament **unanimously adopted** this legislation after a **Joint Parliamentary Committee** had carefully considered its provisions.
संयुक्त संसदीय समिति द्वारा इसके प्रावधानों की गहन समीक्षा के बाद, संसद के दोनों सदनों ने इस कानून को **सर्वसम्मति** से पारित किया था।

Grant of compulsory licence

अनिवार्य लाइसेंस का अनुदान



- India's **TRIPS-consistent Patents Act** allows grant of **compulsory licence** to anyone interested in producing a **patented product in India, three years** after the grant of a patent.

भारत का **TRIPS-संगत पेटेंट अधिनियम** किसी भी इच्छुक व्यक्ति को **भारत में पेटेंट किए गए उत्पाद** का उत्पादन करने के लिए **तीन वर्षों** के बाद **अनिवार्य लाइसेंस** देने की अनुमति देता है।
- This licence can be granted if: **reasonable requirements of the public with respect to the patented invention are not satisfied**; or the **patented invention is not available to the public at reasonably affordable price**, or the **patented invention is not "worked" in the territory of India**, implying, it has not been **commercially exploited** in the country.

यह लाइसेंस तब दिया जा सकता है जब: पेटेंट की गई खोज के संबंध में जनता की **वाजिब आवश्यकताएँ** पूरी नहीं होतीं; या वह खोज **उचित किफायती मूल्य** पर जनता के लिए उपलब्ध नहीं है, या वह खोज **भारत में "प्रयोग" नहीं की गई है**, अर्थात् उसका देश में **व्यावसायिक उपयोग नहीं हुआ है**।
- Patent rules** monitor **"working" requirement** and, accordingly, patentees must submit the **working status** of their inventions.

पेटेंट नियम "प्रयोग" की आवश्यकता की निगरानी करते हैं और तदनुसार, पेटेंट धारकों को अपनी खोजों की **प्रयोग स्थिति** जमा करनी होती है।
- They had to do so **annually** until this requirement was **diluted** through India's **FTA with the European Free Trade Association**, with **India agreeing that the periodicity of reporting "shall not be less than 3 years"**.

उन्हें यह काम **वार्षिक रूप से** करना होता था, जब तक कि यह आवश्यकता भारत के **यूरोपीय मुक्त व्यापार संघ (EFTA) के साथ FTA के माध्यम से कमजोर नहीं की गई**, जिसमें भारत ने सहमति दी कि रिपोर्टिंग की आवृत्ति **"3 वर्षों से कम नहीं होगी"**।
- This **dilution**, has now been **reinforced through the CETA**, and **it takes away an important ground for issuing compulsory licences**.

यह **कमजोरी अब CETA के माध्यम से और मजबूत हो गई है** और यह **अनिवार्य लाइसेंस जारी करने का एक महत्वपूर्ण आधार छीन लेती है**।
- By backing **voluntary licensing** to address the problem of **access to medicines**, India has, **de facto**, given up its position as a **strong votary of compulsory licensing** in the WTO.

दवाओं तक पहुंच की समस्या से निपटने के लिए **स्वैच्छिक लाइसेंसिंग** का समर्थन करके, भारत ने वास्तव में, **WTO में अनिवार्य लाइसेंसिंग के एक मजबूत समर्थक** के रूप में अपनी स्थिति **छोड़ दी है**।
- A **coalition of developing countries**, including India earned the right to issue **compulsory licences** through the **Doha Declaration on the TRIPS Agreement and Public Health in 2001**, despite strident opposition from **advanced countries**.

भारत सहित **विकासशील देशों के गठबंधन ने 2001 में TRIPS समझौते और सार्वजनिक स्वास्थ्य पर दोहा घोषणा के माध्यम से अनिवार्य लाइसेंस जारी करने का अधिकार प्राप्त किया**, जबकि **विकसित देशों ने इसका तीव्र विरोध किया**।
- The **Declaration emphasised**, **"each Member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted"**.

इस घोषणा ने जोर दिया, **"प्रत्येक सदस्य को अनिवार्य लाइसेंस देने का अधिकार है और यह तय करने की स्वतंत्रता है कि ऐसे लाइसेंस किन आधारों पर दिए जाएँ"**।
- Voluntary licences** cannot ensure access to **affordable medicines** due to the **weak bargaining position** of domestic companies in developing countries vis-à-vis **dominant pharmaceutical corporations**.

विकासशील देशों में घरेलू कंपनियों की **कमजोर सौदेबाज़ी स्थिति** के कारण **स्वैच्छिक लाइसेंस सस्ती दवाओं तक पहुंच सुनिश्चित नहीं कर सकते**, खासकर जब सामने **प्रमुख फार्मा कंपनियाँ** हों।



- **Médecins Sans Frontières (MSF)**, a medical humanitarian organisation, observed that using the terms of **voluntary licences**, **pharmaceutical corporations can set various limitations, including to control the supply of active pharmaceutical ingredients, besides imposing restrictions on licensees.**
मेडिसिन्स सॉन्स फ्रंटियर्स (MSF), एक चिकित्सा मानवीय संगठन ने देखा कि **स्वैच्छिक लाइसेंस** की शर्तों का उपयोग करके, **फार्मास्यूटिकल कंपनियाँ विभिन्न सीमाएँ तय कर सकती हैं, जैसे कि सक्रिय फार्मा घटकों की आपूर्ति नियंत्रित करना, और साथ ही लाइसेंसधारियों पर प्रतिबंध लगाना।**
- Therefore, options for getting **affordable access** are compromised when **voluntary licences** are used.
इसलिए, जब **स्वैच्छिक लाइसेंस** का उपयोग किया जाता है, तो **सस्ती पहुँच के विकल्प कमजोर हो जाते हैं।**
- The MSF's observations were proven when **Cipla produced the anti-COVID drug, remdesivir, in India under a voluntary licence from Gilead Sciences**, the owner of the patent on the medicine.
MSF के अवलोकनों की पुष्टि तब हुई जब **सिप्ला ने COVID-रोधी दवा, रेमडेसिविर को भारत में Gilead Sciences से प्राप्त स्वैच्छिक लाइसेंस के तहत तैयार किया, जो इस दवा की पेटेंटधारी कंपनी है।**
- The **price of remdesivir** fixed by Cipla for India was, in **purchasing power terms, higher than that Gilead had charged in the United States.**
भारत में **सिप्ला द्वारा तय की गई रेमडेसिविर की कीमत, खरीद शक्ति के लिहाज से, संयुक्त राज्य अमेरिका में गिलियड द्वारा ली गई कीमत से अधिक थी।**

India's demand will be affected

भारत की माँग प्रभावित होगी

- The **CETA undermines India's demand for technology transfer "on favourable terms" in several multilateral forums.**
CETA भारत की कई **बहुपक्षीय मंचों** में **"अनुकूल शर्तों पर प्रौद्योगिकी हस्तांतरण"** की माँग को **कमजोर करता है।**
- This demand was first made through the **United Nations General Assembly Resolution on the New International Economic Order (NIEO) in 1974.**
यह माँग सबसे पहले **1974 में संयुक्त राष्ट्र महासभा के प्रस्ताव के माध्यम से नए अंतर्राष्ट्रीय आर्थिक व्यवस्था (NIEO) में** की गई थी।
- A key aspect of the NIEO was the **call for facilitated technology transfer from advanced to developing countries to promote the industrialisation efforts of the developing countries.**
NIEO का एक प्रमुख पहलू था **विकसित देशों से विकासशील देशों में सरल तकनीकी हस्तांतरण की माँग ताकि विकासशील देशों के औद्योगिकरण प्रयासों को बढ़ावा मिल सके।**
- However, despite their best efforts, **little progress** was seen regarding **technology transfer.**
हालांकि, उनके **सर्वश्रेष्ठ प्रयासों के बावजूद, प्रौद्योगिकी हस्तांतरण के मामले में बहुत कम प्रगति देखी गई।**
- The **disappointment** of developing countries was reflected in India's **Fourth Biennial Update Report to the United Nations Framework Convention on Climate Change in 2024:**
विकासशील देशों की **निराशा भारत की 2024 में संयुक्त राष्ट्र जलवायु परिवर्तन फ्रेमवर्क कन्वेंशन को दी गई चौथी द्वैवार्षिक रिपोर्ट में परिलक्षित हुई:**
- "Despite substantial national efforts and investments, **barriers like slow international technology transfer and intellectual property rights (IPR) hinder the rapid adoption of [climate friendly] technologies.**"



“काफी राष्ट्रीय प्रयासों और निवेश के बावजूद, धीमी अंतर्राष्ट्रीय प्रौद्योगिकी हस्तांतरण और बौद्धिक संपदा अधिकार (IPR) जैसी बाधाएं [जलवायु अनुकूल] प्रौद्योगिकियों को तेजी से अपनाने में अड़चन बनती हैं।”

- As India has **compromised** its long-held position that **technology transfer to developing countries must be on “favourable terms”**, its demand for **climate-friendly technologies** from advanced countries could **lose its sting**.
चूंकि भारत ने यह दीर्घकालिक स्थिति कि प्रौद्योगिकी हस्तांतरण “अनुकूल शर्तों” पर होना चाहिए, से समझौता कर लिया है, इसलिए विकसित देशों से जलवायु अनुकूल प्रौद्योगिकियों की माँग अपनी प्रभावशीलता खो सकती है।

TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights)

- The **TRIPS Agreement** is one of the most comprehensive multilateral agreements on **intellectual property rights (IPRs)**.
- It is a core component of the **World Trade Organization (WTO)** framework, established as **Annex 1C** of the **Marrakesh Agreement**.
- Came into effect on **1 January 1995**, binding all WTO member countries.

Historical Background

- TRIPS was negotiated during the **Uruguay Round** of GATT negotiations (1986–1994).
- Adopted on **15 April 1994** at **Marrakesh, Morocco**, it marked the integration of IPRs into global trade policy.
- Before TRIPS, intellectual property was governed by various **WIPO (World Intellectual Property Organization)** treaties like the **Paris Convention (1883)** and **Berne Convention (1886)**.

Key Objectives of TRIPS

- Set **minimum standards** for the protection and enforcement of IPRs in WTO member countries.
- Promote **technological innovation, knowledge sharing, and economic development**.
- Ensure **balance** between the interests of IPR holders and public welfare.
- Enforce **non-discriminatory treatment** via **Most-Favoured-Nation (MFN)** and **National Treatment** principles.

Scope and Coverage of TRIPS

TRIPS covers seven key areas of Intellectual Property:

Copyrights and Related Rights

- Includes literary works, music, software, cinematographic works.
- Duration: Life of author + **50 years**.

Trademarks

- Protects brand identity like logos, names, and symbols.
- Valid for **7 years** (minimum), renewable indefinitely.

Geographical Indications (GI)

- Identifies goods originating from specific locations, known for quality.
- Examples: **Darjeeling Tea, Kanchipuram Silk**.

Industrial Designs

- Protects the aesthetic aspect of objects (shapes, patterns).
- Minimum protection: **10 years**.

Patents

- Exclusive rights to inventions (products or processes).
- Duration: **20 years** from the filing date.
- Countries may **exclude** certain inventions (e.g., plants, animals, diagnostic methods).



Layout Designs of Integrated Circuits

- Protects designs used in semiconductors.
- Minimum protection: **10 years**.

Trade Secrets (Undisclosed Information)

- Includes formulas, techniques, or data.
- Must be protected from unfair use or disclosure.

Enforcement Mechanisms under TRIPS

- TRIPS mandates **civil, criminal, and border enforcement** procedures.
- Member countries must establish laws and remedies for IPR violations.
- TRIPS disputes are resolved via the **WTO Dispute Settlement Body (DSB)**.

Flexibilities under TRIPS (For Developing Countries)

1. Transition Periods

- Developing countries were given **5 years** and Least Developed Countries (LDCs) **11 years** or more to implement TRIPS provisions.
- LDCs have time till **July 1, 2034** to comply with TRIPS (as of latest extension).

2. Compulsory Licensing (Article 31)

- Allows government to produce/use a patented product **without the patent holder's consent** during public health crises.
- Example: **India's 2012 compulsory licence** to produce **Nexavar**, a cancer drug, at a price 97% lower than the patented version.

3. Parallel Imports

- Countries can import a patented product from another country **where it is sold more cheaply**, without permission from the patent holder.

4. Section 3(d) of Indian Patents Act

- Prevents **evergreening** (minor changes to existing drugs to renew patents).
- Supported by **Novartis v. Union of India (2013)** case.

PATRIOTIC IAS

How does the World Bank classify countries by income?

The World Bank's income groups are widely used in global data. This article explains how they are defined and updated

GS II: International Institutions

DATA POINT

Bertha Rohenkohl
Pablo Arriagada

When people talk about countries as 'rich' or 'poor', they can mean many different things. But for researchers and policymakers, it helps to have a way to compare countries by income using clear criteria. One widely used approach is the World Bank's income classification system, which places countries into four groups: low, lower-middle, upper-middle, and high-income countries.

Every year, the World Bank assigns each country to an income group based on its gross national income (GNI) per capita. GNI per capita is a measure of the average income of a country's residents, including income that is earned abroad. Since countries report GNI in their local currencies, the World Bank converts these figures into U.S. dollars using exchange rates. It then places countries in one of four income groups based on specific thresholds. **Maps 1 and 2** show how countries were classified by income in 2014 and 2024.

The income thresholds that separate groups were first set in the late 1980s when this classification system was introduced. At that time, these were aligned with the World Bank's policies for lending money to countries. The Bank used average incomes to determine which countries were eligible for concessional loans.

This threshold for receiving such loans became the boundary between low-income and middle-income countries. The Bank then added two more thresholds to allow for further distinctions. These were chosen based on the distribution of country incomes at the time, rather than on lending rules.

Today, the thresholds are no longer linked to the Bank's operations, but they have been updated yearly to account for inflation. This

adjustment is based on a measure of global inflation.

This means that the classification is *absolute*. Countries are put into groups according to predetermined thresholds, and a country's placement depends only on its GNI per capita, not on how it stacks up relative to other countries. The thresholds for the latest income groups are (in U.S. dollars): low income: \$1,135 or less; lower-middle income: \$1,136 to \$4,495; upper-middle income: \$4,496 to \$13,935; high income: More than \$13,935.

If a country's GNI per capita crosses a threshold, it moves into a new income group in the following update. Because GNI per capita changes over time, and thresholds are revised annually, countries can move between income groups over time. These movements may reflect real changes in income, shifts in exchange rates, or updates to population data.

In the long run, most countries have moved up the income ladder as their economies have grown. However, countries can also move down – and some have, particularly in periods of war and economic crisis. Two examples are Syria and Yemen, which went from low-middle income to low income in 2017.

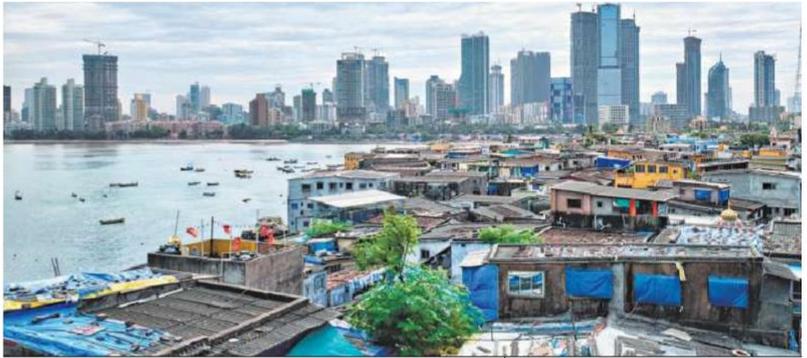
When we hear that there are four income groups, we might imagine that the world's population is evenly divided across them, with around 25% of people living in each. But this isn't the case. Again, these groups are defined based on *absolute* thresholds, not relative cut-offs that change based on other countries' progress.

In 2004, 37% of the population lived in low-income countries. Today, that share has fallen to less than 10%. In the same period, the share of upper-middle income countries increased from less than 10% to 35%. You can see this change in **Charts 3, 4 and 5**.

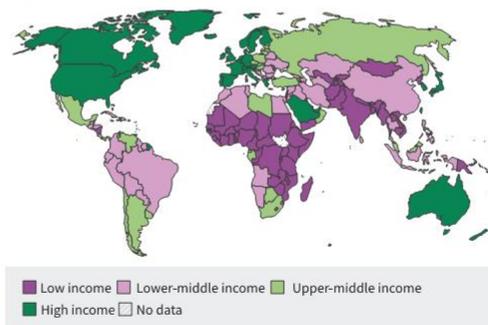
Bertha Rohenkohl is Research and Data Economics Lead and Pablo Arriagada is Data Scientist at Our World in Data

Income thresholds

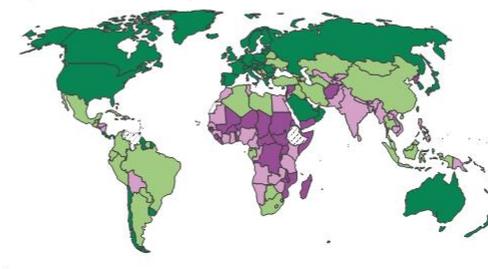
The data for the charts were sourced from Our World in Data's story titled "How does the World Bank classify countries by income?"



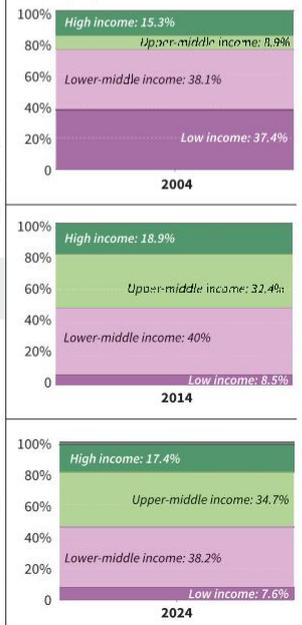
Map 1: Countries classified by income in 2014



Map 2: Countries classified by income in 2024



Charts 3, 4 and 5: Share of population by income group in 2004, 2014 and 2024



How does the World Bank classify countries by income?

विश्व बैंक देशों को आय के अनुसार कैसे वर्गीकृत करता है?

World Bank's Income Classification System

विश्व बैंक की आय वर्गीकरण प्रणाली

- When people talk about countries as 'rich' or 'poor', they can mean many different things.
जब लोग देशों को 'अमीर' या 'गरीब' कहते हैं, तो उनका मतलब कई अलग-अलग चीजों से हो सकता है।



- But for **researchers and policymakers**, it helps to have a way to compare countries by income using clear criteria.
लेकिन **शोधकर्ताओं और नीति निर्माताओं** के लिए, आय के आधार पर देशों की तुलना करने का एक स्पष्ट तरीका होना सहायक होता है।
- One widely used approach is the **World Bank's income classification system**, which places countries into four groups: **low, lower-middle, upper-middle, and high-income countries**.
एक व्यापक रूप से उपयोग की जाने वाली विधि है **विश्व बैंक की आय वर्गीकरण प्रणाली**, जो देशों को चार समूहों में विभाजित करती है: **निम्न, निम्न-मध्यम, उच्च-मध्यम, और उच्च-आय वाले देश**।
- **Every year, the World Bank assigns each country to an income group based on its gross national income (GNI) per capita**.
हर साल, **विश्व बैंक** प्रत्येक देश को उसकी प्रति व्यक्ति सकल राष्ट्रीय आय (GNI) के आधार पर एक आय समूह में वर्गीकृत करता है।
- **GNI per capita** is a measure of the **average income** of a country's residents, including income that is earned abroad.
प्रति व्यक्ति GNI किसी देश के निवासियों की **औसत आय** का माप है, जिसमें विदेशों से प्राप्त आय भी शामिल होती है।
- **Since countries report GNI in their local currencies, the World Bank converts these figures into U.S. dollars using exchange rates**.
चूंकि देश अपनी स्थानीय मुद्राओं में GNI रिपोर्ट करते हैं, इसलिए विश्व बैंक इन आंकड़ों को **विनिमय दरों** के अनुसार **अमेरिकी डॉलर** में परिवर्तित करता है।
- It then places countries in one of four income groups based on specific **thresholds**.
इसके बाद यह देशों को विशेष **सीमाओं (thresholds)** के आधार पर चार आय समूहों में रखता है।
- Maps 1 and 2 show how countries were classified by income in **2014 and 2024**.
मानचित्र 1 और 2 दिखाते हैं कि देशों को **2014 और 2024** में आय के आधार पर कैसे वर्गीकृत किया गया था।

Origin of the Classification System वर्गीकरण प्रणाली की उत्पत्ति

- The income thresholds that separate groups were first set in the **late 1980s** when this classification system was introduced.
आय सीमाएं, जो समूहों को अलग करती हैं, पहली बार **1980 के दशक के अंत** में निर्धारित की गई थीं जब यह वर्गीकरण प्रणाली शुरू की गई थी।
- At that time, these were aligned with the World Bank's **policies for lending money** to countries.
उस समय, ये सीमाएं विश्व बैंक की देशों को **ऋण देने की नीतियों** के अनुरूप थीं।
- The Bank used **average incomes** to determine which countries were eligible for **concessional loans**.
बैंक ने यह तय करने के लिए **औसत आय** का उपयोग किया कि कौन से देश **रियायती ऋणों** के लिए पात्र हैं।
- This threshold for receiving such loans became the **boundary between low-income and middle-income** countries.
ऐसे ऋण प्राप्त करने के लिए यह सीमा **निम्न-आय और मध्य-आय** वाले देशों के बीच की रेखा बन गई।
- The Bank then added **two more thresholds** to allow for further distinctions.
इसके बाद बैंक ने आगे के वर्गीकरण के लिए **दो और सीमाएं** जोड़ीं।
- These were chosen based on the **distribution of country incomes** at the time, rather than on lending rules.
इन्हें उस समय की **देशों की आय के वितरण** के आधार पर चुना गया था, न कि ऋण नियमों पर।



Current Updates and Use वर्तमान अद्यतन और उपयोग

- Today, the thresholds are **no longer linked** to the Bank's operations, but they have been **updated yearly** to account for **inflation**.
आज, ये सीमाएं अब बैंक के संचालन से **जुड़ी नहीं हैं**, लेकिन इन्हें **हर साल अद्यतन** किया जाता है ताकि **मुद्रास्फीति** को ध्यान में रखा जा सके।
- This adjustment is based on a measure of **global inflation**.
यह समायोजन **वैश्विक मुद्रास्फीति** के एक माप पर आधारित है।
- This means that the classification is **absolute**, and a country's placement depends **only on its GNI per capita**, not on comparison with others.
इसका मतलब है कि यह वर्गीकरण **निर्धारित (absolute)** है, और किसी देश की स्थिति **केवल उसके प्रति व्यक्ति GNI** पर निर्भर करती है, न कि अन्य देशों से तुलना पर।
- The thresholds for the **latest income groups** are (in U.S. dollars):
नवीनतम आय समूहों के लिए सीमाएं (अमेरिकी डॉलर में) इस प्रकार हैं:
 - **Low income:** \$1,135 or less
निम्न आय: \$1,135 या कम
 - **Lower-middle income:** \$1,136 to \$4,495
निम्न-मध्यम आय: \$1,136 से \$4,495
 - **Upper-middle income:** \$4,496 to \$13,935
उच्च-मध्यम आय: \$4,496 से \$13,935
 - **High income:** More than \$13,935
उच्च आय: \$13,935 से अधिक

Country Movement Between Groups समूहों के बीच देशों की स्थिति में परिवर्तन

- If a country's **GNI per capita crosses a threshold**, it moves into a new income group in the following update.
यदि किसी देश की **प्रति व्यक्ति GNI** किसी सीमा को पार करती है, तो वह अगले अद्यतन में नए आय समूह में चला जाता है।
- Since **GNI per capita** and **thresholds** change over time, countries can **move between income groups**.
चूंकि **प्रति व्यक्ति GNI** और **सीमाएं** समय के साथ बदलती हैं, इसलिए देश **आय समूहों के बीच स्थानांतरित** हो सकते हैं।
- These movements may reflect **real changes in income, shifts in exchange rates, or updates to population data**.
ये परिवर्तन **आय में वास्तविक बदलाव, विनिमय दरों में बदलाव, या जनसंख्या आंकड़ों के अद्यतन** को दर्शा सकते हैं।

Long-Term Trends and Exceptions दीर्घकालिक प्रवृत्तियाँ और अपवाद

- In the **long run**, most countries have **moved up** the income ladder as their **economies have grown**.
दीर्घकालिक रूप में, अधिकांश देश **आर्थिक विकास** के साथ आय स्तर में **ऊपर की ओर** बढ़े हैं।
- However, countries can also **move down**, especially during **war** or **economic crisis**.
हालांकि, देश **नीचे भी जा सकते हैं**, विशेष रूप से **युद्ध** या **आर्थिक संकट** के समय।
- Two examples are **Syria and Yemen**, which went from **low-middle income to low income** in 2017.



सीरिया और यमन इसके उदाहरण हैं, जो 2017 में निम्न-मध्यम आय से निम्न आय वाले देशों में आ गए थे।

Global Population Distribution by Income आय के आधार पर वैश्विक जनसंख्या का वितरण

- When we hear there are **four income groups**, we might imagine that the **world's population is evenly divided** across them.
जब हम सुनते हैं कि चार आय समूह हैं, तो हम सोच सकते हैं कि **दुनिया की जनसंख्या** इन समूहों में **समान रूप से विभाजित** है।
- But this isn't the case — these groups are **absolute thresholds**, not based on **relative progress**.
लेकिन ऐसा नहीं है — ये समूह **निर्धारित सीमाएं** हैं, **अन्य देशों की प्रगति** पर आधारित नहीं हैं।
- In **2004**, **37%** of the population lived in **low-income countries**.
2004 में, **37%** जनसंख्या **निम्न-आय देशों** में रहती थी।
- Today, that share has fallen to **less than 10%**.
आज, यह हिस्सा घटकर **10% से कम** हो गया है।
- In the same period, the share of **upper-middle income countries** increased from **less than 10% to 35%**.
इसी अवधि में, **उच्च-मध्यम आय वाले देशों** का हिस्सा **10% से कम** से बढ़कर **35%** हो गया है।
- You can see this change in **Charts 3, 4 and 5**.
आप इस परिवर्तन को **चार्ट 3, 4 और 5** में देख सकते हैं।

PATRIOTICIAS



How will railway to Sairang help in regional connectivity?

How will it boost the **Act East policy**? What is the status of projects to link the northeast with Southeast Asia?

GS II: India-South East

Rahul Asia

The story so far:

The Indian Railways recently commissioned the new 51.38 km track to Sairang, 18 km short of Mizoram's capital Aizawl. It raises hopes for India's ambitious Act East Policy which envisages rail and road links with Southeast Asia.

When did the Mizoram project start?

Mizoram had 1.5 km of metre gauge railway track connecting Bairabi in the State's Kolasib district to Assam's Silchar before the gauge conversion project, sanctioned in 2000, was undertaken. The extension of this project to Sairang, which entailed laying a 51.38 km track, began in 2008-09, but the progress was slow due to inclement weather, a difficult and landslide-prone terrain, manpower shortage, and issues with transporting construction materials. The project was

part of the Indian Railways' plan in the early 2010s to connect all the northeastern State capitals to the country's rail network, although the Sairang railway station is 18 km short of Mizoram's capital, Aizawl. The Bairabi-Sairang section, which received safety clearance in June 2025 and awaits formal inauguration, has 48 tunnels with a total length of 12.85 km and 142 bridges. The project cost more than ₹5,020 crore and the lives of 18 workers when the bridge with the tallest pier collapsed during construction in August 2023.

What is its significance?

Landlocked Mizoram's fastest access to the rest of the country is through air travel. The Aizawl-Silchar highway, also via Sairang, is the second-fastest option that consumes at least five hours. Trains, including a proposed Rajdhani Express, from the Sairang railhead will slash this travel time to 1.5 hours and the cost of

transportation considerably. Railway officials say the biggest gain for the State will be in tourism, trade, and transportation of goods, reducing the dependence on trucks to a large extent. They said the Sairang railhead is strategic vis-a-vis the Act East Policy, envisaging rail and road connectivity to improve trade with the Association of Southeast Asian Nations (ASEAN) and other East Asian countries, deepen diplomatic engagements, and build stronger security cooperation. Sairang is also expected to be vital for transshipment of goods from the India-funded Sittwe Port in Myanmar.

What is the Act East Policy?

The Act East Policy, announced by Prime Minister Narendra Modi in 2014, was a more ambitious version of the Look East Policy initiated during the Congress government in 1991 with the key objective of transforming the northeastern region into India's gateway to the ASEAN bloc.

How will the railway to Sairang help in regional connectivity?

सैरांग तक रेलवे से क्षेत्रीय संपर्क में किस प्रकार मदद मिलेगी?

Indian Railways' New Track to Sairang and Its Strategic Importance

भारतीय रेलवे की सैरांग तक नई पटरी और इसकी रणनीतिक महत्ता

- The Indian Railways recently commissioned the new **51.38 km track to Sairang, 18 km short of Mizoram's capital Aizawl**. भारतीय रेलवे ने हाल ही में **51.38 किमी लंबी नई पटरी** को सैरांग तक चालू किया, जो कि मिज़ोरम की राजधानी आइज़ोल से 18 किमी कम है।
- It raises hopes for **India's ambitious Act East Policy which envisages rail and road links with Southeast Asia**. यह भारत की महत्वाकांक्षी "एक्ट ईस्ट पॉलिसी" के लिए आशा बढ़ाता है, जो दक्षिण-पूर्व एशिया के साथ रेल और सड़क संपर्क की परिकल्पना करता है

When did the Mizoram project start?

मिज़ोरम परियोजना कब शुरू हुई थी?

- Mizoram had **1.5 km of metre gauge railway track connecting Bairabi in Kolasib district to Assam's Silchar** before the gauge conversion project.



मिज़ोरम में 1.5 किमी मीटर गेज रेलवे ट्रैक था, जो कोलासिब जिले के बैराबी को असम के सिलचर से जोड़ता था, यह गेज परिवर्तन परियोजना से पहले था।

- The **gauge conversion project**, sanctioned in **2000**, was undertaken later. यह गेज परिवर्तन परियोजना 2000 में स्वीकृत की गई थी।
- The extension of this project to **Sairang** began in **2008-09**, but the progress was slow due to **inclement weather, landslide-prone terrain, manpower shortage, and transportation issues**. इस परियोजना का सैरांग तक विस्तार 2008-09 में शुरू हुआ, लेकिन खराब मौसम, भूस्खलन-प्रवण इलाके, मजदूरों की कमी, और निर्माण सामग्री की दुलाई में समस्याओं के कारण धीमा रहा।
- The project was part of **Indian Railways' plan** in the early **2010s** to connect all **northeastern State capitals** to the country's rail network. यह परियोजना 2010 के दशक की शुरुआत में भारतीय रेलवे की योजना का हिस्सा थी, जिसमें सभी पूर्वोत्तर राज्य की राजधानियों को देश के रेल नेटवर्क से जोड़ने की बात थी।
- The **Sairang railway station** is **18 km short of Aizawl**. सैरांग रेलवे स्टेशन, आइज़ोल से 18 किमी की दूरी पर स्थित है।
- The **Bairabi-Sairang** section, received **safety clearance in June 2025**, and awaits **formal inauguration**. बैराबी-सैरांग खंड को जून 2025 में सुरक्षा मंजूरी मिली और अब यह औपचारिक उद्घाटन की प्रतीक्षा में है।
- The project includes **48 tunnels** (total **12.85 km**) and **142 bridges**. परियोजना में 48 सुरंगें (कुल 12.85 किमी) और 142 पुल शामिल हैं।
- It cost more than **₹5,020 crore** and claimed **18 workers' lives** during the **bridge collapse in August 2023**. इस परियोजना की लागत ₹5,020 करोड़ से अधिक रही और अगस्त 2023 में पुल ढहने की दुर्घटना में 18 श्रमिकों की जान गई।

What is its significance?

इसकी क्या महत्ता है?

- Landlocked **Mizoram's fastest access** to the rest of the country is through **air travel**. स्थल-आवृत मिज़ोरम के लिए देश के अन्य हिस्सों तक सबसे तेज़ पहुंच हवाई यात्रा के माध्यम से है।
- The **Aizawl-Silchar highway**, via **Sairang**, is the **second-fastest option**, taking at **least 5 hours**. आइज़ोल-सिलचर हाईवे, सैरांग के रास्ते, दूसरा सबसे तेज़ विकल्प है, जिसे तय करने में कम से कम 5 घंटे लगते हैं।
- Trains, including a **proposed Rajdhani Express**, from **Sairang** will reduce travel time to **1.5 hours** and transportation cost significantly.



TOPICS COVERED (GS Paper III: Polity, Governance, And International Relations)

1. 'Bio-fortified potatoes with added iron to hit Indian market soon'

‘आयरन युक्त बायो-फोर्टिफाइड आलू जल्द ही भारतीय बाजार में आएंगे’

2. NSCN(I-M) rules outworking with rival Naga faction NNPG

एनएससीएन (आई-एम) ने प्रतिद्वंद्वी नागा गुट एनएनपीजी के साथ काम करने से इनकार किया

3. Central nod to increase CISF strength, 58,000 personnel to be recruited over next five years

सीआईएसएफ की संख्या बढ़ाने के लिए केंद्र की मंजूरी, अगले पाँच वर्षों में 58,000 कर्मियों की भर्ती की जाएगी

4. 'Anything that moves, NISAR will see with unprecedented fidelity'

"जो भी वस्तु हिलेगी, NISAR उसे अभूतपूर्व स्पष्टता से देखेगा"

5. Scientists use AI-designed proteins to generate immune cells

वैज्ञानिकों ने प्रतिरक्षा कोशिकाएं उत्पन्न करने के लिए एआई-डिज़ाइन किए गए प्रोटीन का उपयोग किया

6. An unravelling

एक उजागर होती साजिश

7. The 'Right to Repair' Must Include 'Right to Remember'

‘राइट टू रिपेयर’ में ‘राइट टू रिमेम्बर’ भी शामिल होना चाहिए

8. A step forward, but not far enough

एक कदम आगे, लेकिन पर्याप्त नहीं



'Bio-fortified potatoes with added iron to hit Indian market soon'

GS III: S&T

A.M. Jigeesh
NEW DELHI

Bio-fortified potatoes, with added iron content, will soon be available in Indian markets, said Simon Heck, Director-General of the Peru-based International Potato Center (CIP), in an interview with *The Hindu*. Bio-fortified sweet potatoes, with vitamin A added using technology developed by the CIP, are already available in Karnataka, Assam, West Bengal, and Odisha.

The CIP, an apex research body of international research institutions working on tubular crops, will take efforts to make

the seeds of bio-fortified sweet potato available to more farmers, said Dr. Heck, currently in India for the establishment of the CIP South Asia regional centre in Agra.

The focus is on iron fortification in potatoes. "We have already shared the germ plasm with the Indian Council of Agricultural Research's Central Potato Institute in Shimla. The first variety has been released in Peru", he said.

"Now it is under the evaluation of the ICAR, and it needs to be adapted to the Indian growing conditions," Dr. Heck added.

Dr. Heck said India has the strongest momentum

for potato production and farmers wanted better varieties of potato that grew well with fewer agro-chemical input, and they also wanted to be part of the market chain, including food processing. He expressed hope that the centre will help farmers access better quality potato and sweet potato seeds and provide them with better exposure to markets.

The CIP believes that the location chosen for the new centre near Agra, in the heart of the potato belt of India, is ideal as the Indo-Gangetic plains is the largest potato-producing area in the world.

Dr. Heck said the Uttar



Simon Heck

Pradesh government had made available the land and handed it over to the National Horticulture Board, which invited the CIP to establish the centre.

The agreement between the CIP and the Union Agriculture Ministry, signed last week of July, was set up

following the demand from the Government of India in recognition of the potential for economic growth from the thriving potato sector.

"It may be noted that international companies, especially potato firms from Europe and North America, are increasingly investing in potato production in India," he said.

Part of market chain

"What they [farmers] needed is access to potato seed of the right quality, of the right variety, and at the right time of the year. There are constraints. They do not have enough potato seeds or they come

too late for planting or they are not of good quality. We need to build the capacity for companies to multiply potato seeds. That will be a major contribution of the CIP," he said.

The CIP was working with private companies and public research institutes to make sure that farmers throughout India would have access to good quality planting material, right from the initial breeding of new varieties, through multiplication every year, in the right locations.

He said the CIP would also ensure that the vulnerable parts of society had access to nutritious potato.

There were a number of opportunities along the road; one was to work with the government, with public sector food procurement, for school feeding programmes, such as mid-day meals. This would give children access to nutritious potato, more specifically and consistently, he said. Another one was to breed potato that was more nutritious, he added.

Governing committee

The CIP regional centre would be governed by a coordination committee that comprises the Secretaries of Agriculture of India, Nepal, Bhutan, and Bangladesh.

'Bio-fortified potatoes with added iron to hit Indian market soon'

'आयरन युक्त बायो-फोर्टिफाइड आलू जल्द ही भारतीय बाजार में आएंगे'

Bio-fortified Potatoes and CIP's Expansion in India बायो-फोर्टिफाइड आलू और भारत में सीआईपी का विस्तार

- **Bio-fortified potatoes, with added iron content**, will soon be available in **Indian markets**, said **Simon Heck**, Director-General of the **Peru-based International Potato Center (CIP)**, in an interview with *The Hindu*.

आयरन युक्त बायो-फोर्टिफाइड आलू जल्द ही भारतीय बाजारों में उपलब्ध होंगे, ऐसा कहा साइमन हेक, जो कि पेरू स्थित इंटरनेशनल पोटाटो सेंटर (CIP) के महानिदेशक हैं, ने द हिंदू को दिए एक साक्षात्कार में।

- **Bio-fortified sweet potatoes, with vitamin A added using technology developed by the CIP**, are already available in **Karnataka, Assam, West Bengal, and Odisha**.

विटामिन A युक्त बायो-फोर्टिफाइड शकरकंद, जो CIP द्वारा विकसित तकनीक से बनाए गए हैं, पहले से ही कर्नाटक, असम, पश्चिम बंगाल, और ओडिशा में उपलब्ध हैं।

- The **CIP**, an **apex research body** of international research institutions working on **tubular crops**, will take efforts to make the seeds of **bio-fortified sweet potato** available to **more farmers**, said Dr. Heck, currently in **India** for the **establishment of the CIP South Asia regional centre in Agra**.

CIP, जो कि कंदीय फसलों पर काम करने वाली अंतरराष्ट्रीय अनुसंधान संस्थाओं की एक शीर्ष अनुसंधान संस्था है, बायो-फोर्टिफाइड शकरकंद के बीजों को और अधिक किसानों तक पहुँचाने के प्रयास करेगा, ऐसा डॉ. हेक ने कहा, जो फिलहाल आगरा में CIP दक्षिण एशिया क्षेत्रीय केंद्र की स्थापना के लिए भारत में हैं।

- The focus is on **iron fortification in potatoes**. "We have already shared the **germ plasm** with the **Indian Council of Agricultural Research's Central Potato Institute in Shimla**. The first variety has been released in **Peru**," he said.



ध्यान आलू में आयरन फ़ोर्टिफ़िकेशन पर है। “हमने भारतीय कृषि अनुसंधान परिषद (ICAR) के शिमला स्थित सेंट्रल पोटैटो इंस्टीट्यूट के साथ जर्मप्लाज़्म साझा कर लिया है। पहली किस्म पेरू में जारी की जा चुकी है,” उन्होंने कहा।

- “Now it is under the **evaluation of the ICAR**, and it needs to be **adapted to the Indian growing conditions**,” Dr. Heck added.
“अब यह ICAR द्वारा मूल्यांकन की प्रक्रिया में है, और इसे भारतीय कृषि परिस्थितियों के अनुसार अनुकूलित करने की आवश्यकता है,” डॉ. हेक ने जोड़ा।

- Dr. Heck said **India has the strongest momentum for potato production** and farmers wanted **better varieties of potato** that grew well with **fewer agro-chemical inputs**, and they also wanted to be part of the **market chain**, including **food processing**.

डॉ. हेक ने कहा कि भारत में आलू उत्पादन की सबसे तेज़ गति है और किसान बेहतर किस्मों के आलू चाहते हैं जो कम रासायनिक इनपुट के साथ अच्छी तरह उगें, और वे खाद्य प्रसंस्करण सहित बाजार श्रृंखला का हिस्सा बनना भी चाहते हैं।

- He expressed hope that the centre will help farmers **access better quality potato and sweet potato seeds** and provide them with **better exposure to markets**.

उन्होंने आशा व्यक्त की कि यह केंद्र किसानों को बेहतर गुणवत्ता वाले आलू और शकरकंद के बीजों तक पहुँच दिलाने में मदद करेगा और उन्हें बाजारों से बेहतर जुड़ाव प्रदान करेगा।

- The **CIP believes** that the **location** chosen for the **new centre near Agra**, in the heart of the **potato belt of India**, is ideal as the **Indo-Gangetic plains** is the **largest potato-producing area in the world**.

CIP का मानना है कि आगरा के पास नया केंद्र स्थापित करने के लिए चुना गया स्थान उपयुक्त है, क्योंकि यह **भारत के आलू बेल्ट** के केंद्र में है, और **भारत-गंगा के मैदान** दुनिया का सबसे बड़ा आलू उत्पादन क्षेत्र है।

- Dr. Heck said the **Uttar Pradesh government** had made available the **land** and handed it over to the **National Horticulture Board**, which invited the **CIP** to establish the centre.

डॉ. हेक ने कहा कि **उत्तर प्रदेश सरकार** ने **भूमि उपलब्ध** कराई और उसे **राष्ट्रीय बागवानी बोर्ड** को सौंप दिया, जिसने **CIP** को केंद्र स्थापित करने के लिए आमंत्रित किया।

- The **agreement between the CIP and the Union Agriculture Ministry**, signed **last week of July**, was set up following the **demand from the Government of India** in recognition of the **potential for economic growth from the thriving potato sector**.

CIP और केंद्रीय कृषि मंत्रालय के बीच हुआ **समझौता**, जो **जुलाई के अंतिम सप्ताह** में हस्ताक्षरित हुआ, **भारत सरकार की मांग** पर किया गया था, जो **समृद्ध आलू क्षेत्र से आर्थिक वृद्धि की संभावनाओं** को पहचानने के लिए था।

- “It may be noted that **international companies**, especially **potato firms from Europe and North America**, are increasingly investing in potato production in **India**,” he said.

“यह उल्लेखनीय है कि **अंतरराष्ट्रीय कंपनियाँ**, विशेष रूप से **यूरोप और उत्तरी अमेरिका की आलू कंपनियाँ**, भारत में आलू उत्पादन में तेजी से निवेश कर रही हैं,” उन्होंने कहा।

Part of Market Chain

बाजार श्रृंखला का हिस्सा

- “What they [farmers] needed is access to **potato seed of the right quality, of the right variety, and at the right time of the year**.
“किसानों को सही गुणवत्ता, सही किस्म और वर्ष के सही समय पर आलू के बीजों तक पहुँच की आवश्यकता है।
- There are constraints. **They do not have enough potato seeds** or they **come too late for planting** or they are **not of good quality**.



कुछ बाधाएँ हैं। उनके पास पर्याप्त आलू के बीज नहीं होते, या वे बोने के लिए बहुत देर से आते हैं, या उनकी गुणवत्ता अच्छी नहीं होती।

- We need to **build the capacity for companies to multiply potato seeds**. That will be a **major contribution of the CIP**," he said.
हमें कंपनियों की आलू बीजों को गुणित करने की क्षमता विकसित करनी होगी। यह CIP का एक प्रमुख योगदान होगा," उन्होंने कहा।
- The CIP was working with **private companies and public research institutes** to make sure that **farmers throughout India** would have **access to good quality planting material**, right from the **initial breeding of new varieties**, through **multiplication every year**, in the **right locations**.
CIP निजी कंपनियों और सार्वजनिक अनुसंधान संस्थानों के साथ मिलकर काम कर रहा है ताकि भारत भर के किसानों को उच्च गुणवत्ता वाले रोपण सामग्री मिल सके, जो कि नई किस्मों की प्रारंभिक ब्रीडिंग से लेकर, हर साल के गुणन, और सही स्थानों तक सुनिश्चित की जा सके।
- He said the CIP would also ensure that the **vulnerable parts of society** had **access to nutritious potato**.
उन्होंने कहा कि CIP यह भी सुनिश्चित करेगा कि समाज के कमजोर वर्गों को पौष्टिक आलू तक पहुंच मिले।
- There were a number of opportunities along the road; one was to work with the **government**, with **public sector food procurement**, for **school feeding programmes**, such as **midday meals**.
इस दिशा में कई अवसर थे; एक था सरकार के साथ काम करना, सार्वजनिक क्षेत्र के खाद्य अधिग्रहण के साथ, जैसे स्कूल पोषण कार्यक्रमों, जैसे कि मिड-डे मील।
- This would give **children access to nutritious potatoes**, more **specifically and consistently**, he said.
इससे बच्चों को पौष्टिक आलू तक अधिक विशिष्ट और निरंतर पहुंच मिल सकेगी, उन्होंने कहा।
- Another one was to **breed potatoes that were more nutritious**, he added.
एक और अवसर था अधिक पौष्टिक आलू की किस्मों का विकास करना, उन्होंने जोड़ा।

Governing Committee प्रशासनिक समिति

- The CIP regional centre would be governed by a **coordination committee** that comprises the **Secretaries of Agriculture of India, Nepal, Bhutan, and Bangladesh**.
CIP क्षेत्रीय केंद्र का संचालन एक समन्वय समिति द्वारा किया जाएगा जिसमें भारत, नेपाल, भूटान, और बांग्लादेश के कृषि सचिव शामिल होंगे।



NSCN(I-M) rules out working with rival Naga faction NNPG

GS III: NE Insurgency

The Hindu Bureau
GUWAHATI

The National Socialist Council of Nagalim, also called the NSCN (Isak-Muivah) or NSCN(I-M), on Saturday said that working with the Working Committee of the Naga National Political Groups (NNPG) to find "common ground for Naga political solution" was a dangerous proposition.

The NNPG is a conglomerate of at least six Naga extremist groups opposed to the NSCN(I-M). The Centre signed the Agreed Position with the former in 2017, two years after the Framework Agreement (FA) was inked with the latter on August 3, 2015.

Q. Tuccu, the chairman of the NSCN(I-M), said the significance of the "historic" FA lies in the Centre's recognition of the sovereign rights of the Nagas.

Naga sovereignty

"...we are going to give up what has been achieved... to reclaim our rightful place with sovereign right as a nation. Though the government of India is going slow under various pretexts, we have waited with our enduring commitment to stand by FA overcoming numerous challenges," he said.

Mr. Tuccu said the Nagas should accept their

Nagas must work to defend the sanctity of the Framework Agreement, NSCN(I-M) chairman says

bounden duty to defend the sanctity of the FA at any cost.

"This FA symbolically acknowledged the existence of the Naga nation as testified by the recognition of the unique history of the Nagas by the Government of India on July 11, 2002, during the Indo-Naga political talks that took place in Amsterdam," he said in a speech marking the 10th anniversary of the FA.

The NSCN(I-M) chairman said the Nagas were at a crossroads today due to divisive politics within. Calling for unity and reconciliation to achieve the common goal, he, however, said working with the NNPG was a dangerous proposition.

He claimed that the NNPG was created by the Government of India to counterweight the bona fide leadership of the NSCN (I-M) for the Naga political solution and signed the "deceitful" Agreed Position with them.

"Thus, Framework Agreement and Agreed Position are poles apart and we see no meeting point whatsoever," he said.

NSCN(I-M) rules outworking with rival Naga faction NNPG

एनएससीएन (आई-एम) ने प्रतिद्वंद्वीनागा गुट एनएनपीजी के साथ काम करने से इनकार किया

National Socialist Council of Nagalim (NSCN) – Framework Agreement vs. Agreed Position

नेशनल सोशलिस्ट काउंसिल ऑफ नागालिम (NSCN) – फ्रेमवर्क एग्रीमेंट बनाम एग्रीड पोजिशन

• The National Socialist Council of Nagalim, also called the NSCN (Isak-Muivah) or NSCN(I-M), on Saturday said that working with the Working Committee of the Naga National Political Groups (NNPG) to find "common ground for Naga political solution" was a dangerous proposition.

नेशनल सोशलिस्ट काउंसिल ऑफ नागालिम, जिसे NSCN (इसाक-मुइवाह) या NSCN(I-M) भी कहा जाता है, ने शनिवार को कहा कि नागा राजनीतिक समाधान के लिए नागा नेशनल पॉलिटिकल ग्रुप्स (NNPG) की वर्किंग कमेटी के साथ काम करना एक खतरनाक प्रस्ताव है।

• The NNPG is a conglomerate of at least six Naga extremist groups opposed to the NSCN(I-M).

NNPG कम से कम छह नागा उग्रवादी समूहों का एक समूह है जो NSCN(I-M) का विरोध करता है।

• The Centre signed the Agreed Position with the former in 2017, two years after the Framework Agreement (FA) was inked with the latter on August 3, 2015.

केंद्र ने 2017 में पूर्व के साथ एग्रीड पोजिशन पर हस्ताक्षर किए, जबकि फ्रेमवर्क एग्रीमेंट (FA) पर 3 अगस्त 2015 को बाद वाले के साथ हस्ताक्षर किए गए थे।

• Q. Tuccu, the chairman of the NSCN(I-M), said the significance of the "historic" FA lies in the Centre's recognition of the sovereign rights of the Nagas.

NSCN(I-M) के चेयरमैन क्यू. तुच्चु ने कहा कि इस "ऐतिहासिक" FA का महत्व केंद्र द्वारा नागाओं के संप्रभु अधिकारों की मान्यता में निहित है।

• Naga sovereignty
नागा संप्रभुता

"...we are going to give up what has been achieved... to reclaim our rightful place with sovereign rights as a nation. Though the government of India is going slow under various pretexts, we have waited with our enduring commitment to stand by FA overcoming numerous challenges," he said.

"...हम अब तक जो हासिल किया है, उसे छोड़ने नहीं जा रहे हैं... बल्कि एक संप्रभु राष्ट्र के रूप में अपना वैध स्थान पुनः प्राप्त करने जा रहे हैं। हालांकि भारत सरकार विभिन्न बहानों के तहत धीरे बढ़ रही है, हमने FA के प्रति अपनी स्थायी प्रतिबद्धता के साथ कई चुनौतियों को पार करते हुए इंतजार किया है," उन्होंने कहा।

• Mr. Tuccu said the Nagas should accept their bounden duty to defend the sanctity of the FA at any cost.

श्री तुच्चु ने कहा कि नागाओं को किसी भी कीमत पर FA की पवित्रता की रक्षा करना अपना कर्तव्य मानना चाहिए।

• "This FA symbolically acknowledged the existence of the Naga nation as testified by the recognition of the unique history of the Nagas by the Government of India on July 11, 2002, during the Indo-Naga political talks that took place in Amsterdam,"



he said in a speech marking the **10th anniversary** of the FA.

“यह FA प्रतीकात्मक रूप से **नागा राष्ट्र के अस्तित्व** को मान्यता देता है, जैसा कि **11 जुलाई 2002** को **एम्स्टर्डम** में हुए **भारत-नागा राजनीतिक वार्ता** के दौरान भारत सरकार द्वारा नागाओं के **अद्वितीय इतिहास की मान्यता** से प्रमाणित होता है,” उन्होंने FA की **10वीं वर्षगांठ** के अवसर पर दिए गए भाषण में कहा।

- The **NSCN(I-M)** chairman said the **Nagas were at a crossroads today** due to **divisive politics within**.

NSCN(I-M) के चेयरमैन ने कहा कि नागा आज **आंतरिक विभाजनकारी राजनीति** के कारण **एक चौराहे पर खड़े हैं**।

- Calling for **unity and reconciliation** to achieve the **common goal**, he, however, said working with the **NNPG** was a **dangerous proposition**.

उन्होंने **साझा लक्ष्य** को प्राप्त करने के लिए **एकता और मेल-मिलाप** की अपील की, लेकिन साथ ही कहा कि **NNPG के साथ काम करना एक खतरनाक प्रस्ताव** है।

- He claimed that the **NNPG** was created by the **Government of India** to **counterweight** the **bona fide leadership of the NSCN (I-M)** for the Naga political solution and signed the “**deceitful**” Agreed Position with them.

उन्होंने दावा किया कि **NNPG** को **भारत सरकार** द्वारा **NSCN (I-M)** के **वैध नेतृत्व** के प्रभाव को कम करने के लिए बनाया गया था और उनके साथ “**छलपूर्ण**” **एग्रीड पोजिशन** पर हस्ताक्षर किए गए।

- “Thus, **Framework Agreement and Agreed Position** are **poles apart** and we see **no meeting point whatsoever**,” he said.

“इस प्रकार, **फ्रेमवर्क एग्रीमेंट और एग्रीड पोजिशन** एक-दूसरे से **पूरी तरह भिन्न** हैं और हम इनमें किसी भी प्रकार की **समानता नहीं देखते हैं**,” उन्होंने कहा।

Central nod to increase CISF strength, 58,000 personnel to be recruited over next five years

GS III: CISF

Vijaita Singh
NEW DELHI

The Union Home Ministry has approved the recruitment of 58,000 additional personnel for the Central Industrial Security Force (CISF), anticipating future industrial hubs in areas now affected by Left-wing extremism (LWE).

Home Minister Amit Shah has set March 2026 as deadline for the security forces to end Maoist activities in Chhattisgarh, one of the worst-affected States.

The geographical spread of LWE violence has reduced substantially in the past decade. The number of districts affected in 2013 stood at 126 in 10 States, which had fallen to



Gaining strength: CISF official says about 14,000 personnel will be recruited per year over the next five years. REUTERS

38 in 2024.

On July 22, the Ministry wrote to inform CISF Director-General R.S. Bhatti that the President had sanctioned an enhancement in the force's authorised ceiling strength, from 2 lakh to 2.2 lakh. As the present strength of the

CISF is 1.62 lakh, the decision could lead to the recruitment of around 58,000 people.

A CISF official said that around 14,000 personnel will be recruited each year over the next five years. The official said that the new additions would help

in the CISF's deployment across critical sectors such as aviation, sea ports, thermal power plants, nuclear installations, hydro power plants, and jails in Jammu and Kashmir.

New industrial hubs

“With the decline of Left-wing extremism in States such as Chhattisgarh, new industrial hubs are anticipated to emerge, necessitating a stronger CISF presence to provide comprehensive and effective security to these units,” the official said.

The CISF recruited 13,230 personnel in 2024, and the recruitment of another 24,098 is underway during the current year.

Post-Operation Sindoor, there has been an increase in requests by several organisations for CISF security cover. “Around 35 requests are under process and requests from around 100 installations are pending,” the official said.

In the past year, the CISF has been deployed at seven new locations: the Parliament House complex, Ayodhya airport, the National Thermal Power Corporation's coal mining project in Hazaribagh, the Indian Council of Medical Research-National Institute of Virology in Pune, the Buxar thermal power project, the Jawahar thermal power project in Etah; and the Beas Satluj Link project in Mandi.

Central nod to increase CISF strength, 58,000 personnel to be recruited over next five years



सीआईएसएफ की संख्या बढ़ाने के लिए केंद्र की मंजूरी, अगले पाँच वर्षों में 58,000 कर्मियों की भर्ती की जाएगी

CISF Recruitment Expansion Approved CISF भर्ती विस्तार को मंजूरी मिली

- The Union Home Ministry has approved the recruitment of **58,000 additional personnel** for the **Central Industrial Security Force (CISF)**, anticipating future **industrial hubs** in areas now affected by **Left-wing extremism (LWE)**.
केंद्रीय गृह मंत्रालय ने **58,000 अतिरिक्त कर्मियों** की भर्ती को मंजूरी दी है **केंद्रीय औद्योगिक सुरक्षा बल (CISF)** के लिए, जिससे यह उम्मीद की जा रही है कि **वामपंथी उग्रवाद (LWE)** से प्रभावित क्षेत्रों में भविष्य में **औद्योगिक केंद्र** बन सकते हैं।
- Home Minister Amit Shah** has set **March 2026** as the deadline for the security forces to end **Maoist activities** in **Chhattisgarh**, one of the **worst-affected States**.
गृह मंत्री **अमित शाह** ने सुरक्षा बलों के लिए **मार्च 2026** की समयसीमा तय की है कि वे **छत्तीसगढ़** जैसे सबसे अधिक प्रभावित राज्य में **माओवादी गतिविधियों** को समाप्त करें।
- The **geographical spread** of LWE violence has reduced substantially in the past decade.
पिछले दशक में **LWE हिंसा** का **भौगोलिक प्रसार** काफी हद तक कम हो गया है।
- The number of **districts affected** in **2013** stood at **126** in **10 States**, which had fallen to **38** in **2024**.
2013 में **10 राज्यों** में प्रभावित जिलों की संख्या **126** थी, जो **2024** में घटकर **38** रह गई है।
- On **July 22**, the Ministry wrote to inform **CISF Director-General R.S. Bhatti** that the **President** had sanctioned an enhancement in the force's **authorised ceiling strength**, from **2 lakh** to **2.2 lakh**.
22 जुलाई को मंत्रालय ने **CISF महानिदेशक आर.एस. भट्टी** को सूचित किया कि **राष्ट्रपति** ने बल की **स्वीकृत अधिकतम क्षमता** को **2 लाख से बढ़ाकर 2.2 लाख** करने की मंजूरी दे दी है।
- As the **present strength** of the CISF is **1.62 lakh**, the decision could lead to the recruitment of around **58,000 people**.
चूंकि **CISF की वर्तमान ताकत 1.62 लाख** है, इसलिए इस निर्णय से लगभग **58,000 लोगों** की भर्ती हो सकती है।
- A CISF official said that around **14,000 personnel** will be recruited each year over the next **five years**.
एक CISF अधिकारी ने बताया कि अगले **पाँच वर्षों** में हर साल लगभग **14,000 कर्मियों** की भर्ती की जाएगी।
- The official said that the new additions would help in the CISF's deployment across **critical sectors** such as **aviation, sea ports, thermal power plants, nuclear installations, hydro power plants, and jails** in **Jammu and Kashmir**.
अधिकारी ने कहा कि नई नियुक्तियाँ CISF की तैनाती को **महत्वपूर्ण क्षेत्रों** में सहायता प्रदान करेंगी, जैसे कि **हवाई क्षेत्र, समुद्री बंदरगाह, थर्मल पावर प्लांट, परमाणु प्रतिष्ठान, हाइड्रो पावर प्लांट, और जम्मू और कश्मीर की जेलें**।

New Industrial Hubs नए औद्योगिक केंद्र

- "With the **decline of Left-wing extremism** in States such as **Chhattisgarh**, new **industrial hubs** are anticipated to emerge, necessitating a **stronger CISF presence** to provide comprehensive and effective security to these units," the official said.
अधिकारी ने कहा, "**छत्तीसगढ़** जैसे राज्यों में **वामपंथी उग्रवाद** में गिरावट के साथ, नए **औद्योगिक**



केंद्र उभरने की संभावना है, जिनके लिए मजबूत CISF उपस्थिति की आवश्यकता होगी ताकि इन इकाइयों को समग्र और प्रभावी सुरक्षा मिल सके।"

- The CISF recruited **13,230 personnel** in 2024, and the recruitment of another **24,098** is underway during the current year.

CISF ने 2024 में 13,230 कर्मियों की भर्ती की थी, और इस वर्ष के दौरान और 24,098 की भर्ती प्रक्रिया चल रही है।

'Anything that moves, NISAR will see with unprecedented fidelity'

A conversation with Karen St. Germain, director of the Earth Science Division at NASA's Science Mission Directorate, on the extraordinary new capability NISAR represents for ISRO and NASA: a satellite that has been 11 years in the making has implications for the study of other planets too

GS III: S&T

INTERVIEW
Karen St. Germain

Vasudevan Mukunth
Kunal Shankar

In July 31, ISRO launched the NASA-ISRO Synthetic Aperture Radar (NISAR) satellite, a flagship earth observation mission jointly developed by the two space agencies. It's the first satellite to use radars of two frequencies to monitor the earth's surface. NISAR will enhance climate resilience, agricultural monitoring, and disaster response. To discuss the milestone, Vasudevan Mukunth and Kunal Shankar spoke to Karen St. Germain, director of the Earth Science Division at the Science Mission Directorate at NASA, to understand the mission's science goals. To watch the full interview, visit news4life/nasa/science.

Vasudevan Mukunth: Karen, thank you so much for joining us today. Can you give us a few examples of scientific studies that are possible with NISAR, but haven't been possible so far with the existing crop of earth observation satellites?

Karen St. Germain: Absolutely, and it's great to be with you. The way to think about NISAR is that it will see anything that has structure to it that moves, that changes its position at a scale of less than a centimetre over an area about half of a tennis court. When I say anything that has structure: it could be forest, it could be buildings, it could be glaciers, mountains, land. Anything that moves, we'll see at an unprecedented level of fidelity. What that means is we will be able to see the slight bulging that happens before a volcano erupts. We'll be able to see the land becoming unstable before a landslide. We'll be able to see building shifts after an earthquake or any other sort of event. When a forest gets cut down, we'll be able to see that. Anything that changes, we'll be able to see, and that's an extraordinary new capability for us.

Kunal Shankar: After the launch, NISAR will start its 90-day commissioning phase. In this phase, do you foresee any challenges with calibration, especially with cross-band calibration?

Karen St. Germain: There are a number of different aspects to the calibration. Largely the ISRO team will focus on calibrating the S-band radar and the NASA team will focus on calibrating the L-band radar. They don't really get cross-calibrated, but each one will look at its own special targets.

Now, what do I mean by a target? It's something we call a corner reflector and it is exactly what it sounds like. It's a right-angle corner, just like the corner of a room. And it has a special feature, which is that when a pulse of energy hits it from any direction, it reflects back in exactly the same direction. So we use these targets to calibrate independently each of the instruments. And then the only other thing we really have to pay special attention to is the alignment, the pointing. Are they pointing in the same place on the ground? And for that, we'll use the data itself. So the data itself will identify features and we'll align those features from each radar.

Kunal Shankar: Speaking of costs, there's a lot of interest about the commercial aspect and the applications aspect of NISAR. Could you just tell us a bit about the kind of interest that it has generated?

Karen St. Germain: Actually, let me take a step back and talk about earth observation data in general because understanding the earth — the surface, the atmosphere, and the changes large and small that can have impacts on communities and businesses, that's become an enormous area of interest. In fact, NASA's been collecting data on the earth system for more than 60 years now. And we find that about three quarters of our Fortune 100 companies are drawing something out of that earth observation archive. We also find that about 75% of our users, and we have more than 5 million users, are coming from .com addresses. So we are talking about agriculture producers, the insurance industry, the finance industry, the transportation industry. And that's before you even get to things like disaster response. So we have a tremendous interest in general.

For NISAR specifically, we know that NISAR will produce data that can directly be-



Karen St. Germain

ILLUSTRATION: SOURABH SHINHA

net agriculture, also risk assessment — everything from natural hazards like earthquakes and volcanoes, which are both issues in the US but also things like wildfire risk because NISAR will be able to characterize how much fuel is in our wildlands. So that's dry fuel that is burnable. There are all these application areas. One of the things that we do that we're really excited about is any time we launch a new mission, we have an Early Adopters program. These are people out there who anticipate what NISAR might do for them in their business. We don't require that they tell us a lot about what they intend to do. But right now for NISAR, we have at least 200 of these Early Adopters. Once the data start to roll out and the excitement builds, we expect it to take off from there.

Vasudevan Mukunth: Can you say why NISAR took 11 years to build? Were there any particularly difficult engineering challenges that you had to overcome first?

Karen St. Germain: Yeah, absolutely. First, it's an enormously complex system, with many dozens of subsystems that had to be designed. Of course, to make these two radars work together and operate through a single reflector, there's a lot of design work that had to happen up front. So it was challenging to begin with. And then we had a couple of other particular challenges. This one happened right as I was starting my job COVID hit. So think about an integrated engineering team already separated by time zones and distance and now having to work through a global pandemic. A lot of this work would have had to happen in person. We had people

who had to travel at the height of COVID, and had to leave their families. Remember that the waves of COVID hit differently in the US and India. We had people on both teams sometimes come down with COVID when they were in the opposite country, so we had to take care of one another's teams. Then we had to develop entirely new protocols for how people could work together in a space and remain healthy. That was a big one.

More recently, this reflector is enormous, it's about a 40-foot deployable reflector. And when we were in India integrating and we were testing in the thermal vacuum, we saw some data that worried us. We were really afraid that there may be too much of a thermal load on that reflector before it gets deployed, and it might overheat. If it did that, it could challenge the structural integrity. Of course, when you've got a deployable antenna, if it doesn't stay taut, it doesn't reflect the way you want it to. So we ended up de-mating that reflector, bringing it back home, applying a reflective coating so the sun couldn't cause it to overheat, on the struts (not on the reflector surface itself). Then we had to ship it back and re-integrate. So we had a couple of technical challenges, which we expect when you're doing something as difficult as this.

Vasudevan Mukunth: Both the L-band and the S-band radars use the same reflector. Since S-band has a shorter wavelength than the L-band, does this create any trade-offs in either L-band or S-band performance?

Karen St. Germain: It doesn't. And the reason for that is because this is a synthetic

aperture radar. It creates its spatial resolution as it moves along. Each radar is taking snapshots as it moves along. You know, to get this kind of centimetre level fidelity and the kind of spatial resolution we're achieving, if you were to use a solid antenna, it would have to be five miles long. Just like when you're talking about a camera, if you want to be able to get high fidelity, you need a big lens. Same idea. But we can't deploy an antenna that big. So what we do is we build up image after image after image to get that resolution. And because of this technique, it's actually independent of wavelength. It works the same for S- and for L-bands. The only thing that's a little different is because the antenna feeds for the L-band and the S-band can't physically occupy the same space, they have to be next to each other and that means there's a slight difference in the way their pulses reflect off the antenna. There's that positioning difference, and that we can correct for.

Vasudevan Mukunth: Could you tell us a little bit more about that slight difference?

Karen St. Germain: It's the way a reflector works. You would ideally want to put the feed at the focal point of the reflector. But when you have two feeds, you can't do that. So they're slightly offset. That means they illuminate the reflector just slightly differently. The alignment is just a little bit different. The team optimized the design to minimize that difference and to make it so that they could correct it in post-processing.

Kunal Shankar: How do NASA and JPL's radar systems for planetary exploration feed into and evolve from their earth observation systems?

Karen St. Germain: Once you have expertise in a technology, you can use it in many, many ways. And this is often the case in NASA between earth science and planetary science. One of us will develop a new technology or advance a new technology and then it can be used very broadly. So absolutely! And we love that kind of interplay. I love seeing earth science technologies make it into planetary missions.

That's one aspect. The other thing is what we learn from NISAR on earth can inform what we understand about other planets. There are lots of ways that we interact across disciplines.

One of the things that NISAR is going to tell us about is what's going on underneath the crust of the surface because we'll be able to see these very small motions that you and I don't experience daily, right? We can't sense these. But NISAR will, and it will allow us to advance our models about how the interior of planets work. And those kinds of models are the same models we use when we try to understand how a planet like Mars works.

(Kunal Shankar@thehindu.co.in) (mukunth.v@thehindu.co.in)



A view of NISAR before the chamber door was closed ahead of its thermal vacuum testing at the Jet Propulsion Laboratory, California, January 4, 2022. NASA

'Anything that moves, NISAR will see with unprecedented fidelity' "जो भी वस्तु हिलेगी, NISAR उसे अभूतपूर्व स्पष्टता से देखेगा"

NASA-ISRO Synthetic Aperture Radar (NISAR) Launch नासा-इसरो सिंथेटिक एपर्चर रडार (NISAR) लॉन्च

- On July 31, ISRO launched the NASA-ISRO Synthetic Aperture Radar (NISAR) satellite, a flagship earth observation mission jointly developed by the two space agencies.

31 जुलाई को ISRO ने NASA-ISRO Synthetic Aperture Radar (NISAR) सैटेलाइट लॉन्च किया, जो दोनों अंतरिक्ष एजेंसियों द्वारा संयुक्त रूप से विकसित एक प्रमुख पृथ्वी अवलोकन मिशन है।

- It's the first satellite to use radars of two frequencies to monitor the earth's surface.

यह पृथ्वी की सतह की निगरानी के लिए दो फ्रीक्वेंसी वाले रडार का उपयोग करने वाला पहला उपग्रह है।

- NISAR will enhance climate resilience, agricultural monitoring, and disaster response.

NISAR जलवायु लचीलापन, कृषि निगरानी और आपदा प्रतिक्रिया को बेहतर बनाएगा।

- To discuss the milestone, Vasudevan Mukunth and Kunal Shankar spoke to Karen St. Germain, Director of the Earth Science Division at NASA.

इस उपलब्धि पर चर्चा के लिए वासुदेवन



मुकुंथ और कुणाल शंकर ने नासा की अर्थ साइंस डिवीजन की निदेशक करेन सेंट जर्मेन से बात की।

Scientific Capabilities of NISAR

NISAR की वैज्ञानिक क्षमताएँ

- NISAR will see anything that has structure and moves or changes its position at a scale of less than a centimetre over an area about half of a tennis court.
NISAR ऐसी किसी भी संरचना को देख सकता है जो हिलती या बदलती हो, और जिसकी स्थिति एक सेंटीमीटर से भी कम में, लगभग टेनिस कोर्ट के आधे आकार में बदलती हो।
- This includes forests, buildings, glaciers, mountains, land, etc.
इसमें जंगल, इमारतें, ग्लेशियर, पहाड़ और ज़मीन शामिल हैं।
- NISAR can detect the slight bulging before a volcano erupts, or land instability before a landslide, or building shifts after an earthquake.
NISAR ज्वालामुखी विस्फोट से पहले की मामूली उभरी हुई सतह, भूस्खलन से पहले की अस्थिर भूमि, या भूकंप के बाद इमारतों की हलचल का पता लगा सकता है।
- It can detect deforestation and any other structural change.
यह वनों की कटाई और अन्य किसी भी संरचनात्मक परिवर्तन का पता लगा सकता है।

Commissioning and Calibration Phase

कमिशनिंग और कैलिब्रेशन चरण

- After launch, NISAR will undergo a 90-day commissioning phase.
लॉन्च के बाद NISAR 90 दिनों के कमिशनिंग चरण से गुज़रेगा।
- The ISRO team will calibrate the S-band radar, and the NASA team will calibrate the L-band radar.
ISRO टीम S-बैंड रडार का और NASA टीम L-बैंड रडार का कैलिब्रेशन करेगी।
- Cross-band calibration is not required, each team focuses on its own targets.
क्रॉस-बैंड कैलिब्रेशन की आवश्यकता नहीं है, प्रत्येक टीम अपने स्वतंत्र लक्ष्यों पर ध्यान देगी।
- Calibration uses corner reflectors—structures that reflect energy back in the same direction it came from.
कैलिब्रेशन में कॉर्नर रिफ्लेक्टर का उपयोग होता है—ऐसी संरचनाएँ जो किसी भी दिशा से आने वाली ऊर्जा को उसी दिशा में वापस परावर्तित करती हैं।
- Final alignment will be done using the data itself, comparing radar features to ensure both are pointing at the same location.
अंतिम संरेखण (alignment) स्वयं डेटा का उपयोग करके किया जाएगा, ताकि दोनों रडार एक ही स्थान की ओर इशारा कर रहे हों, यह सुनिश्चित किया जा सके।

Commercial and Application Interest

व्यावसायिक और अनुप्रयोग संबंधी रुचि

- Earth observation has become a huge area of interest because understanding earth systems has implications for communities and businesses.
पृथ्वी अवलोकन एक बहुत बड़ा रुचि क्षेत्र बन गया है क्योंकि पृथ्वी प्रणाली की समझ का प्रभाव समुदायों और व्यवसायों पर पड़ता है।
- NASA has been collecting earth data for more than 60 years.
NASA पिछले 60 वर्षों से अधिक समय से पृथ्वी संबंधी डेटा एकत्र कर रहा है।
- Around 75% of Fortune 100 companies use data from the NASA earth observation archive.
लगभग Fortune 100 कंपनियों में से 75% कंपनियाँ NASA पृथ्वी डेटा अभिलेखागार से डेटा का उपयोग करती हैं।



- **75% of NASA's 5 million users** come from **.com addresses** — indicating commercial usage.
NASA के 50 लाख उपयोगकर्ताओं में से 75% .com पते से आते हैं — जो व्यावसायिक उपयोग को दर्शाता है।
- Users include **agriculture producers, insurance, finance, and transportation sectors**.
उपयोगकर्ताओं में कृषि उत्पादक, बीमा, वित्त और परिवहन क्षेत्र शामिल हैं।

Specific Benefits of NISAR

NISAR के विशेष लाभ

- NISAR will benefit **agriculture and risk assessment for natural hazards like earthquakes, volcanoes, and wildfires**.
NISAR कृषि और प्राकृतिक खतरों जैसे भूकंप, ज्वालामुखी, और जंगल की आग के लिए जोखिम मूल्यांकन में मदद करेगा।
- It can **characterise dry fuel** in wildlands, helping assess **wildfire risks**.
यह सूखी जलाऊ सामग्री की पहचान कर सकता है, जिससे जंगल की आग के जोखिम का आकलन करने में मदद मिलती है।
- NISAR has an **Early Adopters program** for potential users exploring its utility for their business needs.
NISAR के पास एक **अर्ली अडॉप्टर्स प्रोग्राम** है, जो संभावित उपयोगकर्ताओं को उनके व्यापारिक उद्देश्यों के लिए इसके उपयोग की जांच करने की सुविधा देता है।
- Over **200 early adopters** are already on board, and more are expected once **data starts rolling out**.
अब तक **200 से अधिक अर्ली अडॉप्टर्स** जुड़ चुके हैं, और जब **डेटा मिलना शुरू होगा**, तो संख्या और बढ़ेगी।

NISAR's 11-Year Development Journey

NISAR के 11 वर्षों के विकास की यात्रा

- First, it's an **enormously complex system**, with **many dozens of subassemblies** that had to be designed.
सबसे पहले, यह एक **बेहद जटिल प्रणाली** है, जिसमें **कई दर्जनों उप-घटक** डिज़ाइन करने थे।
- To make **two radars work together** and operate through a **single reflector**, a lot of **design work** had to happen up front.
दो रडारों को एक साथ कार्य करने और **एक ही रिफ्लेक्टर** के माध्यम से संचालन के लिए, पहले से ही बहुत सारा **डिज़ाइन कार्य** करना पड़ा।
- COVID hit just as I was starting my job — affecting an **internationally distributed team** already separated by **time zones and distance**.
जब मैंने अपनी नौकरी शुरू की, तभी **COVID आया**, जिससे **समय क्षेत्र और दूरी से पहले से ही अलग एक अंतरराष्ट्रीय टीम** प्रभावित हुई।
- Much of the work had to be **in-person**, requiring people to travel even during the **height of COVID**.
बहुत सारा काम **प्रत्यक्ष रूप से** होना था, जिससे लोगों को **COVID की चरम स्थिति में भी यात्रा** करनी पड़ी।
- The **waves of COVID** hit the **US and India differently**, with team members falling ill in the **opposite country**.
COVID की लहरें अमेरिका और भारत में अलग-अलग समय पर आईं, जिससे दोनों देशों की टीमों के सदस्य **विपरीत देश में बीमार** हो गए।



- **New protocols** were developed so that people could work together and remain **healthy**.
लोगों के **स्वस्थ** रहते हुए मिलकर काम करने के लिए **नए प्रोटोकॉल** बनाए गए।
- The **reflector** is a **40-foot deployable structure**; during **thermal vacuum testing in India**, data showed signs of **thermal load risk** before deployment.
यह **रिफ्लेक्टर 40 फुट लंबा फैलाया जा सकने वाला ढांचा** है; भारत में **थर्मल वैक्यूम परीक्षण** के दौरान **तापीय भार के खतरे** के संकेत मिले।
- If the reflector **overheats**, it could **lose structural integrity** and **not reflect** radar signals properly.
यदि रिफ्लेक्टर **अधिक गर्म** हो जाता है, तो यह **संरचनात्मक ताकत खो सकता है** और **सही से रडार सिग्नल नहीं दर्शा सकता**।
- The reflector was **de-mated**, brought **back home**, and **coated** to prevent overheating — then **shipped again** and reintegrated.
रिफ्लेक्टर को **अलग किया गया, वापस लाया गया, और कोटिंग की गई** ताकि यह गर्म न हो — फिर इसे **फिर से भेजा गया और जोड़ा गया**।
- These were **expected technical challenges** in such a **difficult and novel mission**.
ये **ऐसी कठिन और नई परियोजना में अपेक्षित तकनीकी चुनौतियाँ थीं**।

L-band and S-band Performance Trade-offs

एल-बैंड और एस-बैंड प्रदर्शन में समझौते

- Both L-band and S-band radars use the **same reflector**.
एल-बैंड और एस-बैंड दोनों रडार एक ही रिफ्लेक्टर का उपयोग करते हैं।
- There's **no performance trade-off** because this is a **Synthetic Aperture Radar (SAR)** — it builds **spatial resolution** through **motion-based imaging**.
इसमें कोई **प्रदर्शन समझौता नहीं** होता क्योंकि यह एक **सिंथेटिक एपरचर रडार (SAR)** है — जो **गतिशील छवियों के माध्यम से स्थानिक स्पष्टता** प्राप्त करता है।
- With SAR, the radar captures **multiple snapshots** to create **centimeter-level fidelity** and **high spatial resolution**.
SAR के साथ, रडार **कई स्नेपशॉट** लेकर **सेंटीमीटर स्तर की स्पष्टता** और **उच्च स्थानिक विभेदन** प्राप्त करता है।
- If a solid antenna were used, it would need to be **five miles long**, which is impractical.
यदि ठोस एंटीना का उपयोग किया जाता, तो उसे **पाँच मील लंबा** होना पड़ता, जो अव्यावहारिक है।
- SAR works **independently of wavelength**, so it functions **equally well** for both **S- and L-bands**.
SAR **तरंगदैर्घ्य से स्वतंत्र रूप से** कार्य करता है, इसलिए यह **एस और एल-बैंड दोनों के लिए समान रूप से अच्छा** कार्य करता है।
- The only issue is that **L-band and S-band feeds** can't be in the **same focal point**, leading to **slight difference** in how they **reflect**.
एकमात्र समस्या यह है कि **एल-बैंड और एस-बैंड फीड्स** को **एक ही फोकल पॉइंट** पर नहीं रखा जा सकता, जिससे उनके **प्रतिबिंब में हल्का अंतर** आता है।
- This **offset** is **corrected** during **post-processing**.
इस **अंतर** को **पोस्ट-प्रोसेसिंग के दौरान ठीक** किया जाता है।

Reflector Alignment Issues

रिफ्लेक्टर संरेखण की समस्याएँ

- Ideally, the radar feed should be at the **focal point of the reflector**.
आदर्श रूप से, रडार फीड को **रिफ्लेक्टर के फोकल पॉइंट** पर होना चाहिए।

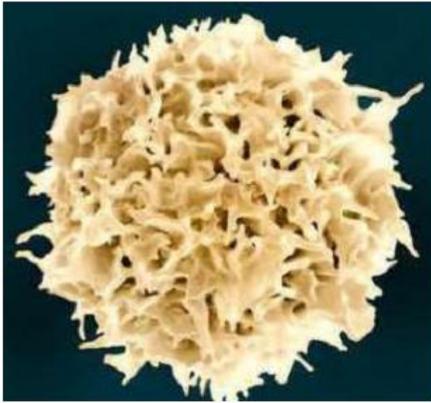


- With **two feeds**, each is **slightly offset**, causing **slightly different illumination** of the reflector.
दो फीड होने के कारण, प्रत्येक को थोड़ा हटाकर रखा गया है, जिससे रिफ्लेक्टर की प्रकाशन में थोड़ा अंतर आता है।
- The team **optimized the design** to minimize this difference and allow **correction in data processing**.
टीम ने इस अंतर को कम करने के लिए डिज़ाइन का अनुकूलन किया और डेटा प्रोसेसिंग में सुधार की व्यवस्था की।

Planetary Science Connection

ग्रहविज्ञान से संबंध

- Once a technology is mastered, NASA uses it across **earth and planetary science**.
एक बार किसी तकनीक में विशेषज्ञता हो जाने के बाद, NASA उसे पृथ्वी और ग्रह विज्ञान दोनों में उपयोग करता है।
- **Technological advances** in one area often **benefit another**, fostering **interdisciplinary synergy**.
किसी एक क्षेत्र में तकनीकी प्रगति, अक्सर दूसरे क्षेत्र को लाभ देती है और अंतर्विषयक तालमेल को बढ़ावा देती है।
- **NISAR's learnings** about **sub-crustal motion** can improve models for other **planetary bodies** like Mars.
NISAR द्वारा क्रस्ट के नीचे की गति की समझ, अन्य ग्रहों (जैसे मंगल) के मॉडल सुधारने में मदद कर सकती है।
- NISAR will detect **tiny earth movements** invisible to human senses, enhancing our understanding of **planetary interiors**.
NISAR पृथ्वी की सूक्ष्म गतियों को देख सकेगा जो हमारी इंद्रियों से अदृश्य होती हैं, जिससे ग्रहों के आंतरिक ढांचे की समझ बढ़ेगी।
- These **models and insights** will contribute directly to **planetary exploration missions**.
ये मॉडल और अंतर्दृष्टियाँ सीधे ग्रह अन्वेषण अभियानों में योगदान देंगी।



A coloured scanning electron micrograph of a T cell. NIAID

Scientists use AI-designed proteins to generate immune cells

Rahul Karmakar

GS III: S&T: Immunity and Immune cell

A team of Harvard scientists has used artificial intelligence (AI), in the form of AI-designed proteins, to generate large numbers of immune cells and enhance immunity against diseases ranging from cancer to viral infections, a new research paper published in *Cell* said.

The scientists engineered a synthetic activator of a key cellular pathway called Notch signalling, which plays a crucial role in cellular differentiation and is essential for transforming human immune progenitors into T cells. Notch signalling is a cell-to-cell communication system vital for various developmental processes and tissue homeostasis in multicellular organisms. Homeostasis is the body's way of keeping everything balanced and stable, despite what is happening around it.

"In response to viral infections or cancer, the body requires a higher production of T cells to mount an effective immune defence. However, this process depends on the activation of the Notch signalling pathway, for which no effective molecular activators have been available," Rubul Mout from Assam, the principal scientist of the study, said.

Associated with the Harvard Stem Cell Institute and the Stem Cell & Regenerative Biology Program at Boston Children's Hospital, he is one of 24 scientists involved in the collaborative effort. They include George Daley, the Dean of Harvard Medical School, and Nobel laureate David Baker.

The body needs more T cells to deal with viral infections or cancer. This process depends on activation of Notch signalling pathways, for which no molecular activators have been available

Improved method

According to the study, an earlier method of activating Notch signalling in laboratory settings by immobilising Notch ligands on tissue culture dishes is not applicable for therapeutic use in humans. The quest for a viable, soluble activator of Notch signalling that could work in vivo (inside a living body) made the team develop a library of custom-designed soluble Notch agonists and systematically test their ability to activate the Notch pathway and support T cell development and function.

AI-driven protein design technologies, an innovation that contributed to Dr. Baker receiving the 2024 Nobel Prize in Chemistry along with Demis Hassabis and John Jumper, were used to address the challenge.

Using the agonists, the researchers demonstrated the large-scale generation of T cells in a laboratory bioreactor, an important advancement given the growing demand for T cell production in hospitals worldwide for Chimeric Antigen Receptor (CAR) T cell-based cancer immunotherapies.

Furthermore, when the agonists were injected into mice during vaccination, the animals displayed significantly improved T cell responses, indicating an enhanced immune response. The treatment resulted in increased production of memory T cells, which are crucial for the long-term impact of vaccines. "Being able to activate Notch signalling opens up tremendous opportunities in immunotherapy, vaccine development, and immune cell regeneration," Dr. Mout said.

(rahul.karmakar@thehindu.co.in)



Scientists use AI-designed proteins to generate immune cells

वैज्ञानिकों ने प्रतिरक्षा कोशिकाएं उत्पन्न करने के लिए एआई-डिज़ाइन किए गए प्रोटीन का उपयोग किया

AI-Driven T Cell Generation and Immunity Enhancement

AI-संचालित टी सेल उत्पादन और रोग प्रतिरोधक क्षमता में वृद्धि

- A team of **Harvard scientists** has used **artificial intelligence (AI)** in the form of **AI-designed proteins** to generate large numbers of **immune cells** and enhance immunity against diseases like **cancer** and **viral infections**, according to a new research paper published in Cell.

हार्वर्ड के वैज्ञानिकों की एक टीम ने **AI-डिज़ाइन किए गए प्रोटीन** के रूप में **कृत्रिम बुद्धिमत्ता (AI)** का उपयोग करके बड़ी संख्या में **प्रतिरक्षा कोशिकाओं** का उत्पादन किया और **कैंसर** व **वायरल संक्रमण** जैसे रोगों के विरुद्ध प्रतिरक्षा को बढ़ाया है, यह जानकारी Cell में प्रकाशित एक नए शोध पत्र में दी गई है।

- The scientists engineered a **synthetic activator** of a key cellular pathway called **Notch signalling**, which is essential for transforming **human immune progenitors into T cells**.

वैज्ञानिकों ने **Notch signalling** नामक एक प्रमुख सेलुलर मार्ग का **कृत्रिम सक्रियक** विकसित किया, जो **मानव प्रतिरक्षा पूर्वज कोशिकाओं** को **टी कोशिकाओं** में परिवर्तित करने के लिए आवश्यक है।

- Notch signalling** is a **cell-to-cell communication system** vital for **developmental processes** and **tissue homeostasis** in multicellular organisms.

Notch signalling एक **सेल-टू-सेल संचार प्रणाली** है जो **विकास प्रक्रियाओं** और **ऊतक संतुलन (homeostasis)** के लिए महत्वपूर्ण है।

- Homeostasis** is the **body's way of keeping everything balanced and stable**, despite **external changes**.

होमियोस्टेसिस शरीर का वह तरीका है जिससे वह **संतुलन और स्थिरता** बनाए रखता है, चाहे बाहरी परिवेश में कुछ भी हो रहा हो।

- "In response to **viral infections or cancer**, the body requires a **higher production of T cells**, but this depends on the activation of **Notch signalling**, for which no **effective molecular activators** were previously available," said **Rubul Mout** from **Assam**, principal scientist of the study.

"**वायरल संक्रमण या कैंसर** की प्रतिक्रिया में शरीर को **टी कोशिकाओं के अधिक उत्पादन** की आवश्यकता होती है, लेकिन यह **Notch signalling** के सक्रिय होने पर निर्भर करता है, जिसके लिए पहले कोई **प्रभावी आणविक सक्रियक** उपलब्ध नहीं था," यह कहना है **असम के रुबुल माउत**, जो इस अध्ययन के प्रमुख वैज्ञानिक हैं।

- He is associated with the **Harvard Stem Cell Institute** and the **Stem Cell & Regenerative Biology Program at Boston Children's Hospital**, and is one of **24 scientists** involved in this collaborative effort.

वह **हार्वर्ड स्टेम सेल संस्थान** और **बोस्टन चिल्ड्रन हॉस्पिटल के स्टेम सेल और पुनर्योजी जीवविज्ञान कार्यक्रम** से जुड़े हुए हैं, और इस सहयोगात्मक प्रयास में शामिल **24 वैज्ञानिकों** में से एक हैं।

- The team includes **George Daley**, **Dean of Harvard Medical School**, and **Nobel laureate David Baker**.

टीम में **हार्वर्ड मेडिकल स्कूल के डीन जॉर्ज डेली** और **नोबेल पुरस्कार विजेता डेविड बेकर** भी शामिल हैं।



Improved Method of Activating Notch Signalling

Notch signalling को सक्रिय करने की उन्नत विधि

- An earlier method involved **immobilising Notch ligands** on tissue culture dishes, which was not suitable for **therapeutic use in humans**.
पहले की विधि में टिशू कल्चर डिशों पर Notch लिगैंड को स्थिर करना शामिल था, जो मानवों में चिकित्सकीय उपयोग के लिए उपयुक्त नहीं थी।
- To address this, the team developed a **library of custom-designed soluble Notch agonists** and tested their ability to **activate the pathway** and support **T cell development**.
इसे हल करने के लिए, टीम ने विशेष रूप से डिज़ाइन किए गए घुलनशील Notch अगोनिस्ट की एक लाइब्रेरी विकसित की और उनकी मार्ग को सक्रिय करने और टी सेल विकास को समर्थन देने की क्षमता का परीक्षण किया।
- **AI-driven protein design technologies**, a key innovation behind **Dr. Baker's 2024 Nobel Prize in Chemistry**, were used in this process.
इस प्रक्रिया में **AI-संचालित प्रोटीन डिज़ाइन तकनीकों** का उपयोग किया गया, जो **डॉ. बेकर को 2024 में रसायन विज्ञान में नोबेल पुरस्कार** दिलाने वाला मुख्य नवाचार था।

Impact and Applications

प्रभाव और अनुप्रयोग

- Using the agonists, the researchers achieved **large-scale T cell generation** in a **laboratory bioreactor**, which is significant for **CAR T cell-based cancer immunotherapies**.
इन अगोनिस्ट का उपयोग करके शोधकर्ताओं ने प्रयोगशाला बायोरिएक्टर में बड़े पैमाने पर टी सेल उत्पादन प्राप्त किया, जो **CAR टी सेल आधारित कैंसर इम्यूनोथेरेपी** के लिए महत्वपूर्ण है।
- When the agonists were **injected into mice** during vaccination, the animals showed **significantly improved T cell responses**, indicating **enhanced immune response**.
जब टीकाकरण के दौरान चूहों में ये अगोनिस्ट इंजेक्ट किए गए, तो उनमें टी कोशिकाओं की प्रतिक्रिया में उल्लेखनीय सुधार देखा गया, जो बेहतर प्रतिरक्षा प्रतिक्रिया को दर्शाता है।
- The treatment led to increased production of **memory T cells**, which are essential for the **long-term effect of vaccines**.
इस उपचार से **मेमोरी टी कोशिकाओं** का उत्पादन बढ़ा, जो **वैक्सीन के दीर्घकालिक प्रभाव** के लिए आवश्यक होती हैं।
- “Being able to **activate Notch signalling** opens up **tremendous opportunities** in **immunotherapy, vaccine development, and immune cell regeneration**,” said **Dr. Mout**.
“Notch signalling को सक्रिय कर पाना **इम्यूनोथेरेपी, वैक्सीन विकास, और प्रतिरक्षा कोशिका पुनरुत्पादन में अपार संभावनाओं के द्वार खोलता है**,” ऐसा **डॉ. माउत** ने कहा।



GS III: Revenge
Terrorism

An unravelling

Malegaon acquittals expose systemic
investigative failures

The 2008 Malegaon blast, killing six and injuring 95 others, during Ramzan, was an extreme act of terror. The initial investigation by the Maharashtra Anti-Terrorism Squad (ATS) posited a chilling conspiracy by Hindutva extremists to exact revenge through a "blast for a blast", emulating the polarising methods of Islamist terror groups. This narrative seemed solidified by circumstantial evidence, including electronic transcripts of secret meetings and a confession by Sangh Parivar activist Aseemanand. The case was politically fraught from the start. The ATS investigation was a pivotal moment, as it sought to identify perpetrators irrespective of religion, especially after Muslim youth were wrongly charged and later acquitted in the 2006 Malegaon blasts. However, this unbiased approach appeared to falter with the consolidation of Hindutva political power. After the case was transferred to the National Investigation Agency (NIA), the agency filed a supplementary charge sheet. Amid allegations that the NIA was under pressure to be lenient, a Special Court rightly ruled in 2018 that a full trial was the best course. Seventeen years later, the final acquittal of all accused, including Lt. Col. Prasad Purohit and Pragya Singh Thakur, leaves a profound sense of unease. Far from refuting the existence of Hindutva-led extremism, the judgment is an indictment of the prosecution's methods and a reminder of how justice can be undone.

The court exposed a foundation of unreliable evidence, noting that key witnesses turned hostile, alleging coercion by the ATS – a claim also noted by the NIA. The explosive electronic transcripts were deemed inadmissible for failing to meet mandatory legal safeguards against tampering. The court also rejected the defence of Purohit, who argued that he was a military intelligence officer infiltrating the group, but acquitted him as the evidence failed to meet what it saw as the legal standard for a conviction. The political circumstances suggest a consistent attempt to reframe the alleged acts of terror not as criminal, but with a communal narrative. In 2019, while still under trial for grave terror charges, Pragya Thakur was fielded as a parliamentary candidate by the Bharatiya Janata Party and won from Bhopal. Her political elevation as a Hindutva icon was precisely because of her purported role in fomenting retaliatory attacks against Muslims. Her subsequent career, marked by an endorsement of Mahatma Gandhi's assassin, Nathuram Godse, has only confirmed the dangerous mainstreaming of extremist voices. The acquittal lays bare the unsettling reality that when state agencies fail, extremist organisations can get away with heinous crimes. Terror has no single religious face and, without a competent and scrupulous policing, prosecution and justice system, its perpetrators, whoever they may be, can walk free.

An unravelling एक उजागर होती साजिश

2008 Malegaon Blast Case and Final Acquittal
2008 मालेगांव विस्फोट मामले और अंतिम बरी

• The **2008 Malegaon blast**, killing six and injuring 95 others, during **Ramzan**, was an **extreme act of terror**.

2008 मालेगांव विस्फोट, जिसमें 6 लोगों की मृत्यु और 95 घायल हुए, रमज़ान के दौरान हुआ और यह एक भीषण आतंकी हमला था।

• The initial investigation by the **Maharashtra Anti-Terrorism Squad (ATS)** revealed a **chilling conspiracy by Hindutva extremists for a "blast for a blast" revenge tactic**.

प्रारंभिक जांच में महाराष्ट्र एंटी-टेररिज़्म स्क्वाड (ATS) ने हिंदुत्व उग्रवादियों द्वारा "ब्लास्ट के बदले ब्लास्ट" की प्रतिशोध योजना को उजागर किया।

• The narrative was supported by **circumstantial evidence, electronic transcripts of secret meetings, and a confession by Sangh Parivar activist Aseemanand**.

इस कहानक को परिस्थितिजन्य साक्ष्य, गुप्त बैठकों के इलेक्ट्रॉनिक ट्रांसक्रिप्ट, और संघ परिवार के कार्यकर्ता असीमानंद की स्वीकारोक्ति ने समर्थन दिया।

• The case was **politically sensitive** from the beginning. यह मामला शुरू से ही राजनीतिक रूप से संवेदनशील रहा।

• The ATS investigation was seen as **crucial** in trying to identify perpetrators **irrespective of religion**, especially after **wrongful charges on Muslim youth in the 2006 Malegaon blasts**.

ATS की जांच को धर्म की परवाह किए बिना अपराधियों की पहचान करने के प्रयास के रूप में देखा गया, खासकर 2006 मालेगांव विस्फोटों में मुस्लिम युवाओं पर गलत आरोप लगने के बाद।

• This **unbiased approach** seemed to **weaken** after the **rise of Hindutva political power**.

यह निर्पेक्ष दृष्टिकोण हिंदुत्व राजनीतिक शक्ति के उभार के बाद कमज़ोर होता दिखा।

• After the case was transferred to the **National Investigation Agency (NIA)**, a **supplementary charge sheet** was filed.

जब मामला राष्ट्रीय जांच एजेंसी (NIA) को सौंपा गया, तब एक पूरक चार्जशीट दाखिल की गई।

• Allegations arose that the **NIA** was under **political pressure** to be **lenient**.

आरोप लगे कि **NIA** पर राजनीतिक दबाव था कि वह नरमी बरते।

• In **2018**, a **Special Court** ruled that a **full trial** was the best course. **2018** में, एक विशेष अदालत ने निर्णय दिया कि **पूर्ण सुनवाई** ही उचित रास्ता है।

Final Acquittal and Its Implications
अंतिम बरी और इसके प्रभाव

- After **17 years**, all accused including **Lt. Col. Prasad Purohit and Pragya Singh Thakur** were **acquitted**.
17 वर्षों बाद, लेफ्टिनेंट कर्नल प्रसाद पुरोहित और प्रज्ञा सिंह ठाकुर समेत सभी अभियुक्तों को बरी कर दिया गया।



- The judgment doesn't **disprove Hindutva extremism**, but **criticizes prosecution's methods** and warns how **justice can fail**.
यह फैसला हिंदुत्व उग्रवाद को खारिज नहीं करता बल्कि अभियोजन की कार्यप्रणाली की आलोचना करता है और दर्शाता है कि न्याय कैसे विफल हो सकता है।
- The court noted **unreliable evidence and hostile witnesses**, some alleging **coercion by ATS**, also echoed by **NIA**.
अदालत ने अविश्वसनीय सबूतों और विरोधी गवाहों को नोट किया, जिनमें से कुछ ने ATS द्वारा ज़बरदस्ती का आरोप लगाया, जिसे NIA ने भी माना।
- Electronic transcripts were rejected as inadmissible, lacking legal safeguards against tampering**.
इलेक्ट्रॉनिक ट्रांसक्रिप्ट्स को कानूनी सुरक्षा उपायों की कमी के कारण अस्वीकार्य माना गया।
- Purohit's defence** that he was a **military intelligence officer infiltrating the group** was rejected but **acquitted for lack of evidence** meeting legal standard.
पुरोहित का यह बचाव कि वह सैन्य खुफिया अधिकारी थे जो समूह में घुसे थे, खारिज किया गया लेकिन पर्याप्त कानूनी सबूत न होने के कारण बरी कर दिया गया।

Political Ramifications and Extremism Normalisation राजनीतिक प्रभाव और उग्रवाद का सामान्यीकरण

- There was a consistent effort to **reframe the acts of terror as communal retaliation** instead of **criminal conduct**.
आतंक की घटनाओं को आपराधिक कृत्य की बजाय सांप्रदायिक प्रतिशोध के रूप में पुनर्परिभाषित करने का निरंतर प्रयास किया गया।
- In **2019**, while still **under trial**, **Pragya Thakur** was **fielded by BJP** as a **Lok Sabha candidate** from **Bhopal** and **won**.
2019 में, जबकि प्रज्ञा ठाकुर अब भी मुकदमे में थीं, उन्हें भाजपा द्वारा भोपाल से लोकसभा उम्मीदवार बनाया गया और उन्होंने जीत हासिल की।
- Her **political rise** was tied to her alleged role in **retaliatory attacks against Muslims**, making her a **Hindutva icon**.
उनकी राजनीतिक उन्नति, मुसलमानों के खिलाफ प्रतिशोधात्मक हमलों में उनकी कथित भूमिका से जुड़ी थी, जिससे वह हिंदुत्व की प्रतीक बन गई।
- She later **endorsed Nathuram Godse**, the **assassin of Mahatma Gandhi**, further confirming the **mainstreaming of extremist ideologies**.
उन्होंने बाद में महात्मा गांधी के हत्यारे नाथूराम गोडसे का समर्थन किया, जिससे उग्र विचारधाराओं के सामान्यीकरण की पुष्टि हुई।

Broader Message on Terror and Justice आतंक और न्याय पर व्यापक संदेश

- The **acquittal** shows that **failure of state agencies** can let **extremist organisations** **escape punishment for heinous crimes**.
यह बरी किया जाना दर्शाता है कि राज्य एजेंसियों की विफलता के कारण उग्रवादी संगठन घृणित अपराधों से बच सकते हैं।
- Terror has no single religious face**, and without **effective policing, prosecution, and justice**, **perpetrators can walk free**.
आतंक का कोई एक धार्मिक चेहरा नहीं होता, और यदि प्रभावी पुलिसिंग, अभियोजन और न्याय प्रणाली न हो, तो अपराधी बचकर निकल सकते हैं।



The 'right to repair' must include 'right to remember'

GS III: Circular Economy

In May 2025, the Indian government took a significant step toward promoting sustainable electronics. It accepted a report proposing a **Repairability Index for mobile phones and appliances**, ranking products based on ease of repair, spare part access, and software support. New e-waste policies now include minimum payments to incentivise formal recycling. These are timely moves.

But as India takes steps toward making repair a consumer right, we must also treat it as a cultural and intellectual resource – a form of knowledge that deserves preservation and support. India's digital and Artificial Intelligence (AI) policy landscape is evolving rapidly. Initiatives such as Digital Public Infrastructure (DPI) and the National Strategy on Artificial Intelligence (NSAI) emphasise innovation, data-driven governance and economic efficiency. Yet, the systems that quietly sustain everyday life – especially the informal repair and maintenance economy – remain largely invisible in digital and policy frameworks.

In an age of cloud backups and algorithmic processing, it is easy to forget the value of knowledge that cannot be codified. Much of India's repair expertise lives in muscle memory, quiet observation, and years of hands-on improvisation. This tacit knowledge is vital to India's material resilience. From mobile fixers in Delhi's Karol Bagh to appliance technicians in Chennai's Ritchie Street, repairers keep devices working well past their planned obsolescence. "If we don't fix it, who will?" says a mobile repairer in Ritchie Street. "People throw things out. But we see what can be made new." Their tools may be modest and their workshops discreet, but their work reflects deep ingenuity. They restore devices not by consulting manuals, but by diagnosing faults through sensory cues, reusing components, and adapting creatively to constraints. Yet, this ecosystem is gradually eroding. As product designs become less repairable and consumer habits shift toward disposability, informal repairers find themselves increasingly locked out of markets, of skilling programmes, and of policy attention. What risks being lost is not only economic opportunity but also a vast, undocumented reservoir of knowledge that has long supported India's technological resilience.

Why tacit knowledge matters

"I learnt by watching my uncle," says an appliance repairer in Bhopal. "He never explained with words. He just showed me once, and expected me to try. That's how we pass it on." Tacit knowledge refers to forms of skill and intuition that are difficult to formalise. In India's repair economy, this expertise is typically passed down through mentorship, observation, and repetition – not through formal training or certification. It is inherently adaptive and



Kinnari Gatare

is a researcher in Human Computer Interaction (HCI) and a former UX Design Consultant, National Programme on Technology Enhanced Learning (NPTEL), Indian Institute of Technology Madras

As India invests in AI infrastructure and digital public goods, it must align these ambitions with the ground realities of repair and an established culture of innovation and frugality

context-sensitive, qualities that structured digital systems, including AI, often struggle to replicate. As AI advances, it increasingly draws on insights shaped by this kind of labour. However, mechanisms to acknowledge or equitably involve the contributors of this knowledge are still evolving. The result is a growing imbalance: AI systems continue to improve, while the communities enabling that learning often remain unrecognised. Globally, the Right to Repair movement has gained momentum. The European Union recently introduced rules requiring manufacturers to provide access to spare parts and repair documentation. In India, the Department of Consumer Affairs launched a Right to Repair framework in 2022, followed by a national portal in 2023 covering electronics, automobiles, and farm equipment. Meanwhile, the United Nations Sustainable Development Goal 12 promotes repair as part of responsible consumption. India now has the opportunity to lead by recognising repair not just as a service but also as a form of knowledge work.

The blind spot in India's digital policy

In 2021-22, India generated over 1.6 million tonnes of e-waste, becoming the world's third-largest producer. The E-Waste (Management) Rules, 2022 introduced Extended Producer Responsibility (EPR) – a principle that makes manufacturers responsible for post-use product management. However, while these rules encourage recycling, they make only a passing mention of repair as a preventive strategy. National skilling programmes such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) focus on short-term certifications for formal industrial roles. Repair work, which requires improvisation, diagnostic skill and creative reuse does not easily fit this framework. Similarly, the National Education Policy (NEP) 2020 celebrates Indian knowledge traditions and experiential learning but offers little guidance on how to support or transmit hands-on repair expertise. Campaigns such as Mission LiFE (LiFEStyle For Environment) promote repair and reuse, but complementary efforts are needed to support the workers who make such sustainability practices possible. While policies now champion circularity, they risk leaving behind the very workforce whose skills make it real.

As sustainability becomes a national priority, policymakers and technologists are reconsidering how we design, discard, and extend the life of everyday products. One emerging idea in research is 'unmaking' – the process of taking apart, repairing or repurposing devices after their first use, revealing design flaws and opportunities for reuse. Breakdowns and repairs are not failures; they are feedback loops and sources of practical insight. A discarded circuit board can become a teaching tool. A salvaged phone part can restore someone's access to work or school.

A broken appliance can be repaired and reuse. Informal repairers perform this work daily. The labour sits at the centre of the circular economy where reuse is not an afterthought but a design principle. Recognising them as stewards of sustainability – not marginal figures – can reshape how we think about environmental and digital innovation alike.

AI-enabled solutions for repair justice

India's culture of *jugaad* and frugality long pre-dates today's tech-forward policies. Repair has always adapted across devices and decac with minimal support. As the country invests in AI infrastructure and digital public goods, it must align these ambitions with the ground realities of repair. Most modern gadgets are built for compactness and control, not repair. According to a 2023 iFixit global report, only 23% of smartphones sold in Asia are easily repairable due to design constraints. To change this, desi norms and procurement policies must include repairability from the start. To make technology genuinely sustainable, public policy must consider not only how products are manufactured and used but also how they are broken down, repaired, and find new life. A shift toward designing for "unmaking", where disassembly and repair are anticipated from the outset, should inform both hardware standards and AI-integrated systems.

This transition will require coordinated institutional action. The Ministry of Electronic and Information Technology can embed repairability criteria into AI and procurement policies. The Department of Consumer Affairs could expand the Right to Repair framework to include product classification and community involvement. Platforms such as e-Shram, under the Ministry of Labour and Employment, can formally recognise informal repairers and connect them to social protection and skill-building schemes. The Ministry of Skill Development and Entrepreneurship can consider training programmes to account for the tacit, diagnostic nature of repair work, which does not conform to standardised industrial templates. Support this, decision trees can help codify typical repair pathways, while Large Language Models can capture, summarise, and translate tacit repair narratives into structured, shareable knowledge, enabling broader learning without stripping local context or expertise.

Supporting this ecosystem is not merely a question of intellectual property or technical efficiency. It is about valuing the quiet, embodied labour that sustains our digital and material life – an essential step toward a just, repair-ready technological future. As philosopher Michael Polanyi observed, "We know more than we can tell." By choosing to remember what cannot be digitised, we preserve the human wisdom essential to a meaningful technological future.

The 'Right to Repair' Must Include 'Right to Remember' 'राइट टू रिपेयर' में 'राइट टू रिमेम्बर' भी शामिल होना चाहिए

Promoting Sustainable Electronics and Repair Culture in India

भारत में सतत इलेक्ट्रॉनिक्स और मरम्मत संस्कृति को बढ़ावा देना

- In May 2025, the Indian government took a **significant step** toward promoting sustainable electronics.
मई 2025 में, भारत सरकार ने सतत इलेक्ट्रॉनिक्स को बढ़ावा देने की दिशा में एक महत्वपूर्ण कदम उठाया।
- It accepted a report proposing a **Repairability Index for mobile phones and appliances**, ranking products based on **ease of repair, spare part access, and software support**.



इसने मोबाइल फोन और उपकरणों के लिए मरम्मत योग्यता सूचकांक (Repairability Index) का प्रस्ताव देने वाली रिपोर्ट को स्वीकार किया, जिसमें उत्पादों को मरम्मत की सरलता, स्पेयर पार्ट्स की उपलब्धता, और सॉफ्टवेयर समर्थन के आधार पर रैंक किया जाएगा।

- **New e-waste policies now include minimum payments to incentivise formal recycling.**
नई ई-कचरा नीतियों में अब औपचारिक पुनर्चक्रण को प्रोत्साहित करने के लिए न्यूनतम भुगतान शामिल है।
- These are **timely moves**.
ये समयोचित कदम हैं।
- But as India takes steps toward making **repair a consumer right**, we must also treat it as a **cultural and intellectual resource** — a **form of knowledge** that deserves **preservation and support**.
लेकिन जब भारत मरम्मत को उपभोक्ता अधिकार बनाने की दिशा में कदम उठा रहा है, तो हमें इसे एक सांस्कृतिक और बौद्धिक संसाधन के रूप में भी देखना चाहिए — जो कि एक ज्ञान का रूप है जिसे संरक्षण और समर्थन की आवश्यकता है।
- India's **digital and Artificial Intelligence (AI)** policy landscape is evolving rapidly.
भारत की डिजिटल और कृत्रिम बुद्धिमत्ता (AI) नीति का परिदृश्य तेजी से विकसित हो रहा है।
- Initiatives such as **Digital Public Infrastructure (DPI)** and the **National Strategy on Artificial Intelligence (NSAI)** emphasise **innovation, data-driven governance, and economic efficiency**.
डिजिटल पब्लिक इंफ्रास्ट्रक्चर (DPI) और नेशनल स्ट्रेटेजी ऑन आर्टिफिशियल इंटेलिजेंस (NSAI) जैसी पहलों में नवाचार, डेटा-आधारित शासन, और आर्थिक दक्षता पर जोर दिया गया है।
- Yet, the systems that quietly sustain **everyday life** — especially the **informal repair and maintenance economy** — remain largely **invisible in digital and policy frameworks**.
फिर भी, जो प्रणालियाँ चुपचाप दैनिक जीवन को बनाए रखती हैं — विशेष रूप से अनौपचारिक मरम्मत और रखरखाव की अर्थव्यवस्था — वे अभी भी डिजिटल और नीतिगत ढाँचों में अदृश्य बनी हुई हैं।
- In an age of **cloud backups and algorithmic processing**, it is easy to forget the value of **knowledge that cannot be codified**.
क्लाउड बैकअप और एल्गोरिथमिक प्रोसेसिंग के युग में, ऐसे ज्ञान की महत्ता को भूल जाना आसान है जिसे औपचारिक रूप से दर्ज नहीं किया जा सकता।
- Much of India's **repair expertise** lives in **muscle memory, quiet observation, and years of hands-on improvisation**.
भारत की मरम्मत विशेषज्ञता का अधिकांश भाग स्नायु स्मृति, शांत पर्यवेक्षण, और वर्षों के व्यावहारिक प्रयोग में निहित है।
- This **tacit knowledge** is vital to India's **material resilience**.
यह अव्यक्त ज्ञान भारत की भौतिक लचीलापन के लिए अत्यंत महत्वपूर्ण है।
- From **mobile fixers in Delhi's Karol Bagh** to **appliance technicians in Chennai's Ritchie Street**, repairers keep devices working **well past their planned obsolescence**.
दिल्ली के करोल बाग के मोबाइल रिपेयरर्स से लेकर चेन्नई के रिची स्ट्रीट के उपकरण तकनीशियनों तक, मरम्मत करने वाले उपकरणों को उनके निर्धारित अप्रचलन काल से कहीं अधिक समय तक चालू रखते हैं।
- "If we don't fix it, who will?" says a mobile repairer in Ritchie Street. "People throw things out. But we see what can be made new."
रिची स्ट्रीट के एक मोबाइल रिपेयरर कहते हैं, "अगर हम इसे नहीं ठीक करेंगे, तो कौन करेगा?" "लोग चीजें फेंक देते हैं। लेकिन हम देखते हैं कि क्या नए सिरे से बनाया जा सकता है।"
- Their **tools may be modest** and their **workshops discreet**, but their work reflects **deep ingenuity**.



उनके उपकरण सामान्य हो सकते हैं और उनके वर्कशॉप साधारण, लेकिन उनका कार्य **गहन नवाचार** को दर्शाता है।

- They restore devices not by consulting manuals, but by **diagnosing faults through sensory cues, reusing components, and adapting creatively to constraints.**
वे उपकरणों को **मैनुअल देखे बिना, इंद्रियों के संकेतों से समस्याओं की पहचान, घटकों का पुनः उपयोग, और सीमाओं के अनुसार रचनात्मक ढंग से अनुकूलन** करके ठीक करते हैं।
- Yet, this ecosystem is **gradually eroding.**
फिर भी, यह पारिस्थितिकी तंत्र **धीरे-धीरे समाप्त हो रहा है।**
- **As product designs become less repairable and consumer habits shift toward disposability, informal repairers find themselves increasingly locked out of markets, skilling programmes, and policy attention.**
जैसे-जैसे उत्पाद डिज़ाइन मरम्मत के लिए कम अनुकूल होते जा रहे हैं और उपभोक्ता व्यवहार फेंकने की प्रवृत्ति की ओर बढ़ रहा है, अनौपचारिक मरम्मतकर्ता खुद को बाज़ार, कौशल प्रशिक्षण कार्यक्रमों, और नीतिगत ध्यान से बाहर पाते हैं।
- **What risks being lost is not only economic opportunity but also a vast, undocumented reservoir of knowledge that has long supported India's technological resilience.**
जो खोने का खतरा है वह सिर्फ **आर्थिक अवसर नहीं बल्कि एक विशाल, अप्रलेखित ज्ञान का भंडार** है, जिसने लंबे समय से भारत की तकनीकी लचीलापन का समर्थन किया है।

Why Tacit Knowledge Matters

क्यों अव्यक्त ज्ञान महत्वपूर्ण है

- "I learnt by watching my uncle," says an appliance repairer in Bhopal. "He never explained with words. He just showed me once, and expected me to try. That's how we pass it on."
भोपाल के एक उपकरण मरम्मतकर्मी कहते हैं, "मैंने अपने चाचा को देखकर सीखा।" "उन्होंने कभी शब्दों में नहीं समझाया। बस एक बार दिखाया और उम्मीद की कि मैं कोशिश करूं। हम इसी तरह ज्ञान को आगे बढ़ाते हैं।"
- **Tacit knowledge** refers to forms of **skill and intuition** that are **difficult to formalise.**
अवचेतन ज्ञान उन कौशलों और अंतर्ज्ञान का रूप है जिन्हें औपचारिक रूप से व्यक्त करना कठिन होता है।
- In India's repair economy, this expertise is typically passed down through **mentorship, observation, and repetition** — not through **formal training or certification.**
भारत की मरम्मत अर्थव्यवस्था में यह विशेषज्ञता आम तौर पर **मार्गदर्शन, पर्यवेक्षण, और दोहराव** के माध्यम से आगे बढ़ती है — न कि **औपचारिक प्रशिक्षण या प्रमाणन** के माध्यम से।
- It is **inherently adaptive and context-sensitive**, qualities that structured digital systems, including **AI**, often struggle to replicate.
यह स्वाभाविक रूप से **अनुकूलनीय और संदर्भ-संवेदनशील** होती है, जिन गुणों को संरचित **डिजिटल प्रणालियाँ** — विशेषकर **एआई** — अक्सर दोहराने में असमर्थ होती हैं।
- As **AI advances**, it increasingly draws on **insights shaped by this kind of labour.**
जैसे-जैसे **AI प्रगति** करता है, यह **इस तरह के श्रम से उत्पन्न अंतर्दृष्टियों** पर अधिक निर्भर होता जाता है।
- However, mechanisms to **acknowledge or equitably involve** the contributors of this knowledge are still **evolving.**
हालांकि, इस ज्ञान के योगदानकर्ताओं को **मान्यता देने या समान रूप से शामिल करने** की प्रक्रियाएं अभी भी **विकासशील** हैं।



- The result is a growing **imbalance**: **AI systems** continue to improve, while the **communities enabling that learning** often remain **unrecognised**.
परिणामस्वरूप असंतुलन बढ़ता जा रहा है: **AI प्रणालियाँ** लगातार बेहतर हो रही हैं, जबकि उन्हें सशक्त बनाने वाले **समुदाय अक्सर मान्यता से वंचित** रहते हैं।
- **Globally**, the **Right to Repair movement** has gained momentum.
वैश्विक स्तर पर, मरम्मत का अधिकार आंदोलन ने गति प्राप्त की है।
- The **European Union** recently introduced rules requiring manufacturers to provide access to **spare parts** and **repair documentation**.
यूरोपीय संघ ने हाल ही में नियम लागू किए हैं, जिनके तहत निर्माताओं को **स्पेयर पार्ट्स** और **मरम्मत दस्तावेजों** की **सुलभता** सुनिश्चित करनी होगी।
- In India, the **Department of Consumer Affairs** launched a **Right to Repair framework in 2022**, followed by a **national portal in 2023** covering **electronics, automobiles, and farm equipment**.
भारत में, **उपभोक्ता मामले विभाग** ने **2022 में मरम्मत का अधिकार ढांचा** शुरू किया और इसके बाद **2023 में एक राष्ट्रीय पोर्टल** लॉन्च किया गया, जो **इलेक्ट्रॉनिक्स, वाहन और कृषि उपकरणों** को कवर करता है।
- Meanwhile, the **United Nations Sustainable Development Goal 12** promotes **repair** as part of **responsible consumption**.
इस बीच, **संयुक्त राष्ट्र के सतत विकास लक्ष्य 12** में **मरम्मत को जिम्मेदार उपभोग** का हिस्सा माना गया है।
- India now has the opportunity to lead by recognising **repair not just as a service but also as a form of knowledge work**.
भारत के पास अब यह अवसर है कि वह **मरम्मत को केवल एक सेवा नहीं, बल्कि ज्ञान-आधारित कार्य के रूप में मान्यता देकर नेतृत्व** करे।

The Blind Spot in India's Digital Policy भारत की डिजिटल नीति में अनदेखा क्षेत्र

- In **2021-22**, India generated **over 1.6 million tonnes of e-waste**, becoming the **world's third-largest producer**.
2021-22 में भारत ने 1.6 मिलियन टन से अधिक ई-कचरा उत्पन्न किया, जिससे यह **दुनिया का तीसरा सबसे बड़ा उत्पादक** बन गया।
- The **E-Waste (Management) Rules, 2022** introduced **Extended Producer Responsibility (EPR)** — a principle making manufacturers responsible for **post-use product management**.
ई-वेस्ट (प्रबंधन) नियम, 2022 ने **विस्तारित उत्पादक उत्तरदायित्व (EPR)** की शुरुआत की — यह सिद्धांत निर्माताओं को **उपयोग के बाद उत्पाद प्रबंधन** के लिए उत्तरदायी बनाता है।
- **These rules encourage recycling, but mention repair only in passing as a preventive strategy**.
ये नियम **रिसाइक्लिंग** को प्रोत्साहित करते हैं, लेकिन **मरम्मत को केवल एक रोकथाम रणनीति** के रूप में संक्षेप में उल्लेख करते हैं।
- **National skilling programmes like PMKVY focus on short-term certifications for formal industrial roles**.
राष्ट्रीय कौशल कार्यक्रम, जैसे कि **प्रधानमंत्री कौशल विकास योजना (PMKVY)**, **औपचारिक औद्योगिक भूमिकाओं** के लिए **कम अवधि के प्रमाणपत्रों** पर ध्यान केंद्रित करते हैं।
- **Repair work, which needs improvisation, diagnostic skill, and creative reuse, doesn't easily fit this framework**.
मरम्मत कार्य, जिसमें **अनुकूलन, निदान कौशल और रचनात्मक पुनः उपयोग** की आवश्यकता होती है, इस ढांचे में आसानी से फिट नहीं होता।
- The **NEP 2020** celebrates **Indian knowledge traditions and experiential learning**, but offers little **guidance on hands-on repair expertise**.



राष्ट्रीय शिक्षा नीति (NEP) 2020 भारतीय ज्ञान परंपराओं और अनुभवात्मक सीखने का उत्सव मनाती है, लेकिन प्रायोगिक मरम्मत विशेषज्ञता पर बहुत कम मार्गदर्शन देती है।

- Campaigns like **Mission LIFE (LiFEStyle For Environment)** promote **repair and reuse**, but **complementary efforts** are needed to support the **repair workforce**.
मिशन लाइफ (पर्यावरण के लिए जीवनशैली) जैसी मुहिम मरम्मत और पुनः उपयोग को बढ़ावा देती हैं, लेकिन मरम्मत कार्यबल को समर्थन देने के लिए पूरक प्रयासों की आवश्यकता है।
- Current policies champion **circularity**, but risk leaving behind the very **workers whose skills make it real**.
वर्तमान नीतियाँ परिपत्र अर्थव्यवस्था को समर्थन देती हैं, लेकिन उन श्रमिकों को पीछे छोड़ने का जोखिम उठाती हैं जिनकी कौशल इसे संभव बनाती है।

Designing for Unmaking and Repair

अनमेकिंग और मरम्मत के लिए डिज़ाइन करना

- As **sustainability** becomes a national priority, there is a shift in how we **design, discard, and extend the life** of products.
जैसे ही सततता राष्ट्रीय प्राथमिकता बनती है, उत्पादों को डिज़ाइन करने, त्यागने और जीवनकाल बढ़ाने के तरीके में बदलाव आ रहा है।
- One emerging idea is **'unmaking'** — taking apart, repairing, or repurposing used devices to reveal **design flaws** and **reuse opportunities**.
एक नया विचार है **'अनमेकिंग'** — इस्तेमाल किए गए उपकरणों को अलग करना, मरम्मत करना या नए रूप में उपयोग करना, ताकि **डिज़ाइन की कमियाँ** और **पुनः उपयोग के अवसर** सामने आ सकें।
- Breakdowns and repairs are not **failures**, but **feedback loops** and **sources of practical insight**.
टूट-फूट और मरम्मत विफलताएं नहीं हैं, बल्कि **प्रतिक्रिया चक्र** और **व्यावहारिक अंतर्दृष्टि** के स्रोत हैं।
- A discarded **circuit board** can become a **teaching tool**; a salvaged **phone part** can **restore access to work or school**.
एक त्यागी गई **सर्किट बोर्ड** एक **शिक्षण उपकरण** बन सकती है; एक बचाया गया **फोन का पुर्जा** किसी के **काम या स्कूल की पहुंच** को बहाल कर सकता है।
- Informal repairers do this work daily and sit at the **center of the circular economy**.
अप्रचलित मरम्मतकर्ता यह कार्य प्रतिदिन करते हैं और **परिपत्र अर्थव्यवस्था के केंद्र** में होते हैं।
- **Reuse is not an afterthought** but a **design principle**.
पुनः उपयोग कोई बाद का विचार नहीं, बल्कि एक **डिज़ाइन सिद्धांत** है।
- Recognising them as **stewards of sustainability**, not as **marginal figures**, can reshape **environmental and digital innovation**.
उन्हें **सततता के संरक्षक** के रूप में पहचानना, न कि **हाशिये के पात्र** के रूप में, **पर्यावरणीय और डिजिटल नवाचार** की सोच को बदल सकता है।

AI-enabled Solutions for Repair Justice

मरम्मत न्याय के लिए एआई-सक्षम समाधान

- India's culture of **jugaad and frugality** predates current **tech-forward policies**.
भारत की **जुगाड़ और मितव्ययिता** की संस्कृति आज की **प्रौद्योगिकी-आधारित नीतियों** से पहले से है।
- Repairers have adapted across **devices and decades**, with **minimal support**.
मरम्मतकर्ता **डिवाइसेस और दशकों** में खुद को ढालते रहे हैं, **बहुत कम समर्थन** के साथ।
- As India invests in **AI infrastructure**, it must align its ambitions with **repair ground realities**.



जैसे भारत एआई इंफ्रास्ट्रक्चर में निवेश करता है, उसे मरम्मत की ज़मीनी हकीकतों से अपने लक्ष्यों को जोड़ना होगा।

- **Most modern gadgets are designed for compactness and control, not repair.**
अधिकांश आधुनिक गैजेट्स कॉम्पैक्टनेस और नियंत्रण के लिए बनाए जाते हैं, मरम्मत के लिए नहीं।
- According to **iFixit 2023 global report**, only **23% smartphones** sold in Asia are **easily repairable**.
iFixit 2023 वैश्विक रिपोर्ट के अनुसार, एशिया में बेचे गए केवल 23% स्मार्टफोन ही आसानी से मरम्मत योग्य हैं।
- To change this, **design norms and procurement policies must include repairability from the start.**
इसे बदलने के लिए, डिज़ाइन मानदंडों और खरीद नीतियों में शुरुआत से ही मरम्मत योग्यता को शामिल करना होगा।
- A shift toward **designing for unmaking** should inform **hardware standards** and **AI-integrated systems**.
अनमेकिंग के लिए डिज़ाइन की ओर बदलाव को हार्डवेयर मानकों और एआई-एकीकृत प्रणालियों में शामिल किया जाना चाहिए।

Institutional Actions Needed

संस्थागत कार्रवाइयों की आवश्यकता

- The **Ministry of Electronics and IT** can embed **repairability criteria** into **AI and procurement policies**.
इलेक्ट्रॉनिक्स और आईटी मंत्रालय मरम्मत योग्यता मापदंडों को एआई और खरीद नीतियों में शामिल कर सकता है।
- The **Department of Consumer Affairs** could expand the **Right to Repair** framework to include **product classification** and **community involvement**.
उपभोक्ता मामलों का विभाग मरम्मत का अधिकार ढाँचे को उत्पाद वर्गीकरण और सामुदायिक भागीदारी तक विस्तारित कर सकता है।
- **Platforms like e-Shram** can formally recognise **informal repairers** and connect them to **social protection and skilling schemes**.
ई-श्रम जैसे प्लेटफ़ॉर्म अप्रचलित मरम्मतकर्ताओं को औपचारिक रूप से पहचान सकते हैं और उन्हें सामाजिक सुरक्षा और कौशल योजनाओं से जोड़ सकते हैं।
- The **Ministry of Skill Development** can offer training aligned to the **tacit, diagnostic nature** of repair, not standardised templates.
कौशल विकास मंत्रालय को मरम्मत के गूढ़, निदानात्मक स्वभाव के अनुरूप प्रशिक्षण कार्यक्रम देने चाहिए, न कि केवल मानकीकृत ढाँचों पर आधारित।
- **Decision trees** can codify typical **repair pathways**, while **Large Language Models (LLMs)** can capture and share **repair narratives**.
निर्णय वृक्ष (Decision Trees) विशिष्ट मरम्मत प्रक्रियाओं को कोडिफाई कर सकते हैं, जबकि बड़े भाषा मॉडल (LLMs) मरम्मत की कहानियों को संरचित और साझा करने योग्य बना सकते हैं।

Towards a Just Repair-Ready Future

एक न्यायसंगत और मरम्मत-तैयार भविष्य की ओर

- Supporting this ecosystem is about **valuing the quiet, embodied labour** behind digital and material life.
इस पारिस्थितिकी तंत्र को समर्थन देना डिजिटल और भौतिक जीवन के पीछे के मौन श्रम को महत्त्व देने की बात है।
- Philosopher **Michael Polanyi** said, **"We know more than we can tell."**
दार्शनिक माइकल पोलानी ने कहा, "हम उससे अधिक जानते हैं जितना बता सकते हैं।"



- By remembering what **cannot be digitised**, we preserve **human wisdom** for a **meaningful technological future**.
जो डिजिटाइज़ नहीं किया जा सकता, उसे याद रखकर हम एक अर्थपूर्ण तकनीकी भविष्य के लिए मानव बुद्धिमत्ता को संरक्षित करते हैं।

On the track towards belonging

GS III: Infrastructure

The completion of the the **Udhampur, Srinagar, Baramulla rail link project**, or the **Jammu-Baramulla line**, nearly four decades in the making, marks not only a historic engineering achievement in one of the most formidable terrains on the planet, but also the quiet fulfilment of a long-standing promise between the Indian state and the people of Jammu and Kashmir. **Spanning 272 kilometres through the Pir Panjal and Himalayan ranges**, this railway line is more than steel and concrete; it is a bridge of belonging.

Mobility equates to opportunity. The railway line connects places such as **Sopore, Anantnag, Qazigund, and Banihal** to the national economy. It brings markets closer, education within reach, and jobs within possibility. Each train narrows not just physical distance but also psychological gaps. This railway line fosters the sentiment that national integration is not merely about symbolism but practical access, investment, and shared development. In a region long marked by conflict, this railway line offers a quieter story – one of shared work, patience, and steady progress. It won't resolve every issue, but it shifts the conversation towards connection and common purpose. The train carries the message that Kashmir is not peripheral to India, but central to its journey forward.

Audacity and achievement

This milestone would not have been possible without the undaunted spirit of India's railway engineers. From the snow-bound tunnels of Pir Panjal to the vertiginous heights of the Chenab bridge, these professionals and workers toiled through some of the harshest natural conditions imaginable. They worked through deep winters, unpredictable landslides, and security concerns. Their courage and commitment deserve the gratitude of a nation.

The Indian Railways has a



Sarabjit Arjan Singh

former general manager, Indian Railway, and former member of Central Administrative Tribunal

More than a feat of engineering, completion of the line is a reaffirmation of a social contract between the people of Kashmir and the Indian Union

proud tradition of such resolve. In the 19th century, railway engineers built a railway through the treacherous Western Ghats and delivered the Bhor Ghat section that connects Mumbai with the Deccan. During the Assam rail-link project of 1948, when newly independent India faced a logistical crisis in connecting the Northeast, the legendary railway engineer Sardar Karnil Singh (later Chairman of the Railway Board) and his team built 200 kilometres of line in record time, including more than 300 bridges.

The Jammu-Baramulla line now joins this lineage of audacity and achievement. It is a reminder that while governments may change and priorities may shift, the railway engineer – anonymous and often unsung – continues to be one of the Republic's most enduring architects. Their work does not merely connect places; it connects lives, aspirations, and identities. It is they who transform maps into meanings and blueprints into belonging.

The symbolism of the Jammu-Baramulla line lies not only in what it connects but also in what it overcomes. The project navigated not only geotechnical obstacles and climatic extremities, but also long periods of political uncertainty and civil unrest. Each completed tunnel and bridge, therefore, is an engineering feat and also a marker of perseverance and institutional commitment in the face of adversity.

Strategic importance

The line's strategic importance is also worth underlining. By linking Kashmir's northernmost railhead with the rest of India's railway grid, it brings unparalleled logistical advantages for civilian mobility, trade, and even emergency response. The line also reduces dependence on the single Srinagar-Jammu national highway, which is vulnerable to landslides and closures during winter. In doing so, it enhances the resilience of Kashmir's

connectivity and helps ensure the regular flow of essentials such as food, fuel, and medicine.

For students and patients who earlier endured long road journeys over mountainous passes, the railway offers comfort, affordability, and dignity. It reduces both the cost and the emotional toll of separation, making it easier for families to stay connected. In time, it will also make the region more attractive to investors and institutions, opening the doors for industrial parks, skill development centres, and agro-logistics hubs to be developed in and around stations such as Anantnag, Awantipora, and Baramulla.

Culturally too, the railway becomes a conduit for exchange. As trains bring people to and from the Valley, they also carry stories, memories, and understanding. The rail journey is a slow but steady social equaliser, allowing a common experience to emerge across geographies. For many in the Valley who had never travelled far beyond their districts, it opens a new window to the rest of the country – and vice versa.

The future now depends on how we build around this backbone. The completion of the Jammu-Baramulla line must be followed by careful planning of last-mile linkages, station area development, and service frequency enhancement. Local entrepreneurs, women's groups, and artisans must be enabled to benefit from the access that this line provides. Government agencies and private players must together create ecosystems around these stations, so they become not just halts, but hubs of rural transformation.

This project is a testament to what democratic development looks like in action – patient, deliberate, and deeply transformational. The tracks may be made of steel, but the promise they carry is one of trust. And that may be the most powerful foundation on which to build the future of Jammu and Kashmir.



On the track towards belonging

स्वीकृति की ओर यात्रा पर

Completion of Jammu–Baramulla Rail Link Project

जम्मू-बारामूला रेल लिंक परियोजना की पूर्णता

- The completion of the Udhampur, Srinagar, Baramulla rail link project, or the Jammu–Baramulla line, nearly four decades in the making, marks not only a **historic engineering achievement** in one of the most **formidable terrains** on the planet, but also the quiet fulfilment of a **long-standing promise** between the Indian state and the people of Jammu and Kashmir.

उधमपुर, श्रीनगर, बारामूला रेल लिंक परियोजना, या जम्मू-बारामूला लाइन की पूर्णता, जो लगभग चार दशकों से बन रही थी, न केवल दुनिया के सबसे कठिन भूभागों में से एक में एक ऐतिहासिक इंजीनियरिंग उपलब्धि है, बल्कि यह जम्मू और कश्मीर के लोगों और भारतीय राज्य के बीच एक पुराने वादे की शांतिपूर्ण पूर्ति भी है।

- Spanning **272 kilometres** through the **Pir Panjal and Himalayan ranges**, this railway line is more than steel and concrete; it is a **bridge of belonging**.

272 किलोमीटर तक फैली हुई यह रेल लाइन पीर पंजाल और हिमालयी पर्वतमालाओं से होकर गुजरती है, और यह केवल लोहे और कंक्रीट से बनी नहीं है, बल्कि यह समर्पण और जुड़ाव का पुल है।

Mobility and Opportunity

गतिशीलता और अवसर

- Mobility equates to opportunity. The railway line connects places such as **Sopore, Anantnag, Qazigund, and Banihal** to the **national economy**.

गतिशीलता अवसरों के बराबर होती है। यह रेलवे लाइन सोपोर, अनंतनाग, काज़ीगुंड और बनिहाल जैसे स्थानों को राष्ट्रीय अर्थव्यवस्था से जोड़ती है।

- It brings **markets closer, education within reach, and jobs within possibility**.

यह बाज़ारों को पास लाती है, शिक्षा को सुलभ बनाती है, और रोज़गार को संभव बनाती है।

- Each train narrows not just **physical distance** but also **psychological gaps**.

प्रत्येक ट्रेन केवल भौतिक दूरी ही नहीं बल्कि मानसिक दूरी को भी कम करती है।

- This railway line fosters the sentiment that **national integration** is not merely about **symbolism** but **practical access, investment, and shared development**.

यह रेलवे लाइन यह भावना उत्पन्न करती है कि राष्ट्रीय एकीकरण केवल प्रतीकों के बारे में नहीं है, बल्कि यह व्यावहारिक पहुंच, निवेश, और साझा विकास के बारे में है।

- In a region long marked by **conflict**, this railway line offers a quieter story — one of **shared work, patience, and steady progress**.

एक ऐसा क्षेत्र जो लंबे समय से संघर्ष से प्रभावित रहा है, वहां यह रेलवे लाइन एक शांत कहानी प्रस्तुत करती है — साझा प्रयास, धैर्य, और स्थिर प्रगति की।

- It won't resolve every issue, but it shifts the conversation towards **connection and common purpose**.

यह सभी समस्याओं का समाधान नहीं करेगी, लेकिन यह बातचीत को जुड़ाव और साझा उद्देश्य की ओर मोड़ती है।

- The train carries the message that **Kashmir** is not peripheral to India, but **central** to its journey forward.

यह ट्रेन यह संदेश देती है कि कश्मीर भारत के लिए हाशिये पर नहीं बल्कि उसकी आगे की यात्रा का केंद्र है।



Audacity and Achievement

साहस और उपलब्धि

- This milestone would not have been possible without the **undaunted spirit** of India's **railway engineers**.
यह उपलब्धि भारत के रेलवे इंजीनियरों की अडिग भावना के बिना संभव नहीं थी।
- From the **snow-bound tunnels** of Pir Panjal to the **vertiginous heights of the Chenab bridge**, these professionals and workers toiled through some of the **harshest natural conditions** imaginable.
पिर पंजाल की बर्फीली सुरंगों से लेकर चिनाब पुल की चक्करदार ऊंचाइयों तक, इन विशेषज्ञों और श्रमिकों ने कुछ सबसे कठिन प्राकृतिक परिस्थितियों में काम किया।
- They worked through **deep winters, unpredictable landslides, and security concerns**.
उन्होंने कठोर सर्दियों, अनियमित भूस्खलन, और सुरक्षा चिंताओं के बीच काम किया।
- Their **courage and commitment** deserve the **gratitude** of a nation.
उनके साहस और समर्पण के लिए राष्ट्र का आभार बनता है।

Historical Context and Legacy

ऐतिहासिक संदर्भ और विरासत

- The Indian Railways has a proud tradition of such resolve.
भारतीय रेलवे की ऐसी दृढ़ता की एक गौरवशाली परंपरा रही है।
- In the **19th century**, railway engineers built a railway through the **treacherous Western Ghats** and delivered the **Bhor Ghat** section that connects **Mumbai** with the **Deccan**.
19वीं शताब्दी में, रेलवे इंजीनियरों ने खतरनाक पश्चिमी घाट से रेलवे बनाकर मुंबई को दक्कन से जोड़ने वाला भोर घाट खंड पूरा किया।
- During the **Assam rail-link project of 1948**, the legendary railway engineer **Sardar Karnil Singh** and his team built **200 kilometres** of line in record time, including more than **300 bridges**.
1948 के असम रेल लिंक परियोजना के दौरान, प्रसिद्ध रेलवे इंजीनियर सरदार कर्निल सिंह और उनकी टीम ने रिकॉर्ड समय में 200 किलोमीटर रेलवे लाइन बनाई, जिसमें 300 से अधिक पुल शामिल थे।

Jammu–Baramulla Line in This Legacy

इस विरासत में जम्मू–बारामूला रेल लाइन

- The Jammu–Baramulla line now joins this lineage of **audacity and achievement**.
अब जम्मू–बारामूला रेल लाइन साहस और उपलब्धि की इस परंपरा में शामिल हो गई है।
- It is a reminder that while **governments may change** and **priorities may shift**, the **railway engineer** — anonymous and often unsung — continues to be one of the **Republic's most enduring architects**.
यह याद दिलाता है कि भले ही सरकारें बदलती हैं और प्राथमिकताएँ बदलती हैं, लेकिन रेलवे इंजीनियर, जो अक्सर अनाम और अल्पज्ञात होते हैं, गणराज्य के सबसे स्थायी शिल्पकारों में से एक बने रहते हैं।
- Their work does not merely **connect places**; it connects **lives, aspirations, and identities**.
उनका कार्य केवल स्थानों को नहीं जोड़ता; यह जीवन, आकांक्षाओं, और पहचान को जोड़ता है।
- It is they who **transform maps into meanings** and **blueprints into belonging**.
वही हैं जो मानचित्रों को अर्थ और खाकों को अपनत्व में बदलते हैं।



Symbolism and Overcoming Challenges

प्रतीकात्मकता और चुनौतियों पर विजय

- The symbolism of the Jammu-Baramulla line lies not only in **what it connects** but also in **what it overcomes**.
जम्मू-बारामूला रेल लाइन की प्रतीकात्मकता केवल इसके द्वारा जोड़े गए स्थानों में नहीं बल्कि इसकी पार की गई बाधाओं में भी है।
- The project navigated not only **geotechnical obstacles** and **climatic extremities**, but also long periods of **political uncertainty** and **civil unrest**.
इस परियोजना ने केवल भू-तकनीकी बाधाओं और जलवायु की चरम स्थितियों को नहीं बल्कि लंबे समय तक राजनीतिक अनिश्चितता और सामाजिक अशांति को भी पार किया।
- Each completed **tunnel and bridge**, therefore, is an **engineering feat** and also a **marker of perseverance and institutional commitment** in the face of adversity.
हर पूर्ण सुरंग और पुल, इसलिए, एक इंजीनियरिंग उपलब्धि है और साथ ही विपरीत परिस्थितियों में धैर्य और संस्थागत प्रतिबद्धता का प्रतीक भी है।

Strategic importance

रणनीतिक महत्व

- The line's **strategic importance** is also worth underlining.
इस लाइन का रणनीतिक महत्व भी रेखांकित किया जाना महत्वपूर्ण है।
- By linking **Kashmir's northernmost railhead** with the rest of India's railway grid, it brings unparalleled **logistical advantages for civilian mobility, trade, and even emergency response**.
कश्मीर के सबसे उत्तरी रेलहेड को भारत के बाकी रेलवे नेटवर्क से जोड़कर यह नागरिक आवागमन, व्यापार और आपातकालीन प्रतिक्रिया के लिए **अद्वितीय लॉजिस्टिक लाभ** प्रदान करता है।
- The line also reduces dependence on the single **Srinagar-Jammu national highway**, which is vulnerable to **landslides** and closures during **winter**.
यह लाइन एकमात्र श्रीनगर-जम्मू राष्ट्रीय राजमार्ग पर निर्भरता को भी कम करती है, जो भूस्खलन और सर्दियों में बंद होने की आशंका से प्रभावित रहता है।
- In doing so, it enhances the **resilience of Kashmir's connectivity** and helps **ensure the regular flow of essentials such as food, fuel, and medicine**.
इसके द्वारा यह कश्मीर की कनेक्टिविटी की लचीलापन को बढ़ाता है और खाद्य, ईंधन और दवाओं जैसे जरूरी सामानों की नियमित आपूर्ति सुनिश्चित करने में मदद करता है।
- For **students and patients** who earlier endured long road journeys over mountainous passes, the railway offers **comfort, affordability, and dignity**.
वे छात्र और मरीज जो पहले पहाड़ी दरों से लंबी सड़क यात्राएँ करते थे, उनके लिए यह रेलवे सुविधा, सस्ती यात्रा और गरिमा प्रदान करता है।
- It reduces both the **cost and the emotional toll of separation, making it easier for families to stay connected**.
यह खर्च और वियोग की भावनात्मक कीमत दोनों को कम करता है, जिससे परिवारों का जुड़ा रहना आसान हो जाता है।
- In time, it will also make the region more attractive to **investors and institutions**, opening the doors for **industrial parks, skill development centres, and agro-logistics hubs** to be developed in and around stations such as **Anantnag, Awantipora, and Baramulla**.
समय के साथ, यह क्षेत्र को निवेशकों और संस्थानों के लिए अधिक आकर्षक बनाएगा, जिससे अनंतनाग, अवन्तिपोरा और बारामूला जैसे स्टेशनों में और उनके आसपास औद्योगिक पार्क, कौशल विकास केंद्र और एग्रो-लॉजिस्टिक हब स्थापित किए जा सकेंगे।



- **Culturally** too, the railway becomes a **conduit for exchange**.
संस्कृति के दृष्टिकोण से भी, यह रेलवे **विनिमय का माध्यम** बन जाता है।
- As trains bring people to and from the **Valley**, they also carry **stories, memories, and understanding**.
जब ट्रेनें **घाटी** में लोगों को लाती और ले जाती हैं, तो वे **कहानियाँ, स्मृतियाँ और समझ** भी साथ लाती हैं।
- The rail journey is a **slow but steady social equaliser**, allowing a **common experience** to emerge across geographies.
रेल यात्रा एक **धीमा लेकिन स्थिर सामाजिक समताकारी** है, जो विभिन्न क्षेत्रों में **साझा अनुभव** को जन्म देता है।
- For many in the Valley who had never travelled far beyond their **districts**, it opens a new **window** to the rest of the country — and vice versa.
घाटी में कई लोगों के लिए जिन्होंने अपने **जिलों** से आगे कभी यात्रा नहीं की थी, यह देश के बाकी हिस्सों के लिए एक नई **खिड़की** खोलता है — और इसके विपरीत भी।
- The **future** now depends on how we build around this **backbone**.
अब **भविष्य** इस बात पर निर्भर करता है कि हम इस **रीढ़** के चारों ओर क्या निर्माण करते हैं।
- The completion of the **Jammu-Baramulla line** must be followed by **careful planning of last-mile linkages, station area development, and service frequency enhancement**.
जम्मू-बारामूला लाइन की पूर्णता के बाद **अंतिम संपर्क, स्टेशन क्षेत्र विकास, और सेवा आवृत्ति वृद्धि** की सावधानीपूर्वक योजना बनानी चाहिए।
- **Local entrepreneurs, women's groups, and artisans** must be enabled to benefit from the access that this line provides.
स्थानीय उद्यमियों, महिला समूहों और कारीगरों को इस लाइन से मिलने वाले लाभों से सशक्त किया जाना चाहिए।
- **Government agencies and private players** must together create **ecosystems** around these stations, so they become not just **halts**, but **hubs of rural transformation**.
सरकारी एजेंसियों और निजी क्षेत्र को मिलकर इन स्टेशनों के आसपास ऐसे **इकोसिस्टम** बनाने चाहिए, जिससे ये सिर्फ **स्टॉपेज** न रहकर **ग्रामीण परिवर्तन के केंद्र** बन जाएँ।
- This project is a **testament** to what **democratic development** looks like in action — **patient, deliberate, and deeply transformational**.
यह परियोजना **लोकतांत्रिक विकास** की सच्ची **प्रमाणिकता** है — जो **धैर्यपूर्ण, सोच-समझकर किया गया, और गहराई से परिवर्तनकारी** है।
- The **tracks** may be made of **steel**, but the **promise** they carry is one of **trust**.
पटरी भले ही **स्टील** की हो, लेकिन वह जो **वादा** लेकर चलती है, वह है **भरोसे** का।
- And that may be the most powerful **foundation** on which to build the **future of Jammu and Kashmir**.
और यही हो सकता है सबसे मजबूत **आधार**, जिस पर **जम्मू और कश्मीर का भविष्य** बनाया जा सकता है।



A step forward, but not far enough

There are lacunae in the calculation of welfare cess in the **Gig Workers Ordinance**

GS III: Gig Workers

STATE OF PLAY

Mohan Mani

While the Karnataka Platform Based Gig Workers (Social Security and Welfare) Ordinance, 2025, is a step forward towards basic social security cover, there are serious lacunae related to calculation of the welfare cess.

The welfare ordinance specifies 'payout' as the basis parameter for calculation of the welfare cess. 'Payout' is defined as the 'final payment made by the aggregator/platform to the gig worker...'. It goes on to define the 'welfare fee' as ranging from 1% and 5% of the payout per transaction to the gig worker. This formulation raises a series of issues. First, the range of 1-5% is likely to tend towards the lower bound of 1%. For instance, while the Construction Workers Welfare Cess provided for 1-2% cess, across States, the actual cess collected was 1% of construction cost.

Second, at the lower bound, this is a clear dilution of the provisions of cess under the Social Security Code of the Centre. The Code defines cess as 1-2% of turnover with a maximum cap of 5% of payment to workers. That means that a cess of 1% on turnover is the minimum. The 'payout', as defined in the Karnataka Bill, being the payment from the platform to the gig worker, is a part of and therefore less than the turnover of the platform. A cess of 1% on payout is therefore necessarily less than 1% cess on turnover of the platform and contravenes the Social Security Code.

We could test this rate of cess against the financial results of Zomato. The company had an Adjusted Revenue of



₹7,790 crore, while the 'delivery and related charges' was ₹3,900 crore (Annual Report 2024). Therefore, even a 2% cess on payout would barely equal 1% of company turnover, the minimum provision for platform cess under the Code.

The trend among food delivery platforms is towards diversification into merchandising and own production. There is every possibility that in such situations, the payout as a ratio to turnover might decline further, with even the cess rate at 2% payout being less than 1% cess on turnover. From Zomato's example, we can calculate that at 5% cess on the payout, the additional cost to be borne by the customer on a purchase value of ₹100 is barely around 50 paise. Surely the customer would not grudge this additional cost for social security cover to the platform worker. The employer contribution from Zomato at this cess rate would still be less than a third of what garment manufacturers in the State contribute towards Employees' State Insurance and Employees' Provident Fund cover per worker.

There is a further issue related to the ride-hail sector of platform work. With the entry of Namma Yatri in Bengaluru, the operations for the sector for autorickshaws has moved from a 'commission' model to a 'subscription' model. In essence, Namma Yatri does not

charge a commission on its rides, passing on the entire payment by customers to the driver. Instead, the driver pays a fixed subscription to Namma Yatri that allows her/him to be onboarded with the platform for a fixed duration. This benefits the driver, as the per ride subscription cost generally works out much less than the per ride commission. Uber and Ola have followed this model introduced by Namma Yatri, for autorickshaw operations in Bengaluru. The payout in this model from the platform to the driver is zero. How will the Bill account for this? Will this mean that platform-based autorickshaw drivers will be excluded from it?

A possible workaround could be that for all platform operations following a subscription model, the cess payment could be built into the customer fee, charging, say, 2% of the full transaction amount. The financial portal for this model of platform work could be designed to transfer the cess amount of each transaction to the Payment and Welfare Fee Verification System that forms part of the Bill. The quantum of payment at 2% is not so much as to inconvenience the customers taking a ride on these autorickshaws. The platforms in this case are unlikely to object, as they are merely called on to serve as intermediaries for the cess transaction.

The platform sector is complex and a one-size-fits-all approach will only end in chaos. Cess rates will need to be calibrated to fit the average employment conditions in each sector, ensuring that some minimum standards of social security can be guaranteed.

Mohan Mani, Visiting Fellow, National Law School of India University, Bengaluru

A step forward, but not far enough

एक कदम आगे, लेकिन पर्याप्त नहीं

Karnataka Platform Based Gig Workers (Social Security and Welfare) Ordinance, 2025

कर्नाटक प्लेटफॉर्म आधारित गिग वर्कर्स (सामाजिक सुरक्षा और कल्याण) अध्यादेश, 2025

• While the Karnataka Platform Based Gig Workers (Social Security and Welfare) Ordinance, 2025, is a step forward towards **basic social security cover**, there are **serious lacunae** related to calculation of the **welfare cess**.

जबकि कर्नाटक प्लेटफॉर्म आधारित गिग वर्कर्स (सामाजिक सुरक्षा और कल्याण) अध्यादेश, 2025 बुनियादी सामाजिक सुरक्षा कवर की ओर एक कदम है, लेकिन कल्याण उपकर (welfare cess) की गणना से संबंधित गंभीर कमियाँ हैं।

• The welfare ordinance specifies 'payout' as the basis parameter for calculation of the **welfare cess**.

कल्याण अध्यादेश में 'payout' को कल्याण उपकर की गणना के लिए आधार पैरामीटर के रूप में निर्दिष्ट किया गया है।

• 'Payout' is defined as the 'final payment made by the aggregator/platform to the gig worker...'

'पैआउट' को परिभाषित किया गया है: 'एग्रीगेटर/प्लेटफॉर्म द्वारा गिग वर्कर को

किया गया अंतिम भुगतान...'

• It goes on to define the '**welfare fee**' as ranging from **1% and 5% of the payout per transaction to the gig worker**.

यह '**कल्याण शुल्क**' को परिभाषित करता है जो गिग वर्कर को किए गए हर लेन-देन के **payout का 1% से 5% तक हो सकता है।**

• This formulation raises a **series of issues**.

यह संरचना कई **समस्याओं** को जन्म देती है।

• First, the range of **1-5%** is likely to tend towards the **lower bound of 1%**.

पहला, **1-5%** की यह सीमा संभवतः **1% की निचली सीमा** की ओर झुकेगी।

• For instance, while the **Construction Workers Welfare Cess** provided for **1-2% cess**, across States, the actual cess collected was **1%** of construction cost.



उदाहरण के लिए, निर्माण श्रमिक कल्याण उपकर के तहत 1-2% उपकर का प्रावधान था, लेकिन राज्यों में वसूला गया वास्तविक उपकर निर्माण लागत का केवल 1% था।

- Second, at the **lower bound**, this is a **clear dilution** of the provisions of cess under the **Social Security Code of the Centre**.
दूसरा, निचली सीमा पर, यह केंद्रीय सामाजिक सुरक्षा संहिता के तहत उपकर प्रावधानों की स्पष्ट कमी है।
- The **Code defines cess as 1-2% of turnover with a maximum cap of 5% of payment to workers**.
संहिता उपकर को परिभाषित करती है: **टर्नओवर का 1-2%, और कर्मचारियों को भुगतान का अधिकतम 5%।**
- That means that a cess of **1% on turnover** is the **minimum**.
इसका अर्थ है कि **टर्नओवर पर 1% उपकर** न्यूनतम है।
- The **'payout'**, as defined in the Karnataka Bill, being the **payment from the platform to the gig worker**, is a part of and therefore **less than the turnover** of the platform.
कर्नाटक विधेयक में परिभाषित **'payout'**, जो **प्लेटफॉर्म से गिग वर्कर को भुगतान** है, वह **टर्नओवर का एक हिस्सा** है और इस प्रकार **टर्नओवर से कम** होता है।
- A **cess of 1% on payout** is therefore necessarily **less than 1% cess on turnover** of the platform and **contravenes the Social Security Code**.
इसलिए, **payout पर 1% उपकर**, प्लेटफॉर्म के **टर्नओवर पर 1% उपकर से कम** होता है और **सामाजिक सुरक्षा संहिता का उल्लंघन** करता है।
- We could test this rate of cess against the **financial results of Zomato**.
हम इस उपकर दर की तुलना **Zomato के वित्तीय परिणामों** से कर सकते हैं।
- The company had an **Adjusted Revenue of ₹7,790 crore**, while the **'delivery and related charges'** was **₹3,900 crore (Annual Report 2024)**.
कंपनी का **समायोजित राजस्व ₹7,790 करोड़** था, जबकि **'वितरण और संबंधित शुल्क ₹3,900 करोड़** था (वार्षिक रिपोर्ट 2024)।
- Therefore, **even a 2% cess on payout would barely equal 1% of company turnover, the minimum provision for platform cess under the Code**.
इसलिए, **payout पर 2% उपकर** भी कंपनी के **टर्नओवर का मुश्किल से 1%** होगा, जो कि संहिता के तहत प्लेटफॉर्म उपकर का **न्यूनतम प्रावधान** है।
- The trend among **food delivery platforms** is towards **diversification into merchandising and own production**.
फूड डिलीवरी प्लेटफॉर्म में प्रवृत्ति अब **मर्चेंडाइजिंग और स्वयं के उत्पादन** की ओर बढ़ रही है।
- There is every possibility that in such situations, the **payout as a ratio to turnover might decline further**, with even the **cess rate at 2% payout being less than 1% cess on turnover**.
ऐसे मामलों में यह संभावना है कि **टर्नओवर के मुकाबले payout का अनुपात** और भी घट सकता है, और **payout पर 2% उपकर** भी **टर्नओवर पर 1% से कम** होगा।
- From **Zomato's example**, we can calculate that at **5% cess on the payout**, the additional cost to be borne by the customer on a **purchase value of ₹100 is barely around 50 paise**.
Zomato के उदाहरण से हम गणना कर सकते हैं कि यदि **payout पर 5% उपकर** लगाया जाए, तो **₹100 के खरीद मूल्य** पर ग्राहक को **केवल लगभग 50 पैसे** अतिरिक्त वहन करने होंगे।
- Surely the customer would not grudge this additional cost for **social security cover** to the platform worker.
निश्चित रूप से ग्राहक, प्लेटफॉर्म वर्कर को **सामाजिक सुरक्षा कवर** देने के लिए यह **अतिरिक्त लागत** नहीं रोकेगा।
- The **employer contribution** from Zomato at this cess rate would still be **less than a third** of what **garment manufacturers** in the State contribute towards **Employees' State Insurance and Employees' Provident Fund** cover per worker.
इस उपकर दर पर Zomato की **नियोक्ता योगदान राशि**, राज्य के **वस्त्र निर्माताओं** द्वारा प्रति



कर्मचारी कर्मचारी राज्य बीमा (ESI) और कर्मचारी भविष्य निधि (EPF) कवर में किए जाने वाले योगदान का एक-तिहाई से भी कम होगी।

Issues in Ride-Hail Sector and Subscription Model for Autorickshaws

राइड-हेल सेक्टर और ऑटोरिक्शा के लिए सब्सक्रिप्शन मॉडल में समस्याएँ

- There is a further issue related to the ride-hail sector of platform work. प्लेटफॉर्म कार्य के राइड-हेल सेक्टर से जुड़ी एक और समस्या है।
- With the entry of Namma Yatri in Bengaluru, the operations for the sector for autorickshaws has moved from a 'commission' model to a 'subscription' model. बेंगलुरु में नम्मा यात्री की एंट्री के साथ, ऑटोरिक्शा सेक्टर का संचालन 'कमीशन' मॉडल से 'सब्सक्रिप्शन' मॉडल में बदल गया है।
- In essence, Namma Yatri does not charge a commission on its rides, passing on the entire payment by customers to the driver. असल में, नम्मा यात्री अपनी राइड्स पर कोई कमीशन नहीं लेता, और ग्राहकों द्वारा दिया गया पूरा भुगतान ड्राइवर को दे देता है।
- Instead, the driver pays a fixed subscription to Namma Yatri that allows her/him to be onboarded with the platform for a fixed duration. इसके बजाय, ड्राइवर एक तय सब्सक्रिप्शन शुल्क नम्मा यात्री को देता है, जिससे वह एक निर्धारित अवधि के लिए प्लेटफॉर्म पर जुड़ सकता है।
- This benefits the driver, as the per ride subscription cost generally works out much less than the per ride commission. यह ड्राइवर के लिए लाभदायक है क्योंकि प्रति राइड सब्सक्रिप्शन लागत आमतौर पर प्रति राइड कमीशन से काफी कम होती है।
- Uber and Ola have followed this model introduced by Namma Yatri, for autorickshaw operations in Bengaluru. बेंगलुरु में ऑटोरिक्शा संचालन के लिए, उबर और ओला ने नम्मा यात्री द्वारा शुरू किए गए इस मॉडल को अपनाया है।
- The payout in this model from the platform to the driver is zero. इस मॉडल में प्लेटफॉर्म द्वारा ड्राइवर को किया जाने वाला भुगतान शून्य होता है।
- How will the Bill account for this? Will this mean that platform-based autorickshaw drivers will be excluded from it? इस स्थिति को विधेयक में कैसे समायोजित किया जाएगा? क्या इसका मतलब यह होगा कि प्लेटफॉर्म आधारित ऑटोरिक्शा ड्राइवर इससे बाहर हो जाएंगे?
- A possible workaround could be that for all platform operations following a subscription model, the cess payment could be built into the customer fee, charging, say, 2% of the full transaction amount. एक संभावित समाधान यह हो सकता है कि सभी सब्सक्रिप्शन मॉडल वाले प्लेटफॉर्म संचालन में सेस को ग्राहक शुल्क में शामिल किया जाए, जैसे कि कुल लेनदेन राशि का 2%।
- The financial portal for this model of platform work could be designed to transfer the cess amount of each transaction to the Payment and Welfare Fee Verification System that forms part of the Bill. इस प्लेटफॉर्म कार्य मॉडल के लिए वित्तीय पोर्टल को इस तरह डिज़ाइन किया जा सकता है कि प्रत्येक लेनदेन की सेस राशि को विधेयक के अंतर्गत आने वाले पेमेंट और वेलफेयर फीस वेरिफिकेशन सिस्टम में ट्रांसफर किया जा सके।
- The quantum of payment at 2% is not so much as to inconvenience the customers taking a ride on these autorickshaws. 2% की भुगतान राशि इतनी नहीं है कि इन ऑटोरिक्शा में सवारी करने वाले ग्राहकों को असुविधा हो।
- **The platforms in this case are unlikely to object, as they are merely called on to serve as intermediaries for the cess transaction.**



इस मामले में प्लेटफॉर्म आपत्ति नहीं करेंगे, क्योंकि वे केवल सेस लेनदेन के लिए मध्यस्थ की भूमिका निभा रहे होंगे।

- The platform sector is complex and a one-size-fits-all approach will only end in chaos.

प्लेटफॉर्म सेक्टर जटिल है और 'वन-साइज़-फिट्स-ऑल' दृष्टिकोण केवल अराजकता को जन्म देगा।

- Cess rates will need to be calibrated to fit the average employment conditions in each sector, ensuring that some minimum standards of social security can be guaranteed.

हर सेक्टर में औसत रोजगार स्थितियों के अनुसार सेस दरों का समायोजन करना आवश्यक होगा, ताकि कुछ न्यूनतम सामाजिक सुरक्षा मानक सुनिश्चित किए जा सकें।

Why were the Malegaon blast accused freed?

What did a Special National Investigation Agency Court rule with respect to the 2008 Malegaon bomb blast case? What were the casualties of the blasts? Why were confessional statements recorded under the Maharashtra Control of Organised Crime Act rendered inadmissible?

GS III: Extremism

EXPLAINER

Aaratrika Bhaumik

The story so far:

On July 31, a Special National Investigation Agency (NIA) Court acquitted all seven accused in the 2008 Malegaon bomb blast case, including Bharatiya Janata Party (BJP) leader and former MP Pragna Singh Thakur and serving Army Lieutenant Colonel Prasad Purohit. Special Judge A.K. Lahoti observed that although the occurrence of the bomb blast was indisputable, the prosecution had failed to produce credible and admissible evidence establishing the accused's involvement in the crime.

What was the Malegaon blast case?

On September 29, 2008, during the holy month of Ramzan, a powerful bomb blast ripped through Malegaon, a communally sensitive town in Maharashtra. Around 9:35 p.m., an explosive device concealed in an LML Freedom motorcycle detonated near the Shakeel Goods Transport Company. The explosion killed six people, injured 95 others, and caused significant damage to surrounding property. An FIR was promptly registered and the investigation was initially undertaken by the Nashik Rural Police and Mumbai's Anti-Terrorism Squad (ATS). In 2011, the case was transferred to the NIA. Of the 14 individuals arrested in connection with the blast, charges against seven were eventually dropped. The remaining seven, Pragna Singh Thakur, Colonel Prasad Shrikant Purohit, Ramesh Upadhyay, Sameer Kulkarni, Ajay Rahirkar, Sudhakar Dwivedi, and Sudhakar Chaturvedi, were put on trial. They were prosecuted under various provisions of the Indian Penal Code, 1860, along with charges under the Unlawful Activities (Prevention) Act (UAPA), 1967, and the Explosive Substances Act, 1908.

According to the ATS, conspiracy meetings had taken place across various



Procedural anomalies: Sameer Kulkarni leaving the sessions court in Mumbai, on July 31, 2011.

locations allegedly under Ms. Thakur's leadership. However, several witnesses, including serving Army officers, later retracted their statements in court, alleging that their earlier testimonies had been coerced. Many of the accused also claimed that their confessions were extracted under torture. The case also attracted widespread attention following the resignation of NIA special public prosecutor Rohini Salian, who alleged that she had been instructed to "go soft" on the accused and that the agency was deliberately weakening the case against the so-called "Hindu terror" network.

Why were the accused acquitted?

The court held that Ms. Thakur was not in "conscious possession" of the LML Freedom motorcycle in which the explosive device was allegedly planted. The Judge further observed that there was neither eyewitness testimony nor circumstantial evidence to suggest that

Ms. Thakur had handed over the motorcycle to the co-accused or was involved in assembling the explosive device. Instead, he noted that the explosive could have been hung, placed, or kept near the motorcycle, rather than fitted inside it. Judge Lahoti observed that the forensic expert who examined the motorcycle, on which the explosive device was allegedly planted, had admitted that it was merely his "guesswork" that led him to conclude the bomb was placed in the vehicle's boot. No scientific test had been conducted to verify the placement of the explosive. Accordingly, the Judge held that in the absence of any primary forensic analysis, the expert's testimony failed to inspire confidence. The ATS further alleged that the explosive used in the blast was RDX, claiming it had been procured by Colonel Purohit during his posting in Jammu & Kashmir. However, the court found no evidence establishing the source of the

explosive or how it was procured or transported.

However, Judge Lahoti rejected Mr. Purohit's claim that his association with fringe organisations like Abhinav Bharat was part of his official duties as an intelligence officer. He noted that documentary evidence clearly established Mr. Purohit's role as a trustee of the Abhinav Bharat Trust. However, there was no material on record to suggest that his superiors had authorised him to join the trust or to collect and utilise its funds.

Moreover, the ATS, which initially investigated the blast, based its case primarily on the accused having participated in conspiracy meetings related to execution of the attack. Its key evidence comprised confessional statements recorded under the Maharashtra Control of Organised Crime Act (MCOCA), 1999. However, these confessions were rendered inadmissible after MCOCA was dropped from the case in 2016, when the NIA took over the investigation and flagged procedural lapses. The court concurred, noting that the sanction to invoke MCOCA had been granted without "application of judicial mind." Judge Lahoti noted that Additional Chief Secretary of the Home Department, Mumbai, Chitkala Zutshi, had failed to consult the investigating officer before granting sanction under the UAPA. As a result, the statutory presumptions under the Act, such as the reverse burden of proof, could not be invoked against the accused, the court held.

What happens next?

Advocate Shahid Nadeem, representing Nisar Ahmed Haji Sayyed Bilal, who lost his son in the blast, told the media that the case reflected "significant failures" on the part of the NIA. He added that the victims' families intend to explore legal remedies by filing an independent appeal in the Bombay High Court. Meanwhile, political pressure is mounting on the Maharashtra government to file its own appeal, as it did following the acquittals in the 2006 Mumbai train blasts case.

THE GIST

On September 29, 2008, during the holy month of Ramzan, a powerful bomb blast ripped through Malegaon, a communally sensitive town in Maharashtra. The explosion killed six people, and injured 95 others.

The court held that Ms. Thakur was not in "conscious possession" of the LML Freedom motorcycle in which the explosive device was allegedly planted.

Advocate Shahid Nadeem, representing Nisar Ahmed Haji Sayyed Bilal, who lost his son in the blast, told the media that the case reflected "significant failures" on the part of the NIA.

Malegaon Blast Case Verdict मालेगांव ब्लास्ट केस का निर्णय

- Why were the Malegaon blast accused freed? मालेगांव ब्लास्ट के आरोपियों को क्यों बरी किया गया?
- What did a Special National Investigation Agency Court rule with respect to the 2008 Malegaon bomb blast case?



2008 मालेगांव बम धमाके मामले में विशेष राष्ट्रीय जांच एजेंसी (NIA) अदालत ने क्या फैसला दिया?

- What were the casualties of the blasts?
धमाकों में कितने लोग हताहत हुए थे?
- Why were confessional statements recorded under the Maharashtra Control of Organised Crime Act rendered inadmissible?
महाराष्ट्र संगठित अपराध नियंत्रण अधिनियम (MCOCA) के तहत दर्ज स्वीकारोक्ति बयानों को क्यों अमान्य माना गया?

Malegaon Blast Case (2008) and Acquittal of Accused

मालेगांव विस्फोट मामले (2008) और आरोपियों को बरी किया जाना

- On July 31, a Special National Investigation Agency (NIA) Court acquitted all seven accused in the 2008 Malegaon bomb blast case, including BJP leader and former MP Pragya Singh Thakur and serving Army Lieutenant Colonel Prasad Purohit.
31 जुलाई को विशेष राष्ट्रीय जांच एजेंसी (NIA) की अदालत ने 2008 मालेगांव बम विस्फोट मामले में सभी सात आरोपियों को बरी कर दिया, जिनमें भाजपा नेता और पूर्व सांसद प्रज्ञा सिंह ठाकुर और सेवारत सेना अधिकारी लेफ्टिनेंट कर्नल प्रसाद पुरोहित शामिल थे।
- Special Judge A.K. Lahoti observed that although the occurrence of the bomb blast was indisputable, the prosecution had failed to produce credible and admissible evidence establishing the accused's involvement in the crime.
विशेष न्यायाधीश ए.के. लाहोटी ने कहा कि हालांकि बम विस्फोट की घटना निर्विवाद थी, लेकिन अभियोजन पक्ष आरोपियों की संलिप्तता साबित करने के लिए विश्वसनीय और स्वीकार्य सबूत पेश करने में विफल रहा।

What was the Malegaon blast case?

मालेगांव विस्फोट मामले क्या था?

- On September 29, 2008, during the holy month of Ramzan, a powerful bomb blast ripped through Malegaon, a communally sensitive town in Maharashtra.
29 सितंबर 2008 को रमज़ान के पवित्र महीने के दौरान महाराष्ट्र के सांप्रदायिक रूप से संवेदनशील शहर मालेगांव में एक शक्तिशाली बम विस्फोट हुआ।
- Around 9:35 p.m., an explosive device concealed in an LML Freedom motorcycle detonated near the Shakeel Goods Transport Company.
लगभग रात 9:35 बजे, एक LML फ्रीडम मोटरसाइकिल में छिपाया गया विस्फोटक उपकरण शकील गुड्स ट्रांसपोर्ट कंपनी के पास फट गया।
- The explosion killed six people, injured 95 others, and caused significant damage to surrounding property.
इस विस्फोट में 6 लोगों की मौत, 95 अन्य घायल हुए, और आसपास की संपत्ति को भारी नुकसान हुआ।
- An FIR was promptly registered and the investigation was initially undertaken by the Nashik Rural Police and Mumbai's Anti-Terrorism Squad (ATS).
एक एफआईआर तुरंत दर्ज की गई और प्रारंभिक जांच नासिक ग्रामीण पुलिस और मुंबई की आतंकवाद-रोधी दस्ते (ATS) द्वारा की गई।
- In 2011, the case was transferred to the NIA.
2011 में मामला एनआईए को सौंप दिया गया।
- Of the 14 individuals arrested, charges against seven were eventually dropped.
गिरफ्तार किए गए 14 लोगों में से 7 के खिलाफ आरोप बाद में हटा दिए गए।
- The remaining seven — Pragya Singh Thakur, Colonel Prasad Shrikant Purohit, Ramesh Upadhyay, Sameer Kulkarni, Ajay Rahirkar, Sudhakar Dwivedi, and



Sudhakar Chaturvedi — were put on trial.

शेष सात आरोपी — प्रज्ञा सिंह ठाकुर, कर्नल प्रसाद श्रीकांत पुरोहित, रमेश उपाध्याय, समीर कुलकर्णी, अजय रहीरकर, सुधाकर द्विवेदी, और सुधाकर चतुर्वेदी — को मुकदमे का सामना करना पड़ा।

- They were prosecuted under various provisions of the **Indian Penal Code, 1860**, along with charges under the **Unlawful Activities (Prevention) Act (UAPA), 1967**, and the **Explosive Substances Act, 1908**.
इन पर **भारतीय दंड संहिता, 1860**, **गैरकानूनी गतिविधियाँ (रोकथाम) अधिनियम (UAPA), 1967**, और **विस्फोटक पदार्थ अधिनियम, 1908** की विभिन्न धाराओं के तहत मुकदमा चलाया गया।
- According to the **ATS, conspiracy meetings** had taken place across various locations allegedly under **Ms. Thakur's leadership**.
एटीएस के अनुसार, **षड्यंत्र की बैठकें** विभिन्न स्थानों पर हुई थीं, जो कथित रूप से **प्रज्ञा ठाकुर के नेतृत्व** में आयोजित की गई थीं।
- However, several **witnesses**, including **serving Army officers**, later **retracted** their statements in court, alleging that their earlier testimonies had been **coerced**.
हालांकि, कई **गवाहों**, जिनमें **सेना के सेवारत अधिकारी** भी शामिल थे, ने बाद में अदालत में अपने बयान **वापस ले लिए**, और आरोप लगाया कि उनके पहले दिए गए बयान **दबाव में लिए गए** थे।
- Many of the accused also claimed that their **confessions were extracted under torture**.
कई आरोपियों ने भी दावा किया कि उनके **इकबालिया बयान प्रताड़ना के तहत लिए गए** थे।
- The case also attracted widespread attention following the **resignation of NIA special public prosecutor Rohini Salian**, who alleged that she had been instructed to **“go soft” on the accused**.
मामला तब और चर्चित हो गया जब **एनआईए की विशेष लोक अभियोजक रोहिणी सालियन ने इस्तीफा दिया**, और आरोप लगाया कि उन्हें **आरोपियों के प्रति नरम रुख अपनाने का निर्देश दिया** गया था।
- She alleged that the agency was **deliberately weakening** the case against the so-called **“Hindu terror” network**.
उन्होंने आरोप लगाया कि एजेंसी **जानबूझकर “हिंदू आतंक” नेटवर्क के खिलाफ मामला कमजोर कर रही थी**।

Why were the accused acquitted?

आरोपियों को बरी क्यों किया गया?

- The court held that **Ms. Thakur was not in “conscious possession”** of the **LML Freedom motorcycle** in which the **explosive device was allegedly planted**.
अदालत ने माना कि **प्रज्ञा सिंह ठाकुर “सचेत कब्जे” में नहीं थीं** उस **एलएमएल फ्रीडम मोटरसाइकिल** की, जिसमें **विस्फोटक डिवाइस लगाए जाने का आरोप था**।
- The Judge observed there was **neither eyewitness testimony nor circumstantial evidence** suggesting that **Ms. Thakur had handed over the motorcycle to co-accused or helped in assembling the bomb**.
न्यायाधीश ने देखा कि **न तो कोई चश्मदीद गवाह था और न ही परिस्थितिजन्य साक्ष्य**, जो यह साबित करे कि **प्रज्ञा ठाकुर ने मोटरसाइकिल किसी सह-आरोपी को सौंपी थी या विस्फोटक तैयार करने में मदद की थी**।
- He noted the **explosive could have been hung, placed, or kept near the motorcycle, not necessarily fitted inside it**.
उन्होंने कहा कि **विस्फोटक को मोटरसाइकिल के अंदर फिट नहीं किया गया हो, बल्कि लटकाया, रखा या उसके पास रखा गया हो सकता है**।
- **Forensic expert admitted** his conclusion that the bomb was placed in the vehicle's boot was mere **“guesswork”**.



फॉरेंसिक विशेषज्ञ ने स्वीकार किया कि बम को वाहन के बूट में रखने का उनका निष्कर्ष केवल “अनुमान” पर आधारित था।

- **No scientific test** was conducted to verify the placement of the explosive. विस्फोटक की स्थिति की पुष्टि के लिए कोई वैज्ञानिक परीक्षण नहीं किया गया था।
- Therefore, the **expert’s testimony failed to inspire confidence** in the absence of any **primary forensic analysis**.
इसलिए, किसी प्राथमिक फॉरेंसिक विश्लेषण के अभाव में विशेषज्ञ की गवाही भरोसेमंद नहीं मानी गई।
- The **ATS alleged** that the explosive was **RDX**, and it was **procured by Colonel Purohit during posting in Jammu & Kashmir**.
एटीएस ने आरोप लगाया कि विस्फोटक RDX था, जिसे कर्नल पुरोहित ने जम्मू-कश्मीर में तैनाती के दौरान हासिल किया था।
- But the court found **no evidence to establish the source, procurement, or transportation** of the explosive.
लेकिन अदालत को विस्फोटक के स्रोत, प्राप्ति या परिवहन का कोई प्रमाण नहीं मिला।

Findings on Mr. Purohit's Role

कर्नल पुरोहित की भूमिका पर निष्कर्ष

- Judge Lahoti **rejected** Mr. Purohit's claim that his link with **Abhinav Bharat** was **part of his official duties as an intelligence officer**.
न्यायाधीश लाहोटी ने कर्नल पुरोहित का यह दावा खारिज किया कि अभिनव भारत से उनका संबंध बतौर खुफिया अधिकारी उनके आधिकारिक कर्तव्यों का हिस्सा था।
- The court found **documentary evidence establishing** Mr. Purohit's role as a **trustee of Abhinav Bharat Trust**.
अदालत को ऐसे दस्तावेजी सबूत मिले, जो यह साबित करते हैं कि कर्नल पुरोहित अभिनव भारत ट्रस्ट के ट्रस्टी थे।
- However, there was **no record showing that his superiors authorised him to join the trust or handle its funds**.
हालांकि, ऐसा कोई रिकॉर्ड नहीं मिला, जिससे यह साबित हो कि उनके वरिष्ठ अधिकारियों ने उन्हें ट्रस्ट से जुड़ने या उसके फंड का प्रबंधन करने की अनुमति दी थी।

Procedural Issues and MCOCA Confessions

प्रक्रियागत खामियाँ और MCOCA के तहत बयान

- The **ATS based its case** primarily on the **accused’s participation in conspiracy meetings and confessional statements under MCOCA, 1999**.
एटीएस ने अपना केस मुख्य रूप से इस आधार पर बनाया कि आरोपियों ने साजिश की बैठकों में हिस्सा लिया था और MCOCA, 1999 के तहत बयान दिए थे।
- These **confessions became inadmissible** after **MCOCA was dropped in 2016**, when **NIA took over the case citing procedural lapses**.
जब 2016 में MCOCA हटाया गया और NIA ने जांच संभाली, तो प्रक्रियात्मक खामियों के कारण ये बयान अमान्य हो गए।
- The court agreed, noting the **MCOCA sanction was granted without “application of judicial mind”**.
अदालत ने सहमति जताई कि MCOCA की स्वीकृति “न्यायिक सोच के बिना” दी गई थी।
- Judge Lahoti noted that **Chitkala Zutshi**, Additional Chief Secretary, **did not consult the investigating officer before sanctioning UAPA**.
न्यायाधीश लाहोटी ने कहा कि अतिरिक्त मुख्य सचिव चित्रकला जुत्शी ने UAPA की मंजूरी से पहले जांच अधिकारी से परामर्श नहीं किया था।



- As a result, **statutory presumptions** under UAPA, like **reverse burden of proof**, could **not be invoked against the accused**.
परिणामस्वरूप, UAPA के तहत कानूनी मान्यताएं, जैसे कि उल्टा प्रमाण भार, आरोपियों पर लागू नहीं किया जा सका।

What happens next?

अब आगे क्या होगा?

- Advocate Shahid Nadeem**, representing **victim Nisar Ahmed Haji Sayyed Bilal**, said the case showed **“significant failures”** on the part of the NIA.
पीड़ित के वकील शाहिद नदीम, जो निसार अहमद हाजी सैयद बिलाल का प्रतिनिधित्व कर रहे थे, ने कहा कि यह मामला NIA की “गंभीर विफलताओं” को दर्शाता है।
- He said the **victims’ families would explore legal remedies by filing an independent appeal in the Bombay High Court**.
उन्होंने कहा कि पीड़ितों के परिवार बॉम्बे हाई कोर्ट में स्वतंत्र अपील दायर करके कानूनी उपायों की तलाश करेंगे।
- appeal**, as done in the **2006 Mumbai train blasts case**.
इस बीच, महाराष्ट्र सरकार पर राजनीतिक दबाव बढ़ रहा है कि वह 2006 मुंबई ट्रेन धमाकों के मामले की तरह अपनी अपील दायर Meanwhile, **political pressure is rising on the Maharashtra government to file its own करे।**

TOPICS COVERED (GS Paper IV and Essay)

1. Gadkari cites Nehru-Gandhi ideals to drive mining jobs in Maharashtra

गडकरी ने महाराष्ट्र में खनन क्षेत्र में नौकरियों को बढ़ावा देने के लिए नेहरू-गांधी आदर्शों का हवाला दिया



Gadkari cites Nehru-Gandhi ideals to drive mining jobs in Maharashtra

GS Paper IV: Ideology

Purnima Sah
MUMBAI

Drawing from the foundational ideas of India's first Prime Minister Jawaharlal Nehru and Mahatma Gandhi, Union Minister for Road Transport and Highways Nitin Gadkari on Sunday said the Centre's upcoming mining policy would aim to boost industrial production while ensuring broader participation and employment — especially in backward regions like Vidarbha.

Speaking at the 'India@100: Charting Vidarbha's Journey to a Developed India' event in Nagpur, Mr. Gadkari recalled Nehru's emphasis on maximising production and Gandhi's insistence on inclusive economic participation. "That's the principle we want to adopt. We want to increase maximum production with the involvement of maximum number of people," Mr. Gadkari said. He said the mining sector would be central to this plan, and a new national mining policy is being finalised to fast-track industrial activity in resource-rich areas like Gadchiroli. "The draft policy was recently tabled before the Cabinet. While the Prime Minister had some reservations, after I shared my suggestions, he directed the Cabinet Secretary to review the policy with me," Mr. Gadkari said.

He also emphasised the need for time-bound clearance of mining projects, adding that environmental approvals should not take more than a month.

Gadkari cites Nehru-Gandhi ideals to drive mining jobs in Maharashtra

गडकरी ने महाराष्ट्र में खनन क्षेत्र में नौकरियों को बढ़ावा देने के लिए नेहरू-गांधी आदर्शों का हवाला दिया

New National Mining Policy Based on Nehru-Gandhi Ideas नेहरू-गांधी विचारों पर आधारित नई राष्ट्रीय खनन नीति

Drawing from the foundational ideas of India's **first Prime Minister Jawaharlal Nehru and Mahatma Gandhi**, Union Minister for Road Transport and Highways **Nitin Gadkari** on **Sunday** said the Centre's upcoming **mining policy** would aim to boost industrial production while ensuring broader participation and employment — especially in **backward regions like Vidarbha**.

भारत के प्रथम प्रधानमंत्री जवाहरलाल नेहरू और महात्मा गांधी के मूलभूत विचारों से प्रेरणा लेते हुए, केंद्रीय सड़क परिवहन और राजमार्ग मंत्री नितिन गडकरी ने रविवार को कहा कि केंद्र की आगामी **खनन नीति** औद्योगिक उत्पादन को बढ़ावा देने के साथ-साथ व्यापक भागीदारी और **विशेषकर विदर्भ जैसे पिछड़े क्षेत्रों** में रोजगार सुनिश्चित करने का लक्ष्य रखेगी।

Speaking at the 'India@100: Charting Vidarbha's Journey to a Developed India' event in Nagpur, Mr. Gadkari recalled **Nehru's emphasis on maximising production and Gandhi's insistence on inclusive economic participation**.

नागपुर में आयोजित 'इंडिया@100: एक विकसित भारत की ओर विदर्भ की यात्रा' कार्यक्रम में बोलते हुए, श्री गडकरी ने नेहरू द्वारा उत्पादन अधिकतम करने पर दिए गए बल और गांधी द्वारा समावेशी आर्थिक भागीदारी की बात को याद किया।

"That's the principle we want to adopt. We want to increase **maximum production** with the involvement of **maximum number of people**," Mr. Gadkari said.

श्री गडकरी ने कहा, "यह वही सिद्धांत है जिसे हम अपनाना चाहते हैं। हम **ज्यादा से ज्यादा लोगों की भागीदारी** के साथ **अधिकतम उत्पादन** बढ़ाना चाहते हैं।"

He said the **mining sector** would be **central** to this plan, and a **new national mining policy** is being finalized to **fast-track industrial activity** in **resource-rich areas like Gadchiroli**.

उन्होंने कहा कि इस योजना के **केंद्र में खनन क्षेत्र** होगा और **गडचिरोली जैसे संसाधन-समृद्ध क्षेत्रों में औद्योगिक गतिविधियों को तेज** करने के लिए एक **नई राष्ट्रीय खनन नीति** को अंतिम रूप दिया जा रहा है।

"The **draft policy** was recently tabled before the **Cabinet**. While the **Prime Minister** had some **reservations**, after I shared my suggestions, he directed the **Cabinet Secretary** to review the policy with me," Mr. Gadkari said.

श्री गडकरी ने कहा, "इस **नीति के मसौदे** को हाल ही में **कैबिनेट** के समक्ष प्रस्तुत किया गया था। हालांकि **प्रधानमंत्री** को कुछ **आपत्तियाँ** थीं, लेकिन जब मैंने अपने सुझाव साझा किए, तो उन्होंने **कैबिनेट सचिव** को मेरे साथ मिलकर नीति की समीक्षा करने का निर्देश दिया।"

He also emphasised the need for **time-bound clearance** of **mining projects**, adding that **environmental approvals** should not take more than a **month**.

उन्होंने **खनन परियोजनाओं की समयबद्ध मंजूरी** की आवश्यकता पर भी बल दिया और कहा कि **पर्यावरण स्वीकृति में एक महीने से अधिक समय नहीं लगना चाहिए**।