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PCS Special:	24 October 2025
1.	A story of survival: tamarind tree planted by woman freedom fighter finds a place at Kolkata film festival संघर्ष की कहानी: महिला स्वतंत्रता सेनानी द्वारा लगाया गया इमली का पेड़ कोलकाता फिल्म समारोह में स्थान पाता है



A story of survival: tamarind tree planted by woman freedom fighter finds a place at Kolkata film festival

PCS

Bishwanath Ghosh
KOLKATA

A neighbourhood tamarind tree has found its way to the Kolkata International Film Festival (KIFF) next month, with a documentary made on it selected for a world premiere in the National Competition on Documentary category.

The massive tree, which provides green cover to its surroundings, carries historical significance as it is said to have been planted about 70 years ago by freedom fighter Parul Mukherjee when she settled in a refugee colony, now known as Vidyasagar Colony, in south Kolkata after Partition. Ms. Mukherjee, a revolutionary, was convicted in the Titagarh conspiracy



The tamarind tree in Kolkata's Vidyasagar Colony, home to several bird species, features in the film *Friends of Jilipibala*, set to premiere at the Kolkata International Film Festival. BISHWANATH GHOSH

case in 1935 at the age of 20 and spent four years in prison.

The tree was under threat when builders recently took over the old building where Ms. Mukherjee had lived before her death in 1990. It was saved

after a cultural movement was launched in July last year by the film's director, Debalina Majumder, who is also a neighbour. Following the campaign, the boundary wall of the property was restructured to leave the tree standing on land

belonging to the Kolkata Municipal Corporation.

"The tree has given shelter to animals and birds for decades. I have been shooting those birds and animals for more than 12 years. This film documents the vulnerability of urban fauna in the face of urban redevelopment projects. Recently in Delhi, we saw mass mobilisation around street dogs. Hope we will find similar mobilisation against cutting trees and making urban fauna lose their homes," Ms. Majumder said about her 30-minute documentary, titled *Friends of Jilipibala*, which conveys its message through a toddler's reactions to various lives on the tree.

This year, the Kolkata International Film Festival

will be held from November 6 to 13, and *Friends of Jilipibala* is among 10 films selected for the National Competition on Documentary category.

'Connected existence'

"Environmental Studies is now a mandatory subject in every field of education. Children continue to be most vulnerable to environmental degradation and have the least ability to take action regarding this. We wanted to make a film that shows our connected existence and a child's response to deforestation beyond her control - as she watched birds, animals and reptiles losing their habitat due to proposed development," Samata Biswas, the producer of the film, said.

A story of survival: tamarind tree planted by woman freedom fighter finds a place at Kolkata film festival

संघर्ष की कहानी: महिला स्वतंत्रता सेनानी द्वारा लगाया गया इमली का पेड़ कोलकाता फिल्म समारोह में स्थान पाता है

- A neighbourhood **tamarind tree** has found its way to the **Kolkata International Film Festival (KIFF)** next month, with a **documentary** made on it selected for a **world premiere** in the **National Competition on Documentary category**.

एक पड़ोस के इमली के पेड़ को अगले महीने होने वाले कोलकाता अंतर्राष्ट्रीय फिल्म समारोह (केआईएफएफ) में स्थान मिला है, जहाँ इस पर बनाई गई डॉक्यूमेंट्री को राष्ट्रीय डॉक्यूमेंट्री प्रतियोगिता श्रेणी में विश्व प्रीमियर के लिए चुना गया है।



- The massive tree, which provides **green cover** to its surroundings, carries **historical significance** as it is said to have been **planted about 70 years ago** by **freedom fighter Parul Mukherjee** when she settled in a **refugee colony**, now known as **Vidyasagar Colony**, in **south Kolkata** after **Partition**.

यह विशाल पेड़, जो अपने आसपास को हरियाली प्रदान करता है, ऐतिहासिक महत्व रखता है क्योंकि कहा जाता है कि इसे लगभग 70 वर्ष पहले स्वतंत्रता सेनानी पारुल मुखर्जी ने लगाया था जब उन्होंने विभाजन के बाद दक्षिण कोलकाता में अब विद्यासागर कॉलोनी के रूप में जानी जाने वाली शरणार्थी बस्ती में बस गई थीं।

- **Ms. Mukherjee**, a revolutionary, was **convicted in the Titagarh conspiracy case in 1935** at the age of **20** and **spent four years in prison**.

सुश्री मुखर्जी, जो एक क्रांतिकारी थीं, को 1935 में टिटागढ़ साजिश मामले में दोषी ठहराया गया था, उस समय उनकी उम्र 20 वर्ष थी और उन्होंने चार वर्ष जेल में बिताए।

- The tree was under threat when **builders** recently took over the **old building** where Ms. Mukherjee had lived before her death in **1990**.



यह पेड़ खतरे में था जब हाल ही में निर्माताओं ने उस पुरानी इमारत को अपने कब्जे में ले लिया जहां सुश्री मुखर्जी अपनी 1990 में मृत्यु से पहले रहती थीं।

- It was saved after a **cultural movement** was launched in **July last year** by the film's director, **Debalina Majumder**, who is also a neighbour.
इसे फिल्म की निर्देशक देबलिना मजूमदार, जो स्वयं एक पड़ोसी हैं, द्वारा पिछले वर्ष जुलाई में शुरू किए गए सांस्कृतिक आंदोलन के बाद बचाया गया।
- Following the campaign, the **boundary wall** of the property was **restructured** to leave the tree standing on land belonging to the **Kolkata Municipal Corporation**.
अभियान के बाद संपत्ति की सीमा दीवार को पुनर्गठित किया गया ताकि पेड़ कोलकाता नगर निगम की भूमि पर खड़ा रह सके।
- "The tree has given **shelter to animals and birds** for decades. I have been shooting those birds and animals for more than **12 years**. This film documents the **vulnerability of urban fauna** in the face of **urban redevelopment projects**. Recently in **Delhi**, we saw **mass mobilisation** around street dogs. Hope we will find similar mobilisation against **cutting trees** and making **urban fauna lose their homes**," Ms. **Majumder** said about her **30-minute documentary**, titled **Friends of Jilipibala**, which conveys its message through a **toddler's reactions** to various lives on the tree.
"इस पेड़ ने दशकों से पक्षियों और जानवरों को आश्रय दिया है। मैं पिछले 12 वर्षों से उन पक्षियों और जानवरों की शूटिंग कर रही हूँ। यह फिल्म शहरी पुनर्विकास परियोजनाओं के बीच शहरी जीव-जंतुओं की असुरक्षा को दर्शाती है। हाल ही में दिल्ली में हमने सड़क के कुत्तों को लेकर जनजागरण देखा। उम्मीद है कि पेड़ों की कटाई और शहरी जीवों को उनके घरों से वंचित करने के खिलाफ भी इसी तरह का जनजागरण होगा," सुश्री मजूमदार ने अपनी 30 मिनट की डॉक्यूमेंट्री 'फ्रेंड्स ऑफ जिलिपिबाला' के बारे में कहा, जो अपना संदेश एक छोटे बच्चे की प्रतिक्रियाओं के माध्यम से देती है जो पेड़ पर रहने वाले विभिन्न जीवों को देखता है।
- This year, the **Kolkata International Film Festival** will be held from **November 6 to 13**, and **Friends of Jilipibala** is among **10 films selected** for the **National Competition on Documentary category**.
इस वर्ष, कोलकाता अंतर्राष्ट्रीय फिल्म समारोह 6 से 13 नवंबर तक आयोजित किया जाएगा, और 'फ्रेंड्स ऑफ जिलिपिबाला' को राष्ट्रीय डॉक्यूमेंट्री प्रतियोगिता श्रेणी के लिए चुनी गई 10 फिल्मों में से एक है।

'Connected existence' 'परस्पर जुड़ा अस्तित्व'

- "**Environmental Studies** is now a **mandatory subject** in every field of education. Children continue to be **most vulnerable** to **environmental degradation** and have the **least ability to take action** regarding this.
"अब पर्यावरण अध्ययन शिक्षा के हर क्षेत्र में एक अनिवार्य विषय बन गया है। बच्चे अभी भी पर्यावरणीय हास के प्रति सबसे अधिक संवेदनशील हैं और इसमें कार्रवाई करने की सबसे कम क्षमता रखते हैं।"
- We wanted to make a film that shows our **connected existence** and a **child's response to deforestation beyond her control** – as she watched **birds, animals and reptiles losing their habitat** due to proposed development," **Samata Biswas**, the producer of the film, said.
"हम एक ऐसी फिल्म बनाना चाहते थे जो हमारे परस्पर जुड़े अस्तित्व और एक बच्चे की अपने नियंत्रण से बाहर हो रही वनों की कटाई पर प्रतिक्रिया को दिखाए – जब वह देखती है कि विकास प्रस्तावों के कारण पक्षी, जानवर और सरीसृप अपने आवास खो रहे हैं," फिल्म की निर्माता समता बिस्वास ने कहा।

Titagarh Conspiracy Case (1935)

- **Titagarh** is an industrial suburb located near **Barrackpore**, in **North 24 Parganas district**, **West Bengal** (then Bengal Presidency under British India).



Nature of the Case

- The **Titagarh Conspiracy Case (1935)** was a **criminal case filed by the British authorities** against a group of **Bengali revolutionaries** accused of plotting to wage war against the British Government.
- It was **one of the last major conspiracy cases** in Bengal before World War II, following a long series of such trials.

The Objective

- The alleged objective was to:
 - Organize secret revolutionary cells in Bengal.
 - Manufacture and store **arms and explosives** for attacks on British officials and police posts.
 - Spread revolutionary literature and inspire mass rebellion.
 - Rebuild networks after previous crackdowns (like the Chittagong Armoury Raid of 1930 and the Shankharitola Conspiracy Case of 1933).

B. British Allegations

- According to British intelligence, revolutionaries in **Titagarh and Calcutta** were:
 - In possession of **arms, gunpowder, bomb-making materials**.
 - Conducting **secret meetings and training sessions**.
 - Maintaining links with exiled revolutionaries in Burma (Myanmar) and Southeast Asia.
- The police traced the movement through **spies and informants** within the underground groups.

Arrests and Trial

- A number of young men — mainly students and workers from Calcutta, Titagarh, and Howrah — were arrested under the **Indian Penal Code, Sections 121A and 122** (conspiracy to wage war and collection of arms).
- Among those detained were individuals believed to have **links with the Jugantar group**.
- The **trial was conducted in 1935** under the supervision of the **Special Tribunal** in Calcutta.
- The British Government invoked provisions of the **Criminal Law Amendment Act** (used in several political conspiracy trials to allow special procedures and speedy convictions).

C. Outcome

- Several accused were **convicted** and sentenced to varying terms of **rigorous imprisonment** (typically between 5 to 10 years).
- Some were **acquitted due to lack of evidence** or **insufficient direct links** to arms recovery.
- The case was widely criticized in nationalist circles as a **“fabricated conspiracy”** to suppress political dissent.



5) Broader Revolutionary Context

A. Chain of Bengal Conspiracy Cases (1908–1935)

Year	Conspiracy Case	Location / Group	Key Figures / Outcome
1908	Alipore Conspiracy Case	Calcutta (Anushilan Samiti)	Aurobindo Ghosh, Barindra Ghosh; landmark early trial
1910	Howrah–Shibpur Case	Howrah	Many acquitted; weak evidence
1912	Delhi–Lahore Conspiracy Case	Punjab–Delhi	Attempt to assassinate Viceroy Hardinge
1930	Chittagong Armoury Raid	Chittagong	Surya Sen, Pritilata Waddedar
1933	Shankharitola Conspiracy Case	Calcutta	Jugantar group
1935	Titagarh Conspiracy Case	Titagarh, Bengal	Attempt to rebuild underground networks
1936	Midnapore Conspiracy Case	Midnapore district	Local revolutionary group crackdown

GS Paper 1: History, Society and Geography

TOPICS COVERED

24 October 2025

- Literacy helped Kerala lead in development indices: Murmu**
साक्षरता ने केरल को विकास सूचकांकों में अग्रणी बनने में मदद की : मुर्मू
- How do monsoons affect Tamil Nadu?**
मॉनसून तमिलनाडु को कैसे प्रभावित करते हैं?



Literacy helped Kerala lead in development indices: Murmu

Knowledge propels society forward and fosters self-reliance, says President; she unveils bust of former President K.R. Narayanan and pays homage to social reformer Sree Narayana Guru

GS 1: History

The Hindu Bureau

THIRUVANANTHAPURAM

The power of literacy and knowledge has enabled Kerala to rank among the leading States on several human development indicators, President Droupadi Murmu said on Thursday.

Addressing the valedictory function of the platinum jubilee celebrations of St. Thomas College at Pala in Kerala, the President emphasised that knowledge drives innovation, propels society forward, and fosters self-reliance.

'Story of courage'

Ms. Murmu unveiled a bust of former President K.R.



President Droupadi Murmu after unveiling the bust of former President K.R. Narayanan at the Kerala Raj Bhavan on Thursday. PTI

Narayanan at the Raj Bhavan in Thiruvananthapuram the same day.

Speaking on the occasion, the President described K.R. Narayanan's life as a story of courage, perseverance, and self-

belief. "His academic excellence was a symbol of what determination and opportunity can accomplish when guided by purpose," she said.

Meanwhile, while inaugurating the death anniver-

sary centenary of Sree Narayana Guru at Sivagiri Madhom in Varkala, the President said the revered social reformer inspired generations with his ideals of equality, unity, and love for humanity.

"Sree Narayana Guru was one of the leading figures of the pan-Indian reawakening witnessed during the 19th century. He devoted his life to liberating people from the darkness of ignorance and superstition," she said. Sree Narayana Guru was one of India's greatest spiritual leaders and social reformers whose philosophy and actions reshaped the nation's social and spiritual landscape, she said.

Literacy helped Kerala lead in development indices: Murmu

साक्षरता ने केरल को विकास सूचकांकों में अग्रणी बनने में मदद की : मुर्मू

- The power of **literacy** and **knowledge** has enabled **Kerala** to rank among the leading States on several **human development indicators**, **President Droupadi Murmu** said on **Thursday**.

राष्ट्रपति द्रौपदी मुर्मू ने गुरुवार को कहा कि साक्षरता और ज्ञान की शक्ति ने केरल को कई मानव विकास सूचकांकों में अग्रणी राज्यों में स्थान दिलाया है।

- Addressing the valedictory function of the **platinum jubilee celebrations** of **St. Thomas College** at **Pala** in **Kerala**, the President emphasised that **knowledge drives innovation**, propels society forward, and fosters **self-reliance**.

केरल के पाला में स्थित सेंट थॉमस कॉलेज के प्लैटिनम जुबली समारोह के समापन समारोह को संबोधित करते हुए राष्ट्रपति ने कहा कि ज्ञान नवाचार को प्रेरित करता है, समाज को आगे बढ़ाता है और आत्मनिर्भरता को प्रोत्साहित करता है।

- **'Story of courage'** / 'साहस की कहानी'



- Ms. Mumu unveiled a **bust of former President K.R. Narayanan** at the **Raj Bhavan** in **Thiruvananthapuram** the same day.
सुश्री मुर्मू ने उसी दिन तिरुवनंतपुरम स्थित राजभवन में पूर्व राष्ट्रपति के.आर. नारायणन की प्रतिमा का अनावरण किया।
- Speaking on the occasion, the President described **K.R. Narayanan's life** as a **story of courage, perseverance, and self-belief**.
इस अवसर पर बोलते हुए राष्ट्रपति ने के.आर. नारायणन के जीवन को साहस, दृढ़ता और आत्मविश्वास की कहानी बताया।
- “His **academic excellence** was a symbol of what **determination and opportunity** can accomplish when guided by **purpose**,” she said.
उन्होंने कहा, “उनकी **शैक्षणिक उत्कृष्टता** इस बात का प्रतीक थी कि **दृढ़ संकल्प और अवसर**, जब उद्देश्य द्वारा निर्देशित हों, तो क्या हासिल कर सकते हैं।”
- Meanwhile, while inaugurating the **death anniversary centenary of Sree Narayana Guru** at **Sivagiri Madhom** in **Varkala**, the President said the revered **social reformer** inspired generations with his ideals of **equality, unity, and love for humanity**.
इस बीच, राष्ट्रपति ने **वर्खला के शिवगिरी मठ** में श्री नारायण गुरु की पुण्यतिथि शताब्दी समारोह का उद्घाटन करते हुए कहा कि पूजनीय **सामाजिक सुधारक** ने **समानता, एकता और मानवता** के प्रति प्रेम के अपने आदर्शों से पीढ़ियों को प्रेरित किया।
- “Sree Narayana Guru was one of the leading figures of the **pan-Indian reawakening** witnessed during the **19th century**.
“श्री नारायण गुरु **19वीं सदी** के दौरान देखे गए **सर्वभारतीय पुनर्जागरण** के प्रमुख व्यक्तित्वों में से एक थे।
- He devoted his life to liberating people from the **darkness of ignorance and superstition**,” she said.
उन्होंने कहा कि उन्होंने अपना जीवन **अज्ञान और अंधविश्वास के अंधकार** से लोगों को मुक्त करने के लिए समर्पित किया।
- **Sree Narayana Guru** was one of **India's greatest spiritual leaders and social reformers** whose **philosophy and actions** reshaped the nation's **social and spiritual landscape**, she said.
उन्होंने कहा कि श्री नारायण गुरु **भारत के महानतम आध्यात्मिक नेताओं और सामाजिक सुधारकों** में से एक थे, जिनकी **दर्शन और कर्म** ने देश के **सामाजिक और आध्यात्मिक परिदृश्य** को पुनर्गठित किया।



How do monsoons affect Tamil Nadu?

How are heavy rains affecting cities, farmland, and infrastructure? What are the health and environmental risks of prolonged heavy rainfall? What role is the Mullaperiyar Dam playing in rising flood risk? Can Tamil Nadu manage simultaneous inflows from Kerala and local monsoon rains?

GS I: Climate, Monsoon

EXPLAINER

Vasudevan Mukunth

The story so far:

The northeast monsoon has kicked in early this year, at least four days sooner for the second year running, over Tamil Nadu. Last year, this phase of the monsoon ended with the State recording 33% more rain than the long-period average, and forecasters expect this year to go the same way.

Historically, policymakers and State authorities have consistently interpreted excess rain as a positive. Climate change is complicating this calculus because while rainfall volumes increase, they are often concentrated in short and localised bursts, delivering over-large quantities of water in places that often can't absorb them in full. As a result, it might be time to reconsider the idea that "excess is good".

Why is excess rainfall a concern?

In urban areas, surfaces paved with concrete and asphalt keep them from absorbing heavy rainfall, leading to rapid runoff that overwhelms drainage systems, leading to flash floods, low-lying areas being inundated, property damage, and disrupted transportation.

As seen during Cyclone Michaung and Tamil Nadu in 2023, urban power authorities are also prone to cutting power supply in such circumstances, citing loose cables. The sheer volume of water can also lead to sewage overflows, where untreated wastewater is discharged into streets and waterbodies, unleashing significant health and environmental hazards.

The agricultural sector's vulnerability to excessive rainfall is well-known: waterlogged soil suffocates plant roots, washes away seeds and young crops, sheds the nutrient-rich topsoil over time, and ultimately loses its long-term fertility.



Raging flow: Surplus water being released from the Mullaperiyar Dam. SPECIAL ARRANGEMENT

Too much moisture can also ease the spread of fungal diseases and pests that devastate crops and undercut yield, leading to significant financial losses for farmers. Intense bursts can also wash fertilizers, pesticides, and other agricultural debris into waterbodies, including reservoirs, degrading water quality. Finally, stagnant water becomes a breeding ground for mosquitoes, increasing the risk of vector-borne diseases such as malaria and dengue fever and zoonotic diseases like leptospirosis, Japanese encephalitis, and scrub typhus.

What are the wider impacts?

Prolonged periods of rainfall also raise the water table, the level below which the ground is saturated with water. And a persistently high water table can compromise the stability of building foundations, roads, and other infrastructure; it can also exert pressure on basement walls, leading to cracks, leaks, and the growth of mold. Saturated soil also loses its load-bearing capacity and causes foundations to shift or settle, potentially leading to significant structural damage over time.

The cumulative impact of these issues translates to significant economic and social costs. Damage to buildings, public infrastructure, and agricultural land warrants substantial investments in repair and rebuilding solutions. Disruptions to businesses and transport networks hamper economic activity. Flooding and landslips can also displace communities, injure people, and even kill them if they are particularly vulnerable. The psychological toll on affected populations, including stress and anxiety, is another significant and often overlooked consequence.

Why is Tamil Nadu particularly vulnerable?

Tamil Nadu, in particular, needs to consider the Kerala factor as well. The two States receive rain from two different monsoon patterns: Kerala's primary rainy season is the southwest monsoon from June to September, whereas Tamil Nadu receives most of its rain during the northeast monsoon from October to December. An important problem arises when these monsoon periods overlap or when both States experience intense

rainfall simultaneously. This is currently the case with the early onset of the northeast monsoon.

At the heart of the issue is the Mullaperiyar Dam, which, while it is located in Kerala's Idukki district, is operated by the Tamil Nadu government to divert water to irrigate farmlands. There is, as a result, a 'direct' link between the rainfall in Kerala's catchment areas and the water levels in Tamil Nadu's river systems.

When the catchment areas of the Mullaperiyar Dam receive heavy rainfall, the reservoir fills up rapidly. To ensure the dam's safety and to manage the rising water levels, Tamil Nadu's authorities are compelled to open the dam's shutters. The released water flows in two directions and risks creating a double whammy. One portion flows down the Periyar river within Kerala, potentially flooding the low-lying areas of Idukki district and creating an inter-State issue while the primary flow is diverted to Tamil Nadu's Vaigai Dam. And this influx may arrive precisely when Tamil Nadu's own rivers and reservoirs are already swollen from the ongoing northeast monsoon.

What is happening on the ground now?

This simultaneous influx thus turns Kerala's "excess" water from a potential resource into an immediate flood risk for Tamil Nadu. Instead of just managing the rainwater falling within its own borders, Tamil Nadu must also handle a massive, concentrated inflow from its neighbour. The State is currently keeping all 13 shutters of the Mullaperiyar Dam open, releasing thousands of cuses of water to make room for the incessant influx. As a result, both farmland and residential areas in Theni are already submerged even as the district is being battered by its own monsoon rains.

For these reasons, it may be time for Tamil Nadu and other States like it, including Kerala, to reconsider the "excess is good" notion vis-à-vis rainfall.

THE GIST

▼ The northeast monsoon has arrived at least four days earlier for the second consecutive year, bringing heavy rainfall that is expected to exceed the long-period average.

▼ Excess rain is overwhelming urban areas, waterlogging farmland, and straining infrastructure, while the Mullaperiyar Dam inflow adds a "double whammy" to Tamil Nadu rivers and reservoirs.

▼ Waterlogged soil, overflowing rivers, and stagnant water create crop damage, health hazards, and threats to buildings, roads, and public safety, emphasising the need to rethink the 'excess is good' notion.

How do monsoons affect Tamil Nadu? मॉनसून तमिलनाडु को कैसे प्रभावित करते हैं?

Northeast Monsoon and Rainfall in Tamil Nadu तमिल नाडु में पूर्वोत्तर मानसून और वर्षा

- The northeast monsoon has kicked in early this year, at least four days sooner for the second year running, over Tamil Nadu. इस वर्ष पूर्वोत्तर मानसून जल्द शुरू हो गया है, लगातार दूसरे वर्ष के लिए कम से कम चार दिन पहले, तमिल नाडु में।
- Last year, this phase of the monsoon ended with the State recording 33% more rain than the long-period average, and forecasters expect this year to go the same way. पिछले वर्ष, इस चरण में मानसून समाप्त हुआ और राज्य ने दीर्घकालीन औसत की तुलना में 33% अधिक वर्षा दर्ज की थी, और पूर्वानुमानकार इस वर्ष भी ऐसा ही होने की उम्मीद कर रहे हैं।
- Historically, policymakers and State authorities have consistently interpreted excess rain as a positive. ऐतिहासिक रूप से, नीति निर्माता और राज्य अधिकारी लगातार अधिक वर्षा को सकारात्मक मानते रहे हैं।
- Climate change is complicating this calculus because while rainfall volumes increase, they are often concentrated in short and localised bursts, delivering over-large quantities of water in places that often can't absorb them in full.





जलवायु परिवर्तन इस गणना को जटिल बना रहा है क्योंकि जबकि वर्षा की मात्रा बढ़ रही है, यह अक्सर संक्षिप्त और स्थानीय विस्फोटों में केंद्रित होती है, जिससे पानी की अधिक मात्रा उन स्थानों पर पहुँचती है जो इसे पूर्ण रूप से अवशोषित नहीं कर सकते।

- As a result, it might be time to reconsider the idea that “**excess is good**”.
- परिणामस्वरूप, यह विचार करने का समय आ गया है कि “अधिक होना अच्छा है”।

Why is Excess Rainfall a Concern?

अत्यधिक वर्षा चिंता का कारण क्यों है?

- In **urban areas**, surfaces paved with **concrete** and **asphalt** keep them from absorbing **heavy rainfall**, leading to rapid **runoff** that overwhelms **drainage systems**, causing **flash floods**, **low-lying areas being inundated**, **property damage**, and **disrupted transportation**.
शहरी क्षेत्रों में, कंक्रीट और अस्फाल्ट से बने सतहें भारी वर्षा को अवशोषित नहीं कर पाती हैं, जिससे तेज रनऑफ होता है जो नाली प्रणालियों को ओवरव्हेल्म कर देता है, और इसके परिणामस्वरूप फ्लैश फ्लड, निम्न क्षेत्रों में बाढ़, संपत्ति का नुकसान, और यातायात में व्यवधान होता है।
- As seen during **Cyclone Michaung in Tamil Nadu in 2023**, **urban power authorities** are also prone to cutting **power supply**, citing **loose cables**.
जैसा कि तूफान मिचांग के दौरान 2023 में तमिल नाडु में देखा गया, शहरी विद्युत प्राधिकरण भी पावर आपूर्ति काटने के लिए प्रवृत्त होते हैं, ढीली तारों का हवाला देते हुए।
- The sheer **volume of water** can also lead to **sewage overflows**, where **untreated wastewater** is discharged into **streets** and **waterbodies**, unleashing significant **health** and **environmental hazards**.
पानी की विशाल मात्रा भी सीवेज ओवरफ्लो का कारण बन सकती है, जहां अशुद्ध अपशिष्ट जल सड़कों और जल निकायों में बहाया जाता है, जिससे महत्वपूर्ण स्वास्थ्य और पर्यावरणीय खतरे उत्पन्न होते हैं।
- The **agricultural sector's vulnerability** to excessive rainfall is well-known: **waterlogged soil suffocates plant roots**, **washes away seeds** and young crops, **sheds the nutrient-rich topsoil** over time, and ultimately **loses its long-term fertility**.
अत्यधिक वर्षा के प्रति कृषि क्षेत्र की संवेदनशीलता अच्छी तरह से जानी जाती है: जलजमित मिट्टी पौधों की जड़ों को घुटन देती है, बीज और युवा फसलें बहा देती है, समय के साथ पोषक तत्वों से भरपूर ऊपरी मिट्टी बह जाती है, और अंततः दीर्घकालीन उर्वरता खो देती है।
- Too much **moisture** can also ease the spread of **fungal diseases** and **pests** that devastate crops and undercut **yield**, leading to significant **financial losses** for **farmers**.
अत्यधिक नमी भी फंगल रोगों और कीटों के प्रसार को आसान बना सकती है जो फसल को नुकसान पहुंचाते हैं और उपज को घटाते हैं, जिससे किसानों के लिए महत्वपूर्ण आर्थिक नुकसान होता है।
- Intense bursts can also wash **fertilizers**, **pesticides**, and other agricultural debris into **waterbodies**, including **reservoirs**, degrading **water quality**.
तीव्र वर्षा उर्वरक, कीटनाशक, और अन्य कृषि मलबे को जल निकायों, जिसमें जलाशय भी शामिल हैं, में बहा सकती है, जिससे जल गुणवत्ता बिगड़ती है।
- Finally, **stagnant water** becomes a breeding ground for **mosquitoes**, increasing the risk of **vector-borne diseases** such as **malaria** and **dengue fever** and **zoonotic diseases** like **leptospirosis**, **Japanese encephalitis**, and **scrub typhus**.
अंत में, स्थिर पानी मच्छरों के प्रजनन स्थल बन जाता है, जिससे संक्रामक रोगों का जोखिम बढ़ता है जैसे मलेरिया, डेंगू बुखार, और जूनोटिक रोग जैसे लेप्टोस्पायरोसिस, जापानी एन्सेफेलाइटिस, और स्क्रब टाइफस।

Wider Impacts of Excess Rainfall

अत्यधिक वर्षा के व्यापक प्रभाव

- Prolonged periods of **rainfall** also raise the **water table**, the level below which the **ground is saturated with water**.
लंबे समय तक वर्षा से जल स्तर भी बढ़ जाता है, वह स्तर जिसके नीचे मिट्टी पानी से संतृप्त होती है।
- A persistently high **water table** can compromise the **stability** of **building foundations**, **roads**, and other **infrastructure**; it can also exert pressure on **basement walls**, leading to **cracks**, **leaks**, and the growth of **mold**.



लगातार उच्च जल स्तर से भवन नींव, सड़कें, और अन्य अवसंरचना की स्थिरता प्रभावित हो सकती है; यह तलघर की दीवारों पर दबाव डाल सकता है, जिससे दरारें, लीक, और फफूंदी उग सकती है।

- **Saturated soil** also loses its **load-bearing capacity** and causes **foundations to shift or settle**, potentially leading to significant **structural damage** over time.
संतृप्त मिट्टी अपनी भार वहन क्षमता खो देती है और नींव को खिसकने या बैठने के लिए मजबूर करती है, जो समय के साथ महत्वपूर्ण संरचनात्मक क्षति का कारण बन सकती है।
- The **cumulative impact** of these issues translates to significant **economic** and **social costs**. इन समस्याओं का संचयी प्रभाव महत्वपूर्ण आर्थिक और सामाजिक लागत में बदल जाता है।
- **Damage to buildings, public infrastructure, and agricultural land** warrants substantial **investments** in repair and **rebuilding solutions**.
भवनों, सार्वजनिक अवसंरचना, और कृषि भूमि को हुए नुकसान के लिए मरम्मत और पुनर्निर्माण समाधान में पर्याप्त निवेश की आवश्यकता होती है।
- **Disruptions to businesses and transport networks** hamper **economic activity**.
व्यवसायों और परिवहन नेटवर्क में विघटन आर्थिक गतिविधि को बाधित करता है।
- **Flooding and landslips** can also displace **communities, injure people, and even kill them** if they are particularly vulnerable.
बाढ़ और भूस्खलन समुदायों को विस्थापित कर सकते हैं, लोगों को चोट पहुँचाते हैं, और यदि वे विशेष रूप से कमजोर हों तो उन्हें मार भी सकते हैं।
- The **psychological toll** on affected populations, including **stress** and **anxiety**, is another significant and often overlooked consequence.
प्रभावित जनसंख्या पर मनोवैज्ञानिक प्रभाव, जिसमें तनाव और चिंता शामिल हैं, एक और महत्वपूर्ण और अक्सर अनदेखा परिणाम है।

Why Tamil Nadu is Particularly Vulnerable

तमिल नाडु विशेष रूप से संवेदनशील क्यों है

- Tamil Nadu, in particular, needs to consider the **Kerala factor** as well.
विशेष रूप से तमिल नाडु को केरल कारक पर भी विचार करने की आवश्यकता है।
- The two States receive rain from two different **monsoon patterns**: **Kerala's primary rainy season** is the **southwest monsoon** from **June to September**, whereas Tamil Nadu receives most of its rain during the **northeast monsoon** from **October to December**.
दोनों राज्य दो अलग-अलग मानसून पैटर्न से वर्षा प्राप्त करते हैं: केरल का मुख्य वर्षा मौसम दक्षिण-पश्चिम मानसून है जून से सितंबर, जबकि तमिल नाडु को अधिकांश वर्षा पूर्वोत्तर मानसून के दौरान अक्टूबर से दिसंबर में मिलती है।
- An important problem arises when these **monsoon periods overlap** or when both States experience **intense rainfall simultaneously**.
एक महत्वपूर्ण समस्या तब उत्पन्न होती है जब ये मानसून अवधि ओवरलैप करती है या जब दोनों राज्य एक साथ तीव्र वर्षा अनुभव करते हैं।
- This is currently the case with the **early onset** of the **northeast monsoon**.
वर्तमान में यह स्थिति पूर्वोत्तर मानसून के जल्द शुरू होने के साथ है।
- At the heart of the issue is the **Mullaperiyar Dam**, which, while located in **Kerala's Idukki district**, is operated by the **Tamil Nadu government** to divert water to **irrigate farmlands**.
इस मुद्दे का मूल बिंदु मुल्लापेरियार बांध है, जो केरल के ईडुक्की जिले में स्थित है, लेकिन इसे तमिल नाडु सरकार द्वारा कृषि भूमि की सिंचाई के लिए पानी मोड़ने के लिए संचालित किया जाता है।
- There is a 'direct' link between the **rainfall in Kerala's catchment areas** and the **water levels in Tamil Nadu's river systems**.
केरल के जलग्रहण क्षेत्रों में वर्षा और तमिल नाडु की नदी प्रणालियों में जल स्तर के बीच एक 'प्रत्यक्ष' संबंध है।
- When the catchment areas of the **Mullaperiyar Dam** receive **heavy rainfall**, the **reservoir fills up rapidly**.
जब मुल्लापेरियार बांध के जलग्रहण क्षेत्रों में भारी वर्षा होती है, तो जलाशय तेजी से भर जाता है।
- To ensure the dam's **safety** and to manage the rising **water levels**, **Tamil Nadu's authorities** are compelled to open the dam's **shutters**.
बांध की सुरक्षा सुनिश्चित करने और बढ़ते जल स्तर को नियंत्रित करने के लिए, तमिल नाडु के अधिकारी बांध के शटर खोलने के लिए मजबूर हैं।



- The released water flows in **two directions** and risks creating a **double whammy**. छोड़ा गया पानी **दो दिशाओं में** बहता है और एक **डबल खतरे** का जोखिम पैदा करता है।
- One portion flows down the **Periyar river** within **Kerala**, potentially **flooding low-lying areas** of **Idukki district** and creating an **inter-State issue**, while the primary flow is diverted to **Tamil Nadu's Vaigai Dam**. एक हिस्सा **केरल में पेरियार नदी** में बहता है, संभावित रूप से **ईडुक्की जिले के निम्न क्षेत्रों में बाढ़** डालता है और एक **अंतर-राज्यीय समस्या** पैदा करता है, जबकि मुख्य प्रवाह **तमिल नाडु के वैगई बांध** की ओर मोड़ा जाता है।
- This influx may arrive precisely when **Tamil Nadu's own rivers** and **reservoirs** are already swollen from the ongoing **northeast monsoon**. यह प्रवाह तब पहुँच सकता है जब **तमिल नाडु की अपनी नदियाँ** और **जलाशय** पहले ही चल रहे **पूर्वोत्तर मानसून** से भरे हुए हैं।

Current Situation on the Ground

मौजूदा स्थिति

- This simultaneous influx turns **Kerala's "excess" water** from a potential resource into an immediate **flood risk** for **Tamil Nadu**. यह एक साथ प्रवाह **केरल के "अधिक" पानी** को संभावित संसाधन से **तमिल नाडु के लिए तत्काल बाढ़ जोखिम** में बदल देता है।
- Tamil Nadu must also handle a massive, **concentrated inflow** from its neighbour. तमिल नाडु को अपने पड़ोसी से भारी, **संगठित प्रवाह** को भी संभालना होगा।
- The State is currently keeping all **13 shutters** of the **Mullaperiyar Dam open**, releasing **thousands of cusecs** of water to make room for the incessant inflow. राज्य वर्तमान में **मुल्लापेरियार बांध** के सभी **13 शटर** खुले रखे हुए हैं, लगातार प्रवाह के लिए जगह बनाने के लिए **हजारों क्यूसेक्स** पानी छोड़ रहे हैं।
- As a result, both **farmland** and **residential areas** in **Theni** are already **submerged** even as the district is being battered by its own **monsoon rains**. परिणामस्वरूप, **थेनी** में दोनों **कृषि भूमि** और **आवासीय क्षेत्र** पहले से ही **डूबे हुए** हैं, जबकि जिला अपनी **मानसून वर्षा** से प्रभावित हो रहा है।
- For these reasons, it may be time for **Tamil Nadu** and other States like it, including **Kerala**, to reconsider the **"excess is good"** notion vis-à-vis **rainfall**. इन कारणों से, यह समय हो सकता है कि **तमिल नाडु** और अन्य राज्य जैसे **केरल**, वर्षा के संबंध में **"अधिक होना अच्छा है"** विचार पर पुनर्विचार



GS Paper II: Polity, Governance, And International Relations

TOPICS COVERED	24 October 2025
1.	U.S. sanctions Russian oil; Indian refineries poised to cut imports अमेरिका ने रूसी तेल पर प्रतिबंध लगाए; भारतीय रिफाइनरियां आयात में कटौती के लिए तैयार
2.	Aland voter fraud: SIT identifies six suspects who prepared duplicate Form 7 applications आलंद वोटर धोखाधड़ी: एसआईटी ने छह संदिग्धों की पहचान की जिन्होंने डुप्लिकेट फॉर्म 7 आवेदन तैयार किए
3.	Pan-India SIR to cover more than 10 States in first phase संपूर्ण भारत में एसआईआर पहले चरण में 10 से अधिक राज्यों को कवर करेगा
4.	IAS officer's resignation stirs a political row in Telangana आईएएस अधिकारी के इस्तीफे ने तेलंगाना में राजनीतिक विवाद छेड़ा
5.	Union govt. asks CJI to recommend a successor केंद्र सरकार ने मुख्य न्यायाधीश से उत्तराधिकारी की सिफारिश करने को कहा
6.	India, Bhutan review security cooperation, border management भारत और भूटान ने सुरक्षा सहयोग और सीमा प्रबंधन की समीक्षा की
7.	The UN matters, as a symbol of possibility संयुक्त राष्ट्र महत्वपूर्ण है, एक संभावना के प्रतीक के रूप में
8.	Immunity of international organisations is no free pass अंतरराष्ट्रीय संगठनों की प्रतिरक्षा कोई मुफ्त पास नहीं है



U.S. sanctions Russian oil; Indian refineries poised to cut imports

Rosneft and Lukoil hit with sanctions for 'funding Kremlin's war machine,' pushing global oil prices up 3%; Trump says India will cut down imports to 'almost nothing' by the year-end; Indian firms are 'recalibrating' to align with new govt. guidelines

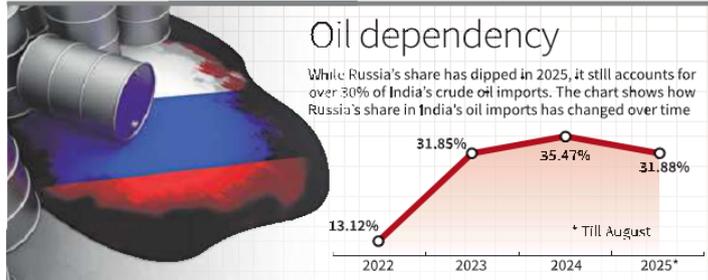
GS II: India and Super Power

WASHINGTON/NEW DELHI

U.S. President Donald Trump hit Russia's two biggest oil companies with sanctions in his latest policy shift on Moscow's war in Ukraine, prompting global oil prices to rise by 3% on Thursday.

Mr. Trump also reiterated his claim that India has agreed to "stop" buying oil from Russia and would bring its oil purchases down to "almost nothing" by the end of the year, and said he would persuade China to do the same. India and China are the two biggest buyers of Russian oil.

Indian refiners — including Reliance, the top Indian buyer of Russian crude — are poised to sharply curtail imports of Russian oil to comply with the new U.S. sanctions, industry sources said on Thursday.



India, as you know, has told me they are going to stop [buying Russian oil]... It's a process. You can't just stop... By the end of the year, they'll be down to almost nothing

DONALD TRUMP, U.S. President

The U.S. sanctions target oil giants Rosneft and Lukoil, which between them account for more than 5% of global oil output.

'Funding war'

The U.S. Treasury has given companies until November 21 to wind down their transactions with the

Russian oil producers.

"Given [Russian] President [Vladimir] Putin's refusal to end this senseless war, Treasury is sanctioning Russia's two largest oil companies that fund the Kremlin's war machine," U.S. Treasury Secretary Scott Bessent said in a statement.

"We encourage our al-

lies to join us in and adhere to these sanctions."

Oil and gas revenue, currently down 21% year-on-year, accounts for a quarter of Russia's budget and is the most important source of funding for its war in Ukraine, now in its fourth year.

Mr. Trump expressed confidence regarding In-

dia's response to the sanctions. "India, as you know, has told me they are going to stop [buying Russian oil]... It's a process. You can't just stop... By the end of the year, they'll be down to almost nothing, almost 40% of the oil. India, they've been great. Spoke to Prime Minister [Narendra] Modi yesterday. They have been absolutely great," the U.S. President told the reporters at the White House on Wednesday.

Reliance Industries, which operates the world's biggest refining complex at Jamnagar in Gujarat, has a long-term deal to buy nearly 500,000 barrels per day of crude from Rosneft and also buys Russian oil from intermediaries.

It now plans to reduce or cease imports of Russian oil, including halting purchases under its deal with Rosneft, people familiar with the matter said.

U.S. sanctions Russian oil; Indian refineries poised to cut imports

अमेरिका ने रूसी तेल पर प्रतिबंध लगाए; भारतीय रिफाइनरियां आयात में कटौती के लिए तैयार

- U.S. President **Donald Trump** hit Russia's two biggest oil companies with **sanctions** in his latest policy shift on Moscow's **war in Ukraine**, prompting **global oil prices to rise by 3%** on Thursday.

अमेरिकी राष्ट्रपति **डोनाल्ड ट्रंप** ने मास्को के **युक्रेन युद्ध** पर अपनी नवीनतम नीति बदलाव में रूस की दो सबसे बड़ी तेल कंपनियों पर **प्रतिबंध** लगाए, जिससे **वैश्विक तेल कीमतों में 3%** की वृद्धि हुई।

- Mr. Trump also reiterated his claim that **India** has agreed to "stop" buying oil from Russia and would bring its oil purchases down to "almost nothing" by the **end of the year**, and said he would persuade **China** to do the same. **India and China** are the two biggest buyers of **Russian oil**.

श्री ट्रंप ने यह दावा भी दोहराया कि **भारत** ने रूस से तेल खरीदना "रोकने" पर सहमति व्यक्त की है और **साल के अंत तक** अपनी तेल खरीद को "लगभग शून्य" तक लाएगा, और उन्होंने कहा कि वह **चीन** को भी ऐसा करने के लिए राजी करेंगे। **भारत और चीन रूसी तेल** के दो सबसे बड़े खरीदार हैं।

- Indian refiners** — including **Reliance**, the top Indian buyer of Russian crude — are poised to sharply curtail imports of Russian oil to comply with the new **U.S. sanctions**, industry sources said on Thursday.

भारतीय रिफाइनरियां — जिनमें **रिलायंस** शामिल है, जो रूसी कच्चे तेल की सबसे बड़ी भारतीय खरीदार है — **नई अमेरिकी प्रतिबंधों** का पालन करने के लिए रूसी तेल के आयात में भारी कटौती करने की तैयारी में हैं, उद्योग सूत्रों ने गुरुवार को बताया।



- The **U.S. sanctions** target oil giants **Rosneft** and **Lukoil**, which between them account for more than **5% of global oil output**.
अमेरिकी प्रतिबंधों का लक्ष्य तेल दिग्गज **रोसनेफ्ट** और **लुकोइल** हैं, जो मिलकर **वैश्विक तेल उत्पादन का 5% से अधिक** हिस्सा रखते हैं।

'Funding war'

'युद्ध के लिए वित्त पोषण'

- The **U.S. Treasury** has given companies until **November 21** to wind down their transactions with the **Russian oil producers**.
अमेरिकी ट्रेजरी ने कंपनियों को **21 नवंबर** तक का समय दिया है ताकि वे **रूसी तेल उत्पादकों** के साथ अपने लेन-देन समाप्त कर सकें।
- "Given [Russian] President **Vladimir Putin's** refusal to end this senseless war, Treasury is sanctioning Russia's two largest oil companies that fund the **Kremlin's war machine**," **U.S. Treasury Secretary Scott Bessent** said in a statement.
"रूसी राष्ट्रपति **व्लादिमीर पुतिन** द्वारा इस निरर्थक युद्ध को समाप्त करने से इनकार करने को देखते हुए, ट्रेजरी रूस की दो सबसे बड़ी तेल कंपनियों पर प्रतिबंध लगा रही है जो **क्रेमलिन की युद्ध मशीन** को वित्त पोषण करती हैं," अमेरिकी ट्रेजरी सचिव **स्कॉट बेसेंट** ने एक बयान में कहा।
- "We encourage our allies to join us in and adhere to these sanctions."
"हम अपने सहयोगियों को हमारे साथ शामिल होने और इन प्रतिबंधों का पालन करने के लिए प्रोत्साहित करते हैं।"
- Oil and gas revenue, currently down **21% year-on-year**, accounts for a **quarter of Russia's budget** and is the most important source of funding for its war in **Ukraine**, now in its **fourth year**.
तेल और गैस की आय, जो वर्तमान में **वर्ष-दर-वर्ष 21%** घट गई है, **रूस के बजट का एक-चौथाई** हिस्सा है और **यूक्रेन में उसके युद्ध** के लिए वित्त पोषण का सबसे महत्वपूर्ण स्रोत है, जो अब **चौथे वर्ष** में है।
- Mr. Trump expressed confidence regarding **India's response** to the sanctions. "India, as you know, has told me they are going to stop [buying Russian oil]... It's a process. You can't just stop... By the end of the year, they'll be down to almost nothing, almost 40% of the oil. India, they've been great. Spoke to **Prime Minister [Narendra] Modi** yesterday. They have been absolutely great," the **U.S. President** told the reporters at the **White House** on Wednesday.
श्री ट्रंप ने **भारत की प्रतिक्रिया** के प्रति विश्वास व्यक्त किया। "भारत, जैसा कि आप जानते हैं, ने मुझसे कहा है कि वे [रूसी तेल खरीदना] बंद करने जा रहे हैं... यह एक प्रक्रिया है। आप तुरंत नहीं रोक सकते... साल के अंत तक, वे लगभग कुछ भी नहीं पर आ जाएंगे, लगभग 40% तेल। भारत, वे शानदार रहे हैं। कल मैंने **प्रधानमंत्री [नरेंद्र] मोदी** से बात की। वे बिल्कुल शानदार रहे हैं," अमेरिकी राष्ट्रपति ने बुधवार को **व्हाइट हाउस** में पत्रकारों से कहा।
- **Reliance Industries**, which operates the world's biggest refining complex at **Jamnagar in Gujarat**, has a long-term deal to buy nearly **500,000 barrels per day** of crude from **Rosneft** and also buys Russian oil from intermediaries.
रिलायंस इंडस्ट्रीज, जो **गुजरात के जामनगर** में दुनिया की सबसे बड़ी रिफाइनिंग कॉम्प्लेक्स का संचालन करती है, का **रोसनेफ्ट** से प्रतिदिन लगभग **5 लाख बैरल** कच्चा तेल खरीदने का दीर्घकालिक समझौता है और यह मध्यस्थों से भी रूसी तेल खरीदती है।
- It now plans to reduce or cease imports of **Russian oil**, including halting purchases under its deal with **Rosneft**, people familiar with the matter said.
अब यह **रूसी तेल** के आयात को कम करने या समाप्त करने की योजना बना रही है, जिसमें **रोसनेफ्ट** के साथ समझौते के तहत खरीद को रोकना भी शामिल है, इस मामले से परिचित लोगों ने बताया।



Aland voter fraud: SIT identifies six suspects who prepared duplicate Form 7 applications

GS II: Elections

The Hindu Bureau
BENGALURU

The Special Investigation Team (SIT) probing the voter fraud in Aland in Karnataka has now unearthed a money trail where a call centre-like firm in Kalaburagi was allegedly paid ₹80 to make each of the 5,994 forged Form 7 applications.

It has identified six suspects, of whom five have been questioned and their statements recorded.

The SIT had raided their residences and recovered key digital devices using which the forged Form 7s

were made.

However, the SIT is still tight-lipped about who paid the firm for this operation, even as it has raided premises linked to former BJP MLA Subhash Guttedar in connection with the case.

Mr. Guttedar won the 2018 polls with a slender margin of 697 votes against the Congress's B.R. Patil, and in 2023, the incumbent Mr. Guttedar lost to Mr. Patil by 10,347 votes. While Mr. Guttedar has denied any involvement in voter fraud, the SIT has not specified his role or given reasons why premises

Past results

The table shows previous election results in the Aland constituency in Karnataka

Election type and year	Party	Vote share (%)	Margin votes
2018 Assembly election	BJP	47.8	697
	INC	47.4	
2019 General election (Assembly segment result)	BJP	57.7	28,287
	INC	36.5	
2023 Assembly election	INC	51.3	10,348
	BJP	45.3	
2024 General election (Assembly segment result)	BJP	52.8	12,936
	INC	44.1	

Source: Election Commission of India

linked to him and his sons were raided recently.

Mr. Patil had raised the alarm over forged Form 7s in February 2023, following which ground verifica-

tion had revealed that 5,994 of 6,018 Form 7s in Aland were forged and these forged applications were rejected. The Returning Officer had filed a com-

plaint based on which an FIR was registered, and the case is now being probed by a SIT.

The SIT was formed after *The Hindu* on September 7, 2025, reported that the probe had gone cold with the Election Commission not cooperating. Leader of Opposition in the Lok Sabha Rahul Gandhi had also flagged the issue at a press conference in Delhi.

It achieved a breakthrough in the first week of October identifying the "call centre-like" firm in Kalaburagi where these forged Form 7s were made.

Aland voter fraud: SIT identifies six suspects who prepared duplicate Form 7 applications

आलंद वोटर धोखाधड़ी: एसआईटी ने छह संदिग्धों की पहचान की जिन्होंने डुप्लिकेट फॉर्म 7 आवेदन तैयार किए

- The **Special Investigation Team (SIT)** probing the **voter fraud in Aland in Karnataka** has now unearthed a **money trail** where a **call centre-like firm in Kalaburagi** was allegedly paid **₹80** to make each of the **5,994 forged Form 7 applications**.

कर्नाटक के आलंद में मतदाता धोखाधड़ी की जांच कर रही विशेष जांच टीम (एसआईटी) ने अब एक मनी ट्रेल का खुलासा किया है, जिसमें कलबुर्गी की एक कॉल सेंटर जैसी फर्म को प्रत्येक 5,994 जाली फॉर्म 7 आवेदन बनाने के लिए कथित रूप से ₹80 का भुगतान किया गया था।

- It has identified **six suspects**, of whom **five have been questioned** and their statements recorded.

एसआईटी ने छह संदिग्धों की पहचान की है, जिनमें से पांच से पूछताछ की गई है और उनके बयान दर्ज किए गए हैं।

- The **SIT** had raided their residences and recovered **key digital devices** using which the **forged Form 7s** were made.

एसआईटी ने उनके घरों पर छापे मारे और महत्वपूर्ण डिजिटल उपकरण बरामद किए जिनका उपयोग जाली फॉर्म 7 तैयार करने में किया गया था।

- However, the **SIT** is still tight-lipped about who paid the firm for this operation, even as it has **raided premises linked to former BJP MLA Subhash Guttedar** in connection with the case.

हालांकि, एसआईटी अभी तक इस ऑपरेशन के लिए फर्म को भुगतान करने वाले व्यक्ति के बारे में कुछ नहीं बता रही है, जबकि उसने मामले से जुड़े पूर्व भाजपा विधायक सुभाष गुट्टेदार के परिसरों पर छापे मारे हैं।

- Mr. **Guttedar** won the **2018 polls** with a slender margin of **697 votes** against the **Congress's B.R. Patil**, and in **2023**, the incumbent Mr. Guttedar lost to Mr. Patil by **10,347 votes**.

श्री गुट्टेदार ने 2018 के चुनावों में कांग्रेस के बी.आर. पाटिल को केवल 697 वोटों के अंतर से हराया था, और 2023 में वर्तमान विधायक श्री गुट्टेदार 10,347 वोटों से श्री पाटिल से हार गए।

- While Mr. **Guttedar** has denied any involvement in **voter fraud**, the **SIT** has not specified his role or given reasons why premises linked to him and his sons were raided recently.

जहां श्री गुट्टेदार ने मतदाता धोखाधड़ी में किसी भी संलिप्तता से इनकार किया है, वहीं एसआईटी ने उनकी



भूमिका स्पष्ट नहीं की है या यह नहीं बताया है कि हाल ही में उनके और उनके बेटों से जुड़े परिसरों पर छापे क्यों मारे गए।

- Mr. Patil had raised the alarm over **forged Form 7s** in **February 2023**, following which **ground verification** had revealed that **5,994 of 6,018 Form 7s** in **Aland** were forged and these forged applications were rejected.
श्री पाटिल ने **फरवरी 2023** में **जाली फॉर्म 7** को लेकर चेतावनी दी थी, जिसके बाद **जमीनी सत्यापन** से पता चला कि **आलंद में 6,018 में से 5,994 फॉर्म 7** जाली थे और इन जाली आवेदनों को खारिज कर दिया गया था।
- The **Returning Officer** had filed a **complaint** based on which an **FIR** was registered, and the case is now being probed by an **SIT**.
रिटर्निंग अधिकारी ने एक **शिकायत** दर्ज कराई थी जिसके आधार पर **एफआईआर** दर्ज की गई, और अब इस मामले की जांच **एसआईटी** द्वारा की जा रही है।
- The **SIT** was formed after **The Hindu** on **September 7, 2025**, reported that the probe had gone cold with the **Election Commission** not cooperating.
एसआईटी का गठन तब किया गया जब **दि हिंदू** ने **7 सितंबर 2025** को रिपोर्ट किया कि जांच ठप पड़ी हुई थी क्योंकि **निर्वाचन आयोग** सहयोग नहीं कर रहा था।
- **Leader of Opposition in the Lok Sabha Rahul Gandhi** had also flagged the issue at a **press conference in Delhi**.
लोकसभा में विपक्ष के नेता राहुल गांधी ने भी इस मुद्दे को **दिल्ली में एक प्रेस कॉन्फ्रेंस** में उठाया था।
- It achieved a **breakthrough** in the first week of **October** identifying the "**call centre-like firm in Kalaburagi**" where these **forged Form 7s** were made.
अक्टूबर के पहले सप्ताह में एसआईटी को एक **बड़ी सफलता** मिली जब उसने "**कलबुर्गी की कॉल सेंटर जैसी फर्म**" की पहचान की, जहां ये **जाली फॉर्म 7** तैयार किए गए थे।

Pan-India SIR to cover more than 10 States in first phase

GS II: Election

Sreeparna Chakrabarty
NEW DELHI

The Election Commission (EC) is all set to announce the schedule for a country-wide roll-out of the Special Intensive Revision (SIR) of electoral rolls at a press conference in the next few days. The first phase of the process will be implemented in more than 10 States and one Union Territory, including election-bound Assam, Tamil Nadu, Puducherry, Kerala, and West Bengal.

The EC took stock of the preparedness of all States and Union Territories for the pan-India SIR, at the

two-day conference of Chief Electoral Officers (CEO) that concluded here on Thursday.

Schedule soon

The full commission will now discuss the matter and take a call on the schedule, which would be announced soon, sources told *The Hindu*.

The process is expected to be rolled out in two phases, beginning with Assam, Tamil Nadu, Puducherry, Kerala, and West Bengal, where Assembly elections are due in 2026. Those States where local body polls are scheduled to be held and are likely to

experience harsh weather conditions during the winter will be tackled in later phases.

The sources said the commission heard the points raised by the CEOs of all States at the conference and while it responded to general queries and held a presentation on the SIR, no concrete decisions were announced at the meeting. It was stated that a decision would be communicated to all CEOs after the meeting of the Election Commission members.

The two-day conference was presided over by Chief Election Commissioner Gyanesh Kumar.

India SIR to cover more than 10 States in first phase

संपूर्ण भारत में एसआईआर पहले चरण में 10 से अधिक राज्यों को कवर करेगा

Pan-



- The **Election Commission (EC)** is all set to announce the schedule for a countrywide roll-out of the **Special Intensive Revision (SIR)** of **electoral rolls** at a press conference in the next few days.
निर्वाचन आयोग (ईसी) अगले कुछ दिनों में एक प्रेस कॉन्फ्रेंस में मतदाता सूचियों के विशेष गहन पुनरीक्षण (एसआईआर) के देशव्यापी कार्यक्रम की घोषणा करने के लिए पूरी तरह तैयार है।
- The **first phase** of the process will be implemented in **more than 10 States and one Union Territory**, including **election-bound Assam, Tamil Nadu, Puducherry, Kerala, and West Bengal**.
इस प्रक्रिया का पहला चरण 10 से अधिक राज्यों और एक केंद्र शासित प्रदेश में लागू किया जाएगा, जिनमें चुनाव की तैयारी कर रहे असम, तमिलनाडु, पुडुचेरी, केरल और पश्चिम बंगाल शामिल हैं।
- The **EC** took stock of the preparedness of all **States and Union Territories** for the **pan-India SIR**, at the two-day conference of **Chief Electoral Officers (CEO)** that concluded here on **Thursday**.
ईसी ने गुरुवार को समाप्त हुई **मुख्य निर्वाचन अधिकारियों (सीईओ)** की दो दिवसीय सम्मेलन में **संपूर्ण भारत एसआईआर** के लिए सभी राज्यों और केंद्र शासित प्रदेशों की तैयारियों की समीक्षा की।
- **Schedule soon**
कार्यक्रम जल्द ही
- The **full commission** will now discuss the matter and take a call on the schedule, which would be announced soon, sources told **The Hindu**.
पूर्ण आयोग अब इस विषय पर चर्चा करेगा और कार्यक्रम पर निर्णय लेगा, जिसे जल्द ही घोषित किया जाएगा, सूत्रों ने **दि हिंदू** को बताया।
- The process is expected to be rolled out in **two phases**, beginning with **Assam, Tamil Nadu, Puducherry, Kerala, and West Bengal**, where **Assembly elections** are due in **2026**.
इस प्रक्रिया को दो चरणों में लागू किए जाने की उम्मीद है, जिसकी शुरुआत असम, तमिलनाडु, पुडुचेरी, केरल और पश्चिम बंगाल से होगी, जहां **विधानसभा चुनाव 2026** में होने वाले हैं।
- Those States where **local body polls** are scheduled to be held and are likely to experience **harsh weather conditions** during the **winter** will be tackled in later phases.
वे राज्य जहां **स्थानीय निकाय चुनाव** होने वाले हैं और जो **सर्दियों के दौरान कठोर मौसम परिस्थितियों** का सामना कर सकते हैं, उन्हें बाद के चरणों में शामिल किया जाएगा।
- The sources said the **commission** heard the points raised by the **CEOs** of all States at the conference and while it responded to general queries and held a **presentation on the SIR**, no **concrete decisions** were announced at the meeting.
सूत्रों ने बताया कि **आयोग** ने सम्मेलन में सभी राज्यों के **सीईओ** द्वारा उठाए गए बिंदुओं को सुना और **एसआईआर पर एक प्रस्तुति** दी तथा सामान्य प्रश्नों के उत्तर दिए, लेकिन बैठक में कोई **ठोस निर्णय** घोषित नहीं किया गया।
- It was stated that a **decision** would be communicated to all **CEOs** after the meeting of the **Election Commission members**.
यह कहा गया कि **निर्वाचन आयोग के सदस्यों** की बैठक के बाद सभी **सीईओ** को निर्णय से अवगत कराया जाएगा।
- The **two-day conference** was presided over by **Chief Election Commissioner Gyanesh Kumar**.
दो दिवसीय सम्मेलन की अध्यक्षता **मुख्य निर्वाचन आयुक्त ग्यानेश कुमार** ने की।



IAS officer's resignation stirs a political row in Telangana

GS II: Governance

The Hindu Bureau
HYDERABAD

All India Services officer Syed Murtaza Ali Rizvi's sudden decision to take voluntary retirement from service has raised a controversy in Telangana.

Political parties criticised the state of affairs in the State government, alleging that officials were allegedly facing pulls and pressures from the powers that be.

The senior bureaucrat tendered his papers citing personal reasons, but pressure from the powers that be is not being ruled out. However, senior officials close to the officer said that

Rizvi is said to have developed differences with the Excise Minister on certain issues

opting for the Voluntary Retirement Scheme (VRS) may have to do with personal reasons, more than administrative reasons.

Holding the portfolio of Secretary of Commercial Taxes and Excise in the Revenue Department, Mr. Rizvi is said to have developed differences with Excise Minister Jupally Krishna Rao on certain issues.

Differences between the two cropped up in respect

of award of a contract for printing holograms to be affixed on liquor bottles, except beer, and the manner in which Mr. Rizvi was allegedly sitting on files sent by the Minister for his clearance.

Meanwhile, the Minister addressed a letter to the Chief Secretary alleging 'insubordination' on the part of Mr. Rizvi and demanding action against him on disciplinary grounds.

Mr. Jupally reportedly expressed displeasure that the Excise Secretary was reporting to the Chief Minister's Office in disregard for the Minister holding the portfolio.

IAS officer's resignation stirs a political row in Telangana

आईएस अधिकारी के इस्तीफे ने तेलंगाना में राजनीतिक विवाद छेड़ा

- All India Services officer **Syed Murtaza Ali Rizvi's** sudden decision to take **voluntary retirement** from service has raised a **controversy** in **Telangana**.
अखिल भारतीय सेवा के अधिकारी सैयद मुरतज़ा अली रिज़वी के अचानक स्वैच्छिक सेवानिवृत्ति लेने के निर्णय ने तेलंगाना में विवाद खड़ा कर दिया है।
- Political parties** criticised the state of affairs in the **State government**, alleging that officials were allegedly facing **pulls and pressures** from the **powers that be**.
राजनीतिक दलों ने राज्य सरकार के कामकाज की आलोचना की, यह आरोप लगाते हुए कि अधिकारी सत्ताधारियों के दबाव और प्रभाव का सामना कर रहे हैं।
- The senior bureaucrat tendered his papers citing **personal reasons**, but pressure from the powers that be is **not being ruled out**.
वरिष्ठ नौकरशाह ने व्यक्तिगत कारणों का हवाला देते हुए अपने कागज़ात जमा किए, लेकिन सत्ताधारियों के दबाव की संभावना को नकारा नहीं जा रहा है।
- However, senior officials close to the officer said that opting for the **Voluntary Retirement Scheme (VRS)** may have to do with **personal reasons**, more than **administrative reasons**.
हालांकि, अधिकारी के करीबी वरिष्ठ अधिकारियों ने कहा कि स्वैच्छिक सेवानिवृत्ति योजना (VRS) चुनना संभवतः प्रशासनिक कारणों की तुलना में व्यक्तिगत कारणों से अधिक संबंधित है।
- Holding the portfolio of **Secretary of Commercial Taxes and Excise** in the **Revenue Department**, Mr. Rizvi is said to have developed **differences** with **Excise Minister Jupally Krishna Rao** on certain issues.
राजस्व विभाग में वाणिज्यिक कर और आबकारी सचिव के रूप में कार्यरत श्री रिज़वी के कुछ मुद्दों पर आबकारी मंत्री जुपाली कृष्णा राव से मतभेद हो गए बताए जा रहे हैं।



Union govt. asks CJI to recommend a successor

GS II: Judicial Appointment

NEW DELHI

The Centre has, in a letter to Chief Justice of India B.R. Gavai, sought his recommendation for naming his successor. The CJI is currently on a four-day visit to Bhutan. His office said he would come back and send his recommendation to the government.

As per seniority norms, Justice Surya Kant is the next in line to become the 53rd CJI. Chief Justice Gavai is scheduled to retire on November 24. Under the Memorandum of Procedure for appointment of the CJI and Supreme Court Judges, the Law Ministry seeks the recommendation of the outgoing CJI on the next appointment. The letter from the government kickstarts the appointment process for the next CJI.

The process usually begins a month before the incumbent is to demit office.

Justice Kant was born on February 10, 1962, in Hisar in Haryana.

After completing his graduation from his hometown, Justice Kant earned his Bachelor's degree in Law in 1984 from Maharishi Dayanand University, Rohtak. He started his legal practice at the Hisar district court and shifted to Chandigarh in 1985 to practise in the Punjab and Haryana High Court.

Justice Kant has represented a number of universities, boards, corporations, banks and also the High Court itself.

Justice Kant became the youngest Advocate-General of Haryana on July 7, 2000, and was designated a senior advocate in March 2001. He was elevated as a judge of the Punjab and Haryana High Court on January 9, 2004 and was appointed the Chief Justice of the High Court of Himachal Pradesh in October, 2018. He is due to retire on February 9, 2027.

Differences between the two cropped up in respect of **award of a contract for printing holograms** to be affixed on **liquor bottles**, except beer, and the manner in which Mr. Rizvi was allegedly **sitting on files** sent by the Minister for his clearance.

दोनों के बीच मतभेद **बीयर को छोड़कर शराब की बोतलों पर लगाए जाने वाले होलोग्राम की छपाई के अनुबंध के आवंटन** और इस बात को लेकर उभरे कि श्री रिज़वी कथित रूप से **मंत्री द्वारा भेजी गई फ़ाइलों को मंजूरी के लिए रोककर बैठे हुए थे**।

• Meanwhile, the Minister addressed a **letter to the Chief Secretary** alleging '**insubordination**' on the part of Mr. Rizvi and demanding **action against him on disciplinary grounds**.

इस बीच, मंत्री ने **मुख्य सचिव को एक पत्र** लिखकर श्री रिज़वी पर '**आज्ञा उल्लंघन**' (**insubordination**) का आरोप लगाया और **अनुशासनात्मक आधार पर कार्रवाई** की मांग की।

• Mr. **Jupally** reportedly expressed **displeasure** that the **Excise Secretary** was **reporting to the Chief Minister's Office** in **disregard** for the Minister holding the portfolio.

श्री **जुपाली** ने कथित तौर पर **असंतोष** व्यक्त किया कि **आबकारी सचिव, पोर्टफोलियो संभालने वाले मंत्री की अवहेलना** करते हुए **मुख्यमंत्री कार्यालय को रिपोर्ट कर रहे थे**।

Union govt. asks CJI to recommend a successor केंद्र सरकार ने मुख्य न्यायाधीश से उत्तराधिकारी की सिफारिश करने को कहा

• The **Centre** has, in a letter to **Chief Justice of India B.R. Gavai**, sought his **recommendation** for naming his **successor**.

केंद्र सरकार ने **भारत के मुख्य न्यायाधीश बी.आर. गवई** को लिखे पत्र में उनके **उत्तराधिकारी** के नाम की **सिफारिश** मांगी है।

• The **CJI** is currently on a **four-day visit to Bhutan**. His office said he would come back and send his recommendation to the government.

मुख्य न्यायाधीश इस समय **चार दिवसीय भूटान दौरे** पर हैं। उनके कार्यालय ने कहा कि वह लौटने के बाद सरकार को अपनी सिफारिश भेजेंगे।

• **As per seniority norms, Justice Surya Kant is the next in line to become the 53rd CJI.**

वरिष्ठता के मानदंडों के अनुसार, न्यायमूर्ति सूर्यकांत अगले 53वें मुख्य न्यायाधीश बनने की पंक्ति में हैं।

• **Chief Justice Gavai** is scheduled to **retire on November 24**.

मुख्य न्यायाधीश गवई की सेवानिवृत्ति 24 नवंबर को निर्धारित है।

• Under the **Memorandum of Procedure** for appointment of the **CJI and Supreme Court Judges**, the **Law Ministry** seeks the recommendation of the **outgoing CJI** on the next appointment.

मुख्य न्यायाधीश और सर्वोच्च न्यायालय के न्यायाधीशों की नियुक्ति के लिए बने प्रक्रिया ज्ञापन (Memorandum of Procedure) के तहत, कानून मंत्रालय अगले नियुक्ति पर वर्तमान मुख्य न्यायाधीश की सिफारिश मांगता है।

• The letter from the government **kickstarts the appointment process** for the next CJI.

सरकार का यह पत्र **अगले मुख्य न्यायाधीश की नियुक्ति प्रक्रिया की शुरुआत** करता है।

• The process usually begins **a month before** the incumbent is to **demit office**.

यह प्रक्रिया आमतौर पर **पद छोड़ने से एक माह पूर्व शुरू** होती है।

• **Justice Surya Kant** was born on **February 10, 1962**, in **Hisar, Haryana**. **न्यायमूर्ति सूर्यकांत का जन्म 10 फरवरी, 1962 को हरियाणा के हिसार में हुआ था।**

• After completing his **graduation** from his hometown, **Justice Kant** earned his **Bachelor's degree in Law** in 1984 from **Maharishi Dayanand University, Rohtak**.



अपने गृहनगर से स्नातक की पढ़ाई पूरी करने के बाद, न्यायमूर्ति कांत ने 1984 में महर्षि दयानंद विश्वविद्यालय, रोहतक से कानून में स्नातक की डिग्री प्राप्त की।

- He started his legal practice at the Hisar district court and shifted to Chandigarh in 1985 to practise in the Punjab and Haryana High Court.
उन्होंने अपनी कानूनी प्रैक्टिस की शुरुआत हिंसा जिला न्यायालय से की और 1985 में चंडीगढ़ स्थानांतरित होकर पंजाब और हरियाणा उच्च न्यायालय में अभ्यास करने लगे।
- Justice Kant has represented a number of universities, boards, corporations, banks and also the High Court itself.
न्यायमूर्ति कांत ने कई विश्वविद्यालयों, बोर्डों, निगमों, बैंकों और स्वयं उच्च न्यायालय का भी प्रतिनिधित्व किया है।
- Justice Kant became the youngest Advocate-General of Haryana on July 7, 2000, and was designated a senior advocate in March 2001.
न्यायमूर्ति कांत 7 जुलाई, 2000 को हरियाणा के सबसे युवा महाधिवक्ता बने और मार्च 2001 में उन्हें वरिष्ठ अधिवक्ता के रूप में नामित किया गया।
- He was elevated as a judge of the Punjab and Haryana High Court on January 9, 2004, and was appointed the Chief Justice of the Himachal Pradesh High Court in October 2018.
उन्हें 9 जनवरी, 2004 को पंजाब और हरियाणा उच्च न्यायालय के न्यायाधीश के रूप में पदोन्नत किया गया और अक्टूबर 2018 में उन्हें हिमाचल प्रदेश उच्च न्यायालय के मुख्य न्यायाधीश के रूप में नियुक्त किया गया।
- He is due to retire on February 9, 2027.
उनकी सेवानिवृत्ति 9 फरवरी, 2027 को निर्धारित है।

India, Bhutan review security cooperation, border management

GS II: India's Neighbours

The Hindu Bureau
NEW DELHI

India and Bhutan reviewed border management and security in a meeting held at Thimphu from October 16-17, a statement by the Union Home Ministry said on Thursday.

The Ministry said the two countries had reviewed bilateral security cooperation and border management issues, including mobile signal spillover, future road map for integrated check posts, maintenance of boundary pillars, and cross-border movement.

Discussions covered capacity building for Bhutan's police. The delegations expressed satisfaction at the cordial and constructive discussions and reiterated their resolve to work together for a safe, secure and prosperous border, the Ministry said.

istry said. This was the 14th India-Bhutan Border Management and Security meeting. The last meeting was held in 2019.

The Indian delegation was led by Rajendra Kumar, Secretary, Department of Border Management, Home Ministry, while the Bhutanese side was headed by Sonam Wangyel, Secretary, Ministry of Home Affairs.

India shares a 699-km border with Bhutan, running along the States of Sikkim, West Bengal, Assam and Arunachal Pradesh. "Reaffirming their strong friendship, India and Bhutan committed to deepening cooperation across traditional and emerging areas... Their enduring partnership, rooted in shared geography, culture, and people-to-people ties, continues to serve as a model for regional cooperation," the Ministry said.

India, Bhutan review security cooperation, border management

भारत और भूटान ने सुरक्षा सहयोग और सीमा प्रबंधन की समीक्षा की

- India and Bhutan reviewed border management and security in a meeting held at Thimphu from October 16-17, a statement by the Union Home Ministry said on Thursday.

भारत और भूटान ने थिम्फू में 16-17 अक्टूबर को आयोजित बैठक में सीमा प्रबंधन और सुरक्षा की समीक्षा की, जैसा कि केंद्रीय गृह मंत्रालय ने गुरुवार को बयान में कहा।

- The Ministry said the two countries had reviewed bilateral security cooperation and border management issues, including mobile signal spillover, future road map for integrated check posts, maintenance of boundary pillars, and cross-border movement.

मंत्रालय ने कहा कि दोनों देशों ने दो-तरफ़ा सुरक्षा सहयोग और सीमा प्रबंधन संबंधी मुद्दों की समीक्षा की, जिसमें मोबाइल सिग्नल स्पिलोवर, एकीकृत चेक पोस्ट के लिए भविष्य की रूपरेखा, सीमा स्तंभों का रखरखाव, और सीमा पार गतिविधियाँ शामिल थीं।

- Discussions covered capacity building for Bhutan's police.

चर्चा में भूटान पुलिस के लिए क्षमता निर्माण पर भी विचार किया गया।

- The delegations expressed satisfaction at the cordial and constructive discussions and reiterated their resolve to work together for a safe, secure and prosperous border, the Ministry said.

मंत्रालय ने कहा कि प्रतिनिधिमंडलों ने स्नेही और रचनात्मक चर्चाओं से



संतोष व्यक्त किया और सुरक्षित, संरक्षित और समृद्ध सीमा के लिए मिलकर काम करने का अपना संकल्प दोहराया।

- This was the **14th India-Bhutan Border Management and Security meeting**. The last meeting was held in **2019**.
यह भारत-भूटान सीमा प्रबंधन और सुरक्षा बैठक का 14वाँ संस्करण था। पिछली बैठक 2019 में हुई थी।
- The Indian delegation was led by **Rajendra Kumar, Secretary, Department of Border Management, Home Ministry**, while the Bhutanese side was headed by **Sonam Wangyel, Secretary, Ministry of Home Affairs**.
भारतीय प्रतिनिधिमंडल का नेतृत्व राजेंद्र कुमार, सचिव, सीमा प्रबंधन विभाग, गृह मंत्रालय ने किया, जबकि भूटानी पक्ष का नेतृत्व सोनम वांग्येल, सचिव, गृह मंत्रालय ने किया।
- **India shares a 699-km border with Bhutan, running along the States of Sikkim, West Bengal, Assam and Arunachal Pradesh.**
भारत का भूटान के साथ 699 किमी लंबा सीमा साझा है, जो सिक्किम, पश्चिम बंगाल, असम और अरुणाचल प्रदेश से होकर गुजरती है।
- “reaffirming their strong friendship, India and Bhutan committed to deepening cooperation across **traditional and emerging areas**... Their enduring partnership, rooted in **shared geography, culture, and people-to-people ties**, continues to serve as a model for regional cooperation,” the Ministry said.
“अपनी मजबूत मित्रता की पुष्टि करते हुए, भारत और भूटान ने पारंपरिक और नए क्षेत्रों में सहयोग को गहरा करने का संकल्प लिया... उनकी स्थायी साझेदारी, जो साझा भूगोल, संस्कृति और जनसंपर्क संबंधों में निहित है, क्षेत्रीय सहयोग के लिए एक मॉडल के रूप में कार्य करती है,” मंत्रालय ने कहा।

PATRIOTICIAS



The UN matters, as a symbol of possibility

GS II: International Organizations

Eighty years ago, in the aftermath of the most devastating war in human history, the nations of the world came together to forge a new compact – one that would seek to prevent future conflict, promote human dignity and uphold the rule of law across borders. The United Nations (UN) was born not of triumph, but of tragedy; not as a monument to power, but as a mechanism for peace.

As someone who served the UN for nearly three decades, from 1978 to 2007, I witnessed first-hand its evolution from a Cold War battleground to a post-Cold War laboratory of global cooperation. I saw the UN falter in Rwanda and Srebrenica, and rise to the occasion in East Timor and Namibia. I saw it struggle with bureaucracy and politics, yet persist in its mission to feed the hungry, shelter the displaced, and give voice to the voiceless. The UN is not perfect – nor was it ever meant to be – but it remains indispensable.

At 80, the UN stands at a crossroads. The world it was designed to serve has changed beyond recognition. The bipolar order of 1945 gave way to American unipolarity, which in turn has yielded to a fragmented, multipolar landscape. New powers have emerged, old alliances have frayed, and transnational challenges – from climate change to cyber warfare – defy the boundaries of traditional diplomacy. The UN must adapt or risk irrelevance.

A shifting global landscape

The most striking transformation in recent years has been the erosion of the post-war consensus. The institutions built to uphold liberal internationalism are under strain, not only from authoritarian regimes but also from within democracies themselves. Multilateralism is increasingly viewed with suspicion, and nationalism – once a force for liberation – is now often wielded as a cudgel against cooperation.

In this context, the UN's foundational principles – sovereign equality, peaceful resolution of disputes, and collective security – are more vital than ever. But they are also more contested. The Security Council, for instance, remains frozen in time, reflecting the power dynamics of 1945 rather than the realities of 2025. Calls for reform have grown louder, especially from countries such as India, Germany, Japan, Brazil, and South Africa, which rightly seek a seat at the table commensurate with their global standing.

India's own case is compelling. As the world's most populous nation and largest democracy, a major contributor to UN peacekeeping, and a rising economic power, India embodies the spirit



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The United Nations, at 80, is a work in progress, with a vital role in global affairs

of the UN Charter. Despite all this, it remains outside the permanent membership of the United Nations Security Council (UNSC) – a glaring anomaly that undermines the Council's legitimacy and effectiveness.

Despite its shortcomings, the UN continues to play a vital role in global affairs. Its humanitarian agencies – UN Refugee Agency (UNHCR), World Food Programme (WFP), UNICEF – deliver life-saving aid in conflict zones and disaster-stricken regions. Its peacekeepers, though stretched thin, provide a modicum of stability in fragile states. Its convening power allows nations to negotiate, deliberate, and sometimes even agree.

The UN's normative influence is perhaps its most underappreciated asset. Through its declarations, treaties, and resolutions, it has helped shape global norms on human rights, gender equality and sustainable development. The Sustainable Development Goals (SDGs), adopted in 2015, represent a bold vision for inclusive growth and planetary stewardship – one that transcends borders and ideologies.

Yet, the UN's ability to act is often constrained by the very member-states that it serves. When powerful nations flout international law or use their vetoes to shield allies (or worse, themselves), the UN is left hamstrung. When funding is politicised or withheld, its agencies struggle to deliver. The UN is not an abstract entity. It is a mirror of the world, reflecting its differences and inequities, and the will (or lack thereof) of its members.

The challenge of strategic autonomy

India's foreign policy has long emphasised sovereignty and strategic autonomy, resisting alignment with any single power bloc. This approach has gained renewed relevance in a world marked by great-power competition and regional instability. Alongside other rising and middle powers, India seeks to protect regional interests without being drawn into rivalries among the United States, China or Russia.

This posture reflects a broader critique of global governance structures, particularly the UNSC. India has consistently called for reform that reflects contemporary realities – one that is not merely powerful but principled, inclusive and representative. The current system, shaped by post-war hierarchies, remains inequitable and unresponsive to diverse perspectives.

A reimagined global order must embrace plurality – not just of power, but of experience and voice. India's vision is not of dominance, but of dignity: a world where sovereignty is respected, cooperation is valued and institutions

are shaped by the many, not the few.

So what must be done? First, the UNSC must be reformed to reflect contemporary realities. This is not merely a matter of equity. It is a matter of efficacy. A UNSC that excludes key stakeholders cannot hope to command legitimacy or deliver results. Second, the UN must invest in agility. In a world of fast-moving crises, responsiveness is key. Streamlining decision-making, empowering field operations, and embracing digital tools are essential steps. Third, the UN must reclaim its moral voice. In an age of disinformation and polarisation, the UN's ability to speak truth to power – to uphold universal values and defend the vulnerable – is more important than ever. This requires courage, clarity and consistency.

Finally, member-states must recommit to the UN's mission. The organisation cannot function without political will and financial support. It needs champions, not just critics; partners, not just participants. Budgetary shortfalls, thanks to defaults by the U.S. and others of their dues, have forced the Secretariat to implement painful staff reductions, freeze hiring, and scale back core programmes. The irony is stark: the institution most needed to address global crises is being weakened by the very powers that helped create it.

A mandate for the future as renewal, reform

The UN at 80 is neither a relic nor a panacea. It is a work in progress – a reflection of our collective aspirations and contradictions. Its failures are real, but so are its achievements. To dismiss the UN is to abandon the idea that humanity can govern itself through dialogue rather than domination.

As someone who spent much of his adult life in its service, I remain convinced that the UN matters. It matters to the refugee seeking shelter, to the peacekeeper standing guard, to the diplomat negotiating a fragile truce. It matters to all of us who believe that cooperation is not weakness, and that justice is not a luxury.

The United Nations remains an indispensable symbol – not of perfection, but of possibility. As Dag Hammarskjöld said, it was meant “not to take mankind to heaven, but to save humanity from hell”. The UN is both stage and actor: a stage for its member-states, and an actor when they empower it to defend our common humanity. Ironically, the actor is often blamed for the failures of the stage. As it marks its 80th anniversary, its challenge is to become more representative, responsive, and resilient in a world that needs principled global cooperation more than ever.

The UN matters, as a symbol of possibility

संयुक्त राष्ट्र महत्वपूर्ण है, एक संभावना के प्रतीक के रूप में

United Nations at 80

संयुक्त राष्ट्र की 80वीं वर्षगांठ

- Eighty years ago, in the aftermath of the most **devastating war** in human history, the nations of the world came together to forge a new **compact** — one that would seek to **prevent future conflict**, promote **human dignity** and uphold the **rule of law** across borders.

अस्सी साल पहले, मानव इतिहास के सबसे विनाशकारी युद्ध के बाद, दुनिया के राष्ट्र एक नई संधि बनाने के लिए एकत्र हुए — जो भविष्य के संघर्ष को रोकने, मानव गरिमा को बढ़ावा देने और कानून के शासन को सीमाओं के पार बनाए रखने का प्रयास करेगी।

- The **United Nations (UN)** was born not of triumph, but of **tragedy**; not as a **monument to power**, but as a **mechanism for peace**.

संयुक्त राष्ट्र (UN) का जन्म विजय से नहीं, बल्कि त्रासदी से हुआ; यह शक्ति का स्मारक नहीं, बल्कि शांति का तंत्र है।



- Serving the UN from 1978 to 2007, I witnessed its evolution from a **Cold War battleground** to a **post-Cold War laboratory** of global cooperation.
1978 से 2007 तक UN में कार्य करते हुए, मैंने इसे एक **शीत युद्ध का युद्धक्षेत्र** से बदलकर वैश्विक सहयोग की **पोस्ट-कोल्ड वार प्रयोगशाला** होते देखा।
- I saw the **UN falter in Rwanda and Srebrenica, and rise in East Timor and Namibia**.
मैंने देखा कि UN **रवांडा** और **स्नेबरनिका** में असफल रहा, और **ईस्ट टिमोर** और **नामिबिया** में सफल हुआ।
- I saw it **struggle with bureaucracy and politics, yet persist in its mission to feed the hungry, shelter the displaced, and give voice to the voiceless**.
मैंने देखा कि यह **ब्यूरोक्रेसी** और **राजनीति** से जूझता है, फिर भी अपनी मिशन में स्थिर रहता है — **भूखों को भोजन देना, बेघर लोगों को आश्रय देना, और निराधारों की आवाज़ बनना**।
- The UN is not **perfect**, nor was it ever meant to be, but it remains **indispensable**.
UN **पूर्ण** नहीं है, और कभी ऐसा होने के लिए नहीं था, लेकिन यह **अनिवार्य** है।

The UN at a Crossroads

संयुक्त राष्ट्र एक मोड़ पर

- At 80, the UN stands at a **crossroads**. The world it was designed to serve has changed **beyond recognition**.
80 वर्ष की उम्र में, UN एक **मोड़ पर** खड़ा है। जिस दुनिया की सेवा के लिए इसे बनाया गया था, वह **पहचान से परे बदल चुकी है**।
- The **bipolar order** of 1945 gave way to **American unipolarity**, which has yielded to a **fragmented, multipolar landscape**.
1945 का **द्विध्रुवीय क्रम** अमेरिकी **एकध्रुवीयता** में बदल गया, जो अब **खंडित, बहुध्रुवीय परिदृश्य** में परिवर्तित हो गया है।
- New powers have emerged, old alliances have **frayed**, and **transnational challenges** — from **climate change to cyber warfare** — defy traditional diplomacy.
नई शक्तियाँ उभरी हैं, पुरानी **साझेदारियाँ कमजोर** हुई हैं, और **अंतरराष्ट्रीय चुनौतियाँ** — **जलवायु परिवर्तन** से लेकर **साइबर युद्ध** तक — पारंपरिक कूटनीति को चुनौती देती हैं।
- The UN must **adapt** or risk **irrelevance**.
UN को **अनुकूलित** होना होगा अन्यथा यह **अप्रासंगिक** हो सकता है।

A Shifting Global Landscape

वैश्विक परिदृश्य में बदलाव

- The most striking transformation has been the **erosion of post-war consensus**.
सबसे महत्वपूर्ण परिवर्तन है **युद्धोत्तर सहमति का क्षय**।
- Institutions built to uphold **liberal internationalism** are under **strain**, not only from **authoritarian regimes** but also from within **democracies**.
संस्थान जो **लिबरल अंतरराष्ट्रीयवाद** को बनाए रखने के लिए बनाए गए थे, वे **तनाव** में हैं, न केवल **तानाशाही शासन** से बल्कि **लोकतंत्रों के भीतर** भी।
- **Multilateralism** is increasingly viewed with **suspicion, and nationalism** — once a force for **liberation** — is now often used against **cooperation**.
बहुपक्षीयता को अब **संदेह** के साथ देखा जाता है, और **राष्ट्रवाद** — जो कभी **मुक्ति का माध्यम** था — अब अक्सर **सहयोग के खिलाफ** इस्तेमाल किया जाता है।
- In this context, the UN's **foundational principles** — **sovereign equality, peaceful resolution of disputes, and collective security** — are **more vital than ever**, but also **more contested**.
इस संदर्भ में, UN के **मूलभूत सिद्धांत** — **सर्वभौमिक समानता, शांतिपूर्ण विवाद समाधान, और सामूहिक सुरक्षा** — अब **पहले से अधिक महत्वपूर्ण**, लेकिन **अधिक विवादित** हैं।
- The **Security Council** remains **frozen in time**, reflecting the **power dynamics of 1945** rather than the realities of 2025.
सुरक्षा परिषद समय में **जमा** हुई है, जो **1945 की शक्ति संरचना** को दर्शाती है, न कि 2025 की वास्तविकताओं को।
- Calls for **reform** have grown louder from countries like **India, Germany, Japan, Brazil, and South Africa**, seeking a **UNSC seat** commensurate with their **global standing**.



देशों जैसे भारत, जर्मनी, जापान, ब्राजील, और दक्षिण अफ्रीका से सुधार की मांगें बढ़ गई हैं, जो अपनी वैश्विक स्थिति के अनुरूप UNSC सीट चाहते हैं।

India's Case in UN

संयुक्त राष्ट्र में भारत का मामला

- India is the **world's most populous nation** and **largest democracy**, a **major UN peacekeeping contributor**, and a **rising economic power**, embodying the **spirit of the UN Charter**.
भारत दुनिया का सबसे अधिक जनसंख्या वाला देश और सबसे बड़ा लोकतंत्र है, UN शांति स्थापना का प्रमुख योगदानकर्ता, और एक उभरती आर्थिक शक्ति, जो UN चार्टर की भावना को दर्शाता है।
- Despite this, India remains **outside permanent membership** of the **UNSC** — a glaring **anomaly** that undermines the Council's **legitimacy** and **effectiveness**.
इसके बावजूद, भारत UNSC की स्थायी सदस्यता के बाहर है — एक स्पष्ट विचित्रता, जो परिषद की वैधता और प्रभावशीलता को कमजोर करती है।

UN's Role and Challenges

UN की भूमिका और चुनौतियाँ

- Despite shortcomings, the UN continues to play a **vital role** in **global affairs**.
कमियों के बावजूद, UN वैश्विक मामलों में महत्वपूर्ण भूमिका निभाता है।
- Humanitarian agencies like **UNHCR, WFP, UNICEF** deliver **life-saving aid** in **conflict zones** and **disaster-stricken regions**.
UNHCR, WFP, UNICEF जैसी मानवीय एजेंसियाँ संघर्ष क्षेत्रों और आपदा प्रभावित क्षेत्रों में जीवनरक्षक सहायता प्रदान करती हैं।
- UN **peacekeepers**, though stretched thin, provide **stability** in **fragile states**.
UN के शांति सैनिक, हालांकि कम संसाधनों के साथ, नाजुक राज्यों में स्थिरता प्रदान करते हैं।
- The UN's **normative influence** is its most **underappreciated asset**, shaping **global norms** on **human rights, gender equality, and sustainable development**.
UN का मानक प्रभाव इसकी सबसे अल्प मूल्यांकित संपत्ति है, जो मानवाधिकार, लैंगिक समानता, और सतत विकास पर वैश्विक मानदंड निर्धारित करता है।
- The **SDGs**, adopted in 2015, represent a **bold vision** for **inclusive growth** and **planetary stewardship**, transcending **borders** and **ideologies**.
2015 में अपनाए गए SDGs समावेशी विकास और ग्रह संरक्षण के लिए एक साहसिक दृष्टि प्रस्तुत करते हैं, जो सीमाओं और विचारधाराओं से परे है।
- The UN's ability to act is often constrained by the **member-states** themselves. **Powerful nations** may flout **international law** or use **vetoes**, while **funding** may be **politicized or withheld**, limiting UN's effectiveness.
UN की कार्यवाही की क्षमता अक्सर सदस्य राज्यों द्वारा सीमित होती है। शक्तिशाली राष्ट्र अंतरराष्ट्रीय कानून का उल्लंघन कर सकते हैं या वीटो का प्रयोग कर सकते हैं, जबकि फंडिंग का राजनीतिकरण या रोक UN की प्रभावशीलता को सीमित करता है।
- The UN is not an **abstract entity**, but a **mirror of the world**, reflecting its **differences, inequities**, and the **will (or lack thereof) of its members**.
UN कोई सैद्धांतिक संस्था नहीं है, बल्कि यह दुनिया का आईना है, जो इसकी भिन्नताएँ, असमानताएँ, और सदस्यों की इच्छा (या उसकी कमी) को दर्शाता है।

The Challenge of Strategic Autonomy

रणनीतिक स्वायत्तता की चुनौती

- India's **foreign policy** has long emphasised **sovereignty** and **strategic autonomy**, resisting alignment with any single **power bloc**.
भारत की विदेश नीति लंबे समय से सार्वभौमिकता और रणनीतिक स्वायत्तता पर जोर देती रही है, और किसी एक शक्ति ब्लॉक के साथ संरेखण से बचती रही है।



- This approach has gained renewed relevance in a world marked by **great-power competition** and **regional instability**.
यह दृष्टिकोण उस दुनिया में नई प्रासंगिकता हासिल करता है जो महाशक्ति प्रतिस्पर्धा और क्षेत्रीय अस्थिरता से चिह्नित है।
- Alongside other **rising** and **middle powers**, India seeks to protect **regional interests** without being drawn into rivalries among the **United States, China, or Russia**.
अन्य **उभरती** और **मध्य शक्तियों** के साथ, भारत **क्षेत्रीय हितों** की रक्षा करना चाहता है, बिना **अमेरिका, चीन या रूस** के बीच प्रतिद्वंद्विता में फंसे।
- This posture reflects a broader critique of **global governance structures**, particularly the **UNSC**.
यह रुख **वैश्विक शासन संरचनाओं** की व्यापक आलोचना को दर्शाता है, विशेष रूप से **UNSC** की।
- India has consistently called for **reform** that reflects **contemporary realities** — one that is not merely **powerful** but **principled, inclusive, and representative**.
भारत लगातार **सुधार** की मांग करता रहा है जो **आधुनिक वास्तविकताओं** को दर्शाता हो — जो केवल **सशक्त** नहीं बल्कि **सिद्धांतपरक, समावेशी और प्रतिनिधित्वकारी** हो।
- The current system, shaped by **post-war hierarchies**, remains **inequitable** and **unresponsive** to diverse perspectives.
वर्तमान प्रणाली, जो **युद्धोत्तर पदानुक्रमों** द्वारा आकार दी गई है, **असमान** और विभिन्न दृष्टिकोणों के प्रति **असंवेदनशील** बनी हुई है।
- A reimagined **global order** must embrace **plurality** — not just of **power**, but of **experience and voice**.
एक पुनःकल्पित **वैश्विक क्रम** को **बहुलता** अपनानी चाहिए — केवल **शक्ति** नहीं बल्कि **अनुभव और आवाज़** की भी।
- India's vision is not of **dominance**, but of **dignity**: a world where **sovereignty** is respected, **cooperation** is valued, and **institutions** are shaped by the **many, not the few**.
भारत का दृष्टिकोण **सत्ता** का नहीं बल्कि **गरिमा** का है: एक ऐसी दुनिया जहाँ **सार्वभौमिकता** का सम्मान हो, **सहयोग** की कीमत समझी जाए, और **संस्थाओं** को **बहुतों द्वारा, कुछ द्वारा नहीं** आकार दिया जाए।

What Must Be Done क्या किया जाना चाहिए

- First, the **UNSC** must be **reformed** to reflect **contemporary realities**.
सबसे पहले, **UNSC** को **आधुनिक वास्तविकताओं** को दर्शाने के लिए **सुधारित** किया जाना चाहिए।
- This is not merely a matter of **equity**. It is a matter of **efficacy**.
यह केवल **समानता** का मामला नहीं है। यह **प्रभावकारिता** का मामला है।
- A UNSC that excludes **key stakeholders** cannot hope to command **legitimacy** or deliver **results**.
एक **UNSC** जो **मुख्य हितधारकों** को बाहर रखता है, वह **वैधता** या **परिणाम** की उम्मीद नहीं कर सकता।
- Second, the UN must invest in **agility**.
दूसरा, UN को **लचीलापन** में निवेश करना चाहिए।
- In a world of **fast-moving crises**, **responsiveness** is key.
एक दुनिया में जहाँ **तेजी से बदलती संकटें** हैं, **प्रतिक्रियाशीलता** महत्वपूर्ण है।
- Streamlining **decision-making**, empowering **field operations**, and embracing **digital tools** are essential steps.
निर्णय लेने की प्रक्रिया को सरल बनाना, **क्षेत्रीय कार्यों** को सशक्त बनाना, और **डिजिटल टूल्स** अपनाना आवश्यक कदम हैं।
- Third, the UN must reclaim its **moral voice**.
तीसरा, UN को अपनी **नैतिक आवाज़** पुनः प्राप्त करनी चाहिए।
- In an age of **disinformation** and **polarisation**, the UN's ability to **speak truth to power** — to uphold **universal values** and defend the **vulnerable** — is more important than ever.
गलत जानकारी और **ध्रुवीकरण** के युग में, UN की **सत्ताधारियों से सच बोलने की क्षमता** — **सार्वभौमिक मूल्यों** को बनाए रखने और **सहायता की जरूरतमंदों** की रक्षा करने की क्षमता — पहले से अधिक महत्वपूर्ण है।
- This requires **courage, clarity, and consistency**.
इसके लिए **साहस, स्पष्टता और स्थिरता** की आवश्यकता है।



- Finally, member-states must **recommit** to the UN's **mission**.
अंत में, सदस्य राज्य UN के **मिशन** के प्रति अपनी **प्रतिबद्धता** दोबारा सुनिश्चित करें।
- The organisation cannot function without **political will** and **financial support**.
यह संगठन **राजनीतिक इच्छाशक्ति** और **आर्थिक समर्थन** के बिना कार्य नहीं कर सकता।
- It needs **champions**, not just **critics**; **partners**, not just **participants**.
इसे केवल **आलोचक** नहीं बल्कि **समर्थक**, केवल **सदस्य** नहीं बल्कि **साझेदार** चाहिए।
- **Budgetary shortfalls**, due to defaults by the **U.S.** and others, have forced the Secretariat to implement **painful staff reductions**, **freeze hiring**, and **scale back core programmes**.
बजटीय कमी, अमेरिका और अन्य द्वारा देय राशि न देने के कारण, सचिवालय को **कर्मचारी कटौती**, **भर्ती पर रोक**, और **मुख्य कार्यक्रमों में कटौती** करनी पड़ी।
- The irony is stark: the institution most needed to address **global crises** is being **weakened** by the very powers that helped **create it**.
विडंबना स्पष्ट है: जो संस्था **वैश्विक संकटों** को संबोधित करने के लिए सबसे आवश्यक है, उसे वही शक्तियाँ **कमजोर** कर रही हैं जिन्होंने इसे **सृजित** किया।

A Mandate for the Future: Renewal and Reform

भविष्य के लिए जनादेश: नवीनीकरण और सुधार

- The UN at 80 is neither a **relic** nor a **panacea**.
80 वर्ष की उम्र में UN न तो कोई **अवशेष** है और न ही कोई **सर्व उपाय**।
- It is a **work in progress** — a reflection of our **collective aspirations** and **contradictions**.
यह एक **प्रगति पर कार्य** है — जो हमारी **सामूहिक आकांक्षाओं** और **विरोधाभासों** का प्रतिबिंब है।
- Its **failures** are real, but so are its **achievements**.
इसकी **असफलताएँ** वास्तविक हैं, लेकिन इसके **उपलब्धियाँ** भी हैं।
- To dismiss the UN is to abandon the idea that **humanity** can govern itself through **dialogue** rather than **domination**.
UN को खारिज करना इस विचार को त्यागने के समान है कि **मानवता संवाद** के माध्यम से अपने आप को शासित कर सकती है, **प्रभुत्व** के माध्यम से नहीं।
- The UN remains an **indispensable symbol** — not of **perfection**, but of **possibility**.
UN एक **अनिवार्य प्रतीक** बना हुआ है — **पूर्णता** का नहीं, बल्कि **संभावना** का।
- As **Dag Hammarskjöld** said, it was meant “not to take mankind to heaven, but to save humanity from hell”.
जैसे **डेग हम्मार्स्कजोल्ड** ने कहा, इसका उद्देश्य “मानवता को स्वर्ग में ले जाना नहीं, बल्कि नरक से बचाना है”।
- The UN is both **stage and actor**: a **stage** for its member-states, and an **actor** when they empower it to **defend common humanity**.
UN दोनों है: **मंच और अभिनेता**: सदस्य राज्यों के लिए **मंच**, और जब वे इसे **सामान्य मानवता की रक्षा** के लिए सशक्त बनाते हैं, तब **अभिनेता**।
- Ironically, the **actor** is often blamed for the **failures of the stage**.
विडंबना यह है कि **अभिनेता** को अक्सर **मंच की असफलताओं** का दोषी ठहराया जाता है।
- As it marks its 80th **anniversary**, its challenge is to become more **representative**, **responsive**, and **resilient** in a world that needs **principled global cooperation** more than ever.
अपनी 80वीं **वार्षिकी** पर, इसका चुनौती यह है कि यह अधिक **प्रतिनिधि**, **प्रतिक्रियाशील** और **लचीला** बने, उस दुनिया में जिसे पहले से अधिक **सिद्धांतपरक वैश्विक सहयोग** की आवश्यकता है।

Immunity of international organisations is no free pass +

GS II: International Organization

International cooperation between countries often leads to the creation of international organisations (IOs) to administer the treaties that states sign and ratify. These IOs, or Intergovernmental Organisations, may operate at the multilateral level, such as the United Nations (UN), or at the regional level, such as the South Asian Association for Regional Cooperation.

While the existence of these IOs is a fact of life, a question of contemporary relevance that has not attracted much attention is whether IOs are subject to the jurisdiction of the domestic courts of the host state where they are based, or whether they enjoy immunity from such jurisdiction. This question is particularly relevant for India as it is home to a number of IOs.

The immunities that different IOs enjoy differ. An IO's immunity is to be determined through a careful reading of the treaty establishing the IO, the headquarters agreement (an agreement between the IO and the host state), and the domestic legislation, if any, that created the IO. The theoretical basis for an IO's immunity from the jurisdiction of the host state's domestic courts is based on the 'functional necessity' thesis.

Accordingly, immunity to IOs is crucial to ensure that they can perform their functions smoothly. While this is generally true, the functional necessity thesis, as international lawyers such as Jan Klabbbers point out, is not without its problems. For instance, what happens when an IO abuses its powers by acting in an arbitrary or discriminatory fashion? Can the IO still hide under the cloak of immunity in the name of functionality?

Judicial practice of other countries

In numerous countries, a typical case that their national courts have handled is whether they have jurisdiction to hear employment disputes between a staff member and the IO. In all such disputes, IOs have claimed immunity from the court's jurisdiction. If an IO wishes to claim



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The issue
acquires
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India is home to
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organisations

immunity from domestic courts for employment disputes, it should provide an alternative mechanism to its staff to settle disputes that they may have with the organisation. The International Court of Justice, as early as 1954, in the *Effect of Awards Case*, upheld the creation of the United Nations Administrative Tribunal, a body created by the UN, for the purpose of providing an orderly judicial mechanism to settle staff disputes.

Traditionally, courts in several jurisdictions have dismissed claims brought by staff members against an IO on the principle of functional immunity. However, more recently, as international lawyer August Reinisch demonstrates, national courts have begun to assess the 'human rights impact' of their immunity decisions. The critical question is whether the court's denial of jurisdiction to hear a claim brought against an IO by a staff member will render the petitioner without remedies. If yes, it would constitute a denial of justice.

Alternative remedy

Arguably, if an IO provides for an alternative dispute settlement mechanism for its staff members, the domestic court should deny jurisdiction, upholding the IO's immunity. However, a mere theoretical possibility of an alternative dispute settlement is not enough. As the Italian Supreme Court held in *Drago vs International Plant Genetic Resources Institute*, the alternative remedy should be an independent and impartial judicial remedy to settle staff disputes.

Likewise, a Belgian court in *Siedler vs Western European Union* abjured the IO's immunity because the alternative remedy did not promise a fair trial. In *Banque africaine de développement vs Degboe*, a French court rejected the immunity argument of the because no alternative remedy existed. The bank had created an alternative remedy after the petitioner's dismissal, which the

petitioner could not access. In short, what courts worldwide are increasingly assessing is not just the availability of the IOs' alternative dispute settlement but also its adequacy, judged by the principles of natural justice. To better understand this point, let us assume that the domestic legislation creating the IO or the headquarters agreement between the IO and the host state provides for arbitration as an alternative method to resolve employment-related disputes. Will this be sufficient for the IO to claim immunity from the domestic court's jurisdiction? The answer is no. The theoretical availability of arbitration is a starting point.

Vital questions

The key question is about what steps the IO has taken to effectively implement this alternative remedy. For example, has the IO established a precise mechanism for conducting arbitration to address employment disputes within its rules, regulations and by-laws? Has it appointed a panel of independent arbitrators? Has the IO been affiliated with any arbitral institution and adopted its rules? Moreover, has it expressly waived its immunity regarding the supervisory jurisdiction of domestic courts in the arbitration of employment disputes? If not, arbitration will not be an effective remedy.

In other words, has the IO taken steps to ensure that this alternative remedy provides reasonable and effective access to a dispute settlement mechanism that is fair for the adjudication of employment disputes? If the answer is no, the IO cannot reasonably claim immunity in employment disputes before domestic courts.

In sum, the immunity of IOs should be respected. Nonetheless, immunity should not become a licence for an IO to abuse public power, leading to grave injustice.

The views expressed are personal

Immunity of international organisations is no free pass

अंतरराष्ट्रीय संगठनों की प्रतिरक्षा कोई मुफ्त पास नहीं है

- International cooperation between countries often leads to the creation of **international organisations (IOs)** to administer the **treaties** that states sign and ratify.
देशों के बीच अंतरराष्ट्रीय सहयोग अक्सर ऐसे अंतरराष्ट्रीय संगठनों (IOs) के निर्माण की ओर ले जाता है जो राज्यों द्वारा हस्ताक्षरित और पृष्ठ किए गए संधियों का संचालन करते हैं।
- These IOs, or **Intergovernmental Organisations**, may operate at the **multilateral level**, such as the **United Nations (UN)**, or at the **regional level**, such as the **South Asian Association for Regional Cooperation**.
ये IOs, या अंतर-सरकारी संगठन, बहुपक्षीय स्तर पर काम कर सकते हैं, जैसे संयुक्त राष्ट्र (UN), या क्षेत्रीय स्तर पर, जैसे दक्षिण एशियाई क्षेत्रीय सहयोग संघ।
- While the existence of these IOs is a **fact of life**, a question of contemporary relevance is whether IOs are subject to the **jurisdiction** of the **domestic courts** of the host state, or whether they enjoy **immunity** from such jurisdiction.
जबकि इन IOs का अस्तित्व एक सच्चाई है, एक आधुनिक प्रासंगिक सवाल यह है कि क्या IOs मेजबान राज्य की घरेलू अदालतों के अधिकार क्षेत्र के अधीन हैं, या उन्हें ऐसे अधिकार क्षेत्र से इम्यूनिटी प्राप्त है।
- This question is particularly relevant for **India** as it is home to a number of IOs.
यह सवाल विशेष रूप से भारत के लिए महत्वपूर्ण है क्योंकि यहाँ कई IOs के मुख्यालय हैं।
- The **immunities** that different IOs enjoy differ.
विभिन्न IOs द्वारा प्राप्त इम्यूनिटी अलग-अलग होती है।
- An IO's immunity is determined through the **treaty** establishing the IO, the **headquarters agreement** (between the IO and host state), and the **domestic legislation**, if any, that



created the IO.

किसी IO की **इम्यूनिटी** उस **संधि, मुख्यालय समझौता** (IO और मेजबान राज्य के बीच) और किसी भी **घरेलू कानून** के माध्यम से निर्धारित होती है जिसने IO को बनाया हो।

- The theoretical basis for an IO's immunity from the jurisdiction of the host state's domestic courts is based on the '**functional necessity**' thesis.
किसी IO की मेजबान राज्य की घरेलू अदालतों के अधिकार क्षेत्र से **इम्यूनिटी** का सैद्धांतिक आधार '**कार्यात्मक आवश्यकता**' सिद्धांत पर आधारित है।
- Accordingly, **immunity** to IOs is crucial to ensure they can perform their **functions smoothly**.
तदनुसार, IOs को **इम्यूनिटी** देना महत्वपूर्ण है ताकि वे अपने **कार्य सुचारू रूप से** कर सकें।
- While this is generally true, the **functional necessity thesis**, as international lawyers such as **Jan Klabbbers** point out, is not without its **problems**.
जबकि यह सामान्यतः सही है, **कार्यात्मक आवश्यकता सिद्धांत**, जैसा कि अंतरराष्ट्रीय वकील **जान क्लैबर्स** ने बताया है, **समस्याओं** से मुक्त नहीं है।
- For instance, what happens when an IO **abuses its powers** by acting in an **arbitrary or discriminatory** fashion?
उदाहरण के लिए, जब कोई IO अपने **अधिकारों का दुरुपयोग** करता है और **मनमाना या भेदभावपूर्ण** तरीके से कार्य करता है तो क्या होता है?
- Can the IO still hide under the **cloak of immunity** in the name of **functionality**?
क्या IO अभी भी **कार्यात्मकता** के नाम पर **इम्यूनिटी की चादर** में छिप सकता है?

Judicial Practice of Other Countries

अन्य देशों का न्यायिक अभ्यास

- In numerous countries, a typical case handled by national courts is whether they have **jurisdiction** to hear **employment disputes** between a **staff member** and the IO.
कई देशों में, राष्ट्रीय अदालतों द्वारा संभाले गए सामान्य मामलों में यह देखा जाता है कि क्या उनके पास **अधिकार क्षेत्र** है कि वे किसी **कर्मचारी** और IO के बीच के **रोजगार विवादों** को सुन सकें।
- In all such disputes, IOs have claimed **immunity** from the court's **jurisdiction**.
ऐसे सभी विवादों में, IOs ने अदालत के **अधिकार क्षेत्र** से **इम्यूनिटी** का दावा किया है।
- If an IO wishes to claim **immunity** from domestic courts for employment disputes, it should provide an **alternative mechanism** to its staff to settle disputes with the organisation.
यदि कोई IO रोजगार विवादों के लिए घरेलू अदालतों से **इम्यूनिटी** का दावा करना चाहता है, तो उसे अपने कर्मचारियों को संगठन के साथ विवाद सुलझाने के लिए **वैकल्पिक तंत्र** प्रदान करना चाहिए।
- The **International Court of Justice**, as early as **1954**, in the **Effect of Awards Case**, upheld the creation of the **United Nations Administrative Tribunal**, a body created by the UN, to provide an **orderly judicial mechanism** to settle **staff disputes**.
अंतरराष्ट्रीय न्यायालय (ICJ) ने, जैसे कि **1954** में **Effect of Awards Case** में, **संयुक्त राष्ट्र प्रशासनिक न्यायाधिकरण** के निर्माण को सही ठहराया, जो UN द्वारा बनाया गया एक निकाय है, ताकि **कर्मचारी विवादों** को सुलझाने के लिए एक **व्यवस्थित न्यायिक तंत्र** प्रदान किया जा सके।
- Traditionally, courts in several jurisdictions have dismissed claims brought by **staff members** against an IO on the principle of **functional immunity**.
पारंपरिक रूप से, कई न्याय क्षेत्रों की अदालतों ने **कार्यात्मक इम्यूनिटी** के सिद्धांत पर IO के खिलाफ **कर्मचारियों द्वारा** लाए गए दावों को खारिज कर दिया है।
- More recently, as international lawyer **August Reinisch** demonstrates, national courts have begun to assess the **human rights impact** of their **immunity decisions**.
हाल ही में, जैसे कि अंतरराष्ट्रीय वकील **ऑगस्ट रीनिश** ने दिखाया है, राष्ट्रीय अदालतें अब अपने **इम्यूनिटी निर्णयों** के **मानवाधिकार प्रभाव** का मूल्यांकन करने लगी हैं।
- The critical question is whether the court's **denial of jurisdiction** to hear a claim brought against an IO by a **staff member** will render the petitioner **without remedies**.
महत्वपूर्ण सवाल यह है कि क्या अदालत द्वारा किसी IO के खिलाफ **कर्मचारी** द्वारा लाए गए दावे को सुनने के **अधिकार से इनकार** करने से याचिकाकर्ता को **उपाय रहित** कर दिया जाएगा।
- If yes, it would constitute a **denial of justice**.
यदि हाँ, तो यह **न्याय का इंकार** होगा।



Alternative Remedy

वैकल्पिक उपचार

- Arguably, if an IO provides for an **alternative dispute settlement mechanism** for its **staff members**, the **domestic court** should deny **jurisdiction**, upholding the IO's **immunity**.
तर्कसंगत रूप से, यदि कोई IO अपने **कर्मचारियों** के लिए **वैकल्पिक विवाद निवारण तंत्र** प्रदान करता है, तो **घरेलू अदालत** को **अधिकार क्षेत्र** से इनकार करना चाहिए, और IO की **इम्यूनिटी** को बनाए रखना चाहिए।
- However, a mere theoretical possibility of an **alternative dispute settlement** is not enough.
हालांकि, केवल **सैद्धांतिक संभावना** पर्याप्त नहीं है।
- As the **Italian Supreme Court** held in **Drago vs International Plant Genetic Resources Institute**, the **alternative remedy** should be an **independent** and **impartial judicial remedy** to settle **staff disputes**.
जैसा कि **इतालवी सर्वोच्च न्यायालय** ने **Drago vs International Plant Genetic Resources Institute** में कहा, **वैकल्पिक उपचार** एक **स्वतंत्र** और **निष्पक्ष न्यायिक उपाय** होना चाहिए जो **कर्मचारी विवादों** को सुलझा सके
- Likewise, a **Belgian court** in **Siedler vs Western European Union** abjured the IO's **immunity** because the **alternative remedy** did not promise a **fair trial**.
इसी तरह, एक **बेल्जियाई अदालत** ने **Siedler vs Western European Union** में IO की **इम्यूनिटी** को खारिज कर दिया क्योंकि **वैकल्पिक उपचार** न्यायसंगत **परीक्षण** का वादा नहीं करता था
- In **Banque africaine de développement vs Degboe**, a **French court** rejected the **immunity argument** because no **alternative remedy** existed.
Banque africaine de développement vs Degboe में, एक **फ्रेंच अदालत** ने **इम्यूनिटी तर्क** को खारिज कर दिया क्योंकि कोई **वैकल्पिक उपचार** मौजूद नहीं था।
- The bank had created an **alternative remedy** after the **petitioner's dismissal**, which the petitioner could not access.
बैंक ने **याचिकाकर्ता के बरखास्तगी** के बाद एक **वैकल्पिक उपचार** बनाया, जिसे याचिकाकर्ता तक पहुँच नहीं थी।
- In short, courts worldwide are increasingly assessing not just the **availability** of IOs' **alternative dispute settlement** but also its **adequacy**, judged by the principles of **natural justice**.
संक्षेप में, विश्वभर की अदालतें अब केवल IOs के **वैकल्पिक विवाद निवारण** की **उपलब्धता** ही नहीं, बल्कि इसकी **प्रभावशीलता** का भी मूल्यांकन कर रही हैं, जिसे **प्राकृतिक न्याय** के सिद्धांतों द्वारा आंका जाता है।
- To better understand this, assume that the **domestic legislation** creating the IO or the **headquarters agreement** between the IO and host state provides for **arbitration** as an **alternative method** to resolve **employment-related disputes**.
इसे बेहतर समझने के लिए मान लें कि IO को बनाने वाला **घरेलू कानून** या IO और मेजबान राज्य के बीच **मुख्यालय समझौता रोजगार-संबंधी विवादों** को हल करने के लिए **मध्यस्थता** को एक **वैकल्पिक तरीका** प्रदान करता है।
- Will this be sufficient for the IO to claim **immunity** from the **domestic court's jurisdiction**?
The answer is **no**.
क्या यह IO को **घरेलू अदालत के अधिकार क्षेत्र** से **इम्यूनिटी** का दावा करने के लिए पर्याप्त होगा? उत्तर **नहीं** है।
- The **theoretical availability** of **arbitration** is a **starting point**.
मध्यस्थता की सैद्धांतिक उपलब्धता एक **प्रारंभिक बिंदु** है।

Vital Questions

महत्वपूर्ण प्रश्न

- The key question is about what steps the IO has taken to effectively implement this **alternative remedy**.
मुख्य सवाल यह है कि IO ने इस **वैकल्पिक उपचार** को प्रभावी ढंग से लागू करने के लिए कौन से कदम उठाए हैं।
- For example, has the IO established a **precise mechanism** for conducting **arbitration** to address **employment disputes** within its **rules, regulations and by-laws**?



उदाहरण के लिए, क्या IO ने अपने नियमों, विनियमों और उपनियमों के भीतर रोजगार विवादों को हल करने के लिए मध्यस्थता करने का एक सटीक तंत्र स्थापित किया है?

- Has it appointed a panel of **independent arbitrators**?
क्या इसने स्वतंत्र मध्यस्थों की एक समिति नियुक्त की है?
- Has the IO been affiliated with any **arbitral institution** and adopted its **rules**?
क्या IO किसी मध्यस्थ संस्थान से संबद्ध है और इसके नियमों को अपनाया है?
- Moreover, has it expressly waived its **immunity** regarding the **supervisory jurisdiction** of domestic courts in the **arbitration of employment disputes**?
इसके अलावा, क्या इसने रोजगार विवादों की मध्यस्थता में घरेलू अदालतों के पर्यवेक्षण अधिकार क्षेत्र के संबंध में अपनी इम्यूनिटी स्पष्ट रूप से त्याग दी है?
- If not, **arbitration** will not be an **effective remedy**.
यदि नहीं, तो मध्यस्थता एक प्रभावी उपचार नहीं होगी।
- In other words, has the IO taken steps to ensure that this **alternative remedy** provides **reasonable** and **effective access** to a **dispute settlement mechanism** that is **fair** for adjudication of **employment disputes**?
दूसरे शब्दों में, क्या IO ने यह सुनिश्चित करने के लिए कदम उठाए हैं कि यह वैकल्पिक उपचार उचित और प्रभावी पहुँच प्रदान करे जो रोजगार विवादों के निपटारे के लिए न्यायसंगत हो?
- If the answer is **no**, the IO cannot reasonably claim **immunity** in **employment disputes** before **domestic courts**.
यदि उत्तर नहीं है, तो IO घरेलू अदालतों के सामने रोजगार विवादों में इम्यूनिटी का तर्कसंगत रूप से दावा नहीं कर सकता।
- In sum, the **immunity** of IOs should be **respected**.
संक्षेप में, IOs की इम्यूनिटी का सम्मान किया जाना चाहिए।
- Nonetheless, **immunity** should not become a **licence** for an IO to **abuse public power**, leading to **grave injustice**.
फिर भी, IO की इम्यूनिटी ऐसा अधिकार नहीं बननी चाहिए जिससे वह सार्वजनिक शक्ति का दुरुपयोग करे और इससे गंभीर अन्याय उत्पन्न हो।

GS Paper III: Economy, S&T, Environment, DM, & IS	
TOPICS COVERED	24_10_2025
1.	Bombay HC sets up panel to protect Sanjay Gandhi park from encroachments बॉम्बे हाईकोर्ट ने संजय गांधी पार्क को अतिक्रमण से बचाने के लिए समिति गठित की
2.	Over 100 hospitalised after use of carbide guns in Bhopal भोपाल में कार्बाइड गन के उपयोग से 100 से अधिक लोग अस्पताल में भर्ती
3.	Tri-services to get systems, platforms for ₹79,000 cr. तीन सेवाओं को ₹79,000 करोड़ के सिस्टम और प्लेटफॉर्म मिलेंगे
4.	90% of Gaganyaan development work done: ISRO chief गगनयान के 90% विकास कार्य पूरे हुए: इसरो प्रमुख



5.	DCGI brings in stricter norms for tracking supply chain of high-risk solvents DCGI ने उच्च-जोखिम वाले सॉल्वेंट्स की आपूर्ति श्रृंखला को ट्रैक करने के लिए कड़े नियम लागू किए
6.	Life after mastectomy: navigating challenges, heralding new beginnings मास्टेक्टॉमी के बाद का जीवन: चुनौतियों का सामना और नई शुरुआत की ओर
7.	Synthetic Media कृत्रिम मीडिया
8.	Good job अच्छा काम
9.	Should India take global leadership on climate change? क्या भारत को जलवायु परिवर्तन पर वैश्विक नेतृत्व लेना चाहिए?
10.	Is Punjab's stubble burning problem really declining? क्या पंजाब की पराली जलाने की समस्या वास्तव में कम हो रही है?
11.	Why Cloud Seeding is Not a Solution to Delhi's Air Pollution Crisis क्यों क्लाउड सीडिंग दिल्ली के वायु प्रदूषण संकट का समाधान नहीं है
12.	QUIZ
13.	UPI leads in payment volume, RTGS value; debit card deals dip' 'UPI भुगतान मात्रा में अग्रणी, RTGS मूल्य में बढ़त; डेबिट कार्ड लेनदेन में गिरावट'
14.	What France and others can learn from Sweden's hard budget lessons फ्रांस और अन्य देशों को स्वीडन के कड़े बजट पाठ से क्या सीखना चाहिए



Bombay HC sets up panel to protect Sanjay Gandhi park from encroachments

GS III: Environment

Purnima Sah

MUMBAI

The Bombay High Court has constituted a high-powered committee headed by former Allahabad High Court Chief Justice Dilip Babasaheb Bhosale to protect and preserve the Sanjay Gandhi National Park (SGNP) after observing that successive governments have failed to implement its directions to safeguard the park for nearly 30 years.

The Division Bench of Chief Justice Shree Chandrashekhar and Justice Gautam A. Ankhad was hearing a contempt petition and a PIL alleging "gross contempt" of multiple orders aimed at safeguarding SGNP, a 104 sq.km. green expanse within Mumbai and Thane. Despite repeated judicial interventions since the late 1990s, the court noted that the State had not taken "effective steps" to comply with its directions.

The order passed on October 16 and made available on Wednesday (October 22, 2025), said, "Various orders passed by this Court over a period of thirty years are still to be complied with. This has perhaps led to further encroachments in SGNP."

The court recorded that



Urban oasis: The park acts as Mumbai's 'green lung', absorbing carbon emissions and replenishing groundwater. FILE PHOTO

only 49 km of the 154 km boundary wall has been built, despite orders in 1997, 1999, 2000 and a final judgment in 2003. Even subsequent directions in 2024 and early 2025 were not followed. The judges observed that this prolonged inaction has allowed encroachments to spread deeper into the park.

Calling SGNP "a crown jewel for the cities of Mumbai and Thane", the Bench observed, "Considering the present scenario, and to ensure that steps are taken for protection of SGNP, we deem it necessary to constitute a High Power Committee."

SGNP is one of the few national parks in the world located within city limits. Spread over 104 sq km, it is home to leopards, over 1,000 plant species, and the ancient Kanheri caves

dating back to the 1st century BCE. The park acts as Mumbai's "green lung", absorbing carbon emissions and replenishing groundwater. Encroachments and unchecked urbanisation have long threatened its ecosystem.

The committee will include Justice Bhosale as chairperson, former Maharashtra Chief Secretary Nitin Kareer, former Director General of Police Subodh Kumar Jaiswal, and Anita Patil, Conservator of Forests and SGNP director, as member secretaries.

The panel has to expedite construction of the boundary wall, suggest measures for compliance, identify land and oversee rehabilitation of encroachers, and recommend steps for removal of illegal structures.

The matter will be heard next on February 19, 2026.

Bombay HC sets up panel to protect Sanjay Gandhi park from encroachments
बॉम्बे हाईकोर्ट ने संजय गांधी पार्क को अतिक्रमण से बचाने के लिए समिति गठित की



- The **Bombay High Court** has constituted a **high-powered committee** headed by former **Allahabad High Court Chief Justice Dilip Babasaheb Bhosale** to protect and preserve the **Sanjay Gandhi National Park (SGNP)** after observing that successive governments have failed to implement its directions to safeguard the park for nearly **30 years**.



बॉम्बे हाईकोर्ट ने **पूर्व इलाहाबाद हाईकोर्ट** के **मुख्य न्यायाधीश दिलीप बाबासाहेब भोसले** की अध्यक्षता में **उच्चस्तरीय समिति** गठित की है ताकि **संजय गांधी राष्ट्रीय उद्यान (SGNP)** की रक्षा और संरक्षण किया जा सके, क्योंकि अदालत ने देखा कि लगातार बदलती सरकारें पिछले **30 वर्षों** से पार्क की सुरक्षा संबंधी उसके निर्देशों को लागू करने में विफल रही हैं।

- The **Division Bench** of **Chief Justice Shree Chandrashekhar** and **Justice Gautam A. Ankhad** was hearing a **contempt petition** and a **PIL** alleging "gross contempt" of multiple orders aimed at safeguarding SGNP, a **104 sq.km.** green expanse within **Mumbai and Thane**.

मुख्य न्यायाधीश श्री चंद्रशेखर और **न्यायमूर्ति गौतम ए. अंकद** की **खंडपीठ अवमानना याचिका** और **लोकहित याचिका (PIL)** पर सुनवाई कर रही थी, जिसमें **मुंबई और ठाणे** के भीतर फैले **104 वर्ग किमी** हरित क्षेत्र **SGNP** की सुरक्षा के लिए जारी कई आदेशों की "**गंभीर अवमानना**" का आरोप लगाया गया था।

- Despite repeated **judicial interventions** since the **late 1990s**, the court noted that the **State** had not taken "**effective steps**" to comply with its directions.

1990 के दशक के उत्तरार्ध से बार-बार **न्यायिक हस्तक्षेप** के बावजूद अदालत ने नोट किया कि **राज्य सरकार** ने अपने निर्देशों का पालन करने के लिए "**प्रभावी कदम**" नहीं उठाए।

- The **order** passed on **October 16** and made available on **October 22, 2025**, said, "Various orders passed by this Court over a period of thirty years are still to be complied with. This has perhaps led to further **encroachments** in SGNP."

16 अक्टूबर को पारित और **22 अक्टूबर, 2025** को जारी आदेश में कहा गया, "पिछले तीस वर्षों में इस न्यायालय द्वारा पारित विभिन्न आदेशों का अभी तक पालन नहीं किया गया है। इससे शायद SGNP में और अधिक **अतिक्रमण** हुआ है।"

- The court recorded that only **49 km** of the **154 km boundary wall** has been built, despite orders in **1997, 1999, 2000** and a final judgment in **2003**.

अदालत ने दर्ज किया कि **154 किमी की सीमा दीवार** में से केवल **49 किमी** का निर्माण किया गया है, जबकि इस संबंध में **1997, 1999, 2000** में आदेश और **2003** में अंतिम निर्णय दिया गया था।

- Even subsequent directions in **2024** and **early 2025** were not followed.

यहां तक कि **2024** और **2025 की शुरुआत** में दिए गए बाद के निर्देशों का भी पालन नहीं किया गया।

- The judges observed that this **prolonged inaction** has allowed **encroachments** to spread deeper into the park.

न्यायाधीशों ने कहा कि इस **लंबे समय तक निष्क्रियता** ने **अतिक्रमणों** को पार्क के भीतर और गहराई तक फैलने की अनुमति दी है।

- Calling SGNP "a **crown jewel** for the cities of **Mumbai and Thane**", the Bench observed, "Considering the present scenario, and to ensure that steps are taken for protection of SGNP, we deem it necessary to constitute a **High Power Committee**."

पीठ ने SGNP को "**मुंबई और ठाणे का मुकुट रत्न**" बताते हुए कहा, "वर्तमान स्थिति को देखते हुए और SGNP की सुरक्षा के लिए कदम सुनिश्चित करने हेतु, हम एक **उच्चस्तरीय समिति** गठित करना आवश्यक समझते हैं।"

- SGNP** is one of the few **national parks** in the world located within **city limits**.

SGNP दुनिया के कुछ **राष्ट्रीय उद्यानों** में से एक है जो **शहर की सीमा** के भीतर स्थित है।

- Spread over **104 sq km**, it is home to **leopards**, over **1,000 plant species**, and the ancient **Kanheri caves** dating back to the **1st century BCE**.

104 वर्ग किमी में फैला यह उद्यान **तेंदुओं, 1,000 से अधिक पौधों की प्रजातियों** और **ईसा पूर्व पहली शताब्दी** की प्राचीन **कन्हेरी गुफाओं** का घर है।

- The park acts as **Mumbai's "green lung"**, **absorbing carbon emissions and replenishing groundwater**.

यह पार्क मुंबई के "**ग्रीन लंग्स (हरित फेफड़े)**" के रूप में कार्य करता है, जो **कार्बन उत्सर्जन** को अवशोषित करता है और **भूजल स्तर** को पुनः भरता है।

- Encroachments** and unchecked **urbanisation** have long threatened its **ecosystem**.

अतिक्रमण और अनियंत्रित **शहरीकरण** ने लंबे समय से इसके **पारिस्थितिकी तंत्र** को खतरे में डाला है।



- The committee will include **Justice Bhosale** as chairperson, **former Maharashtra Chief Secretary Nitin Kareer**, **former DGP Subodhkumar Jaiswal**, and **Anita Patil**, **Conservator of Forests** and **SGNP director**, as member secretaries.
समिति में अध्यक्ष के रूप में **न्यायमूर्ति भोसले**, सदस्य सचिवों के रूप में **पूर्व महाराष्ट्र मुख्य सचिव नितिन करीयर**, **पूर्व पुलिस महानिदेशक सुभोधकुमार जायसवाल**, और **वन संरक्षक व SGNP निदेशक अनीता पाटिल** शामिल होंगी।
- The panel has to **expedite construction** of the boundary wall, **suggest measures** for compliance, **identify land** and oversee **rehabilitation of encroachers**, and **recommend steps** for removal of **illegal structures**.
समिति को सीमा दीवार के निर्माण में **तेजी लाने**, **पालन के उपाय सुझाने**, **भूमि की पहचान करने**, **अतिक्रमणकारियों के पुनर्वास की निगरानी करने**, और **अवैध संरचनाओं को हटाने के कदमों की सिफारिश** करने का कार्य सौंपा गया है।
- The matter will be heard next on **February 19, 2026**.
इस मामले की अगली सुनवाई **19 फरवरी, 2026** को होगी।

Over 100 hospitalised after use of carbide guns in Bhopal

GS III: S&T

More than 100 persons, most of them children aged between 8 and 14, were hospitalised in Bhopal and Vidisha district in Madhya Pradesh due to injuries sustained after using **calcium carbide guns** during Deepavali, officials said on Thursday. While 60 are admitted in government hospitals in Bhopal, 50 are recuperating in facilities in Vidisha, including five with eye injuries, they said. "These crude guns, made using a gas lighter, a plastic pipe, and calcium carbide, are in vogue this Deepavali. The calcium carbide in the gun produces acetylene gas when it meets water and explodes upon contact with a spark," an official said.

Bhopal, 50 are recuperating in facilities in Vidisha, including five with eye injuries, they said.

उन्होंने कहा कि **भोपाल के सरकारी अस्पतालों में 60 लोग भर्ती हैं**, जबकि **विदिशा की स्वास्थ्य सुविधाओं में 50 लोग उपचार प्राप्त कर रहे हैं**, जिनमें **पांच की आंखों में चोटें हैं**।

- "These crude guns, made using a gas lighter, a plastic pipe, and calcium carbide, are in vogue this Deepavali.
"ये कच्ची गनें, जो **गैस लाइटर, प्लास्टिक पाइप और कैल्शियम कार्बाइड** से बनाई जाती हैं, इस दीवाली पर **बहुत लोकप्रिय हो गई हैं**।"
- The calcium carbide in the gun produces acetylene gas when it meets water and explodes upon contact with a spark," an official said.
एक अधिकारी ने कहा, "गन में मौजूद **कैल्शियम कार्बाइड**, जब **पानी** के संपर्क में आता है तो **एसीटिलीन गैस** उत्पन्न करता है और **चिंगारी लगते ही विस्फोट** हो जाता है।"

Over 100 hospitalised after use of carbide guns in Bhopal

भोपाल में कार्बाइड गन के उपयोग से 100 से अधिक लोग अस्पताल में भर्ती

- More than 100 persons, most of them children aged between 8 and 14, were hospitalized in Bhopal and Vidisha district in Madhya Pradesh due to injuries sustained after using calcium carbide guns during Deepavali, officials said on Thursday.



गुरुवार को अधिकारियों ने बताया कि **100 से अधिक लोग**, जिनमें से अधिकांश **8 से 14 वर्ष की आयु के बच्चे हैं**, **मध्य प्रदेश के भोपाल और विदिशा जिलों में दीवाली के दौरान कैल्शियम कार्बाइड गन का उपयोग करने से लगी चोटों के कारण अस्पताल में भर्ती हुए**।

- While 60 are admitted in government hospitals in



Tri-services to get systems, platforms for ₹79,000 cr.

The acquisitions are designed to enhance lethality, mobility and intelligence-gathering capabilities across the services; Defence Acquisition Council, chaired by Rajnath, approves the proposals

GS III: Defence

Saurabh Trivedi
NEW DELHI

The Defence Acquisition Council (DAC), chaired by Defence Minister Rajnath Singh, on Thursday approved a series of capital acquisition proposals worth around ₹79,000 crore aimed at strengthening the operational capabilities of the Army, Navy and Air Force.

The Defence Ministry said the approvals granted during a meeting at South Block would cover a wide spectrum of platforms and systems designed to enhance lethality, mobility, and intelligence-gathering capabilities across the Services.

For the Army, the DAC accorded Acceptance of Necessity (AoN) for the procurement of the Nag missile system (tracked) Mk-II (NAMIS), ground-based mobile ELINT System (GBMES), and high-mobility vehicles (HMTVs) with material handling cranes.

The NAMIS (Tracked) will bolster the Army's ability to destroy enemy armoured vehicles, bunkers,



The Anti Tank Guided Missile Nag Mk II being successfully tested from a light tank developed by the Defence Research and Development Organisation. PTI

and other fortified positions, while the GBMES will provide round-the-clock electronic intelligence on enemy emitters. The induction of HMTVs is expected to significantly enhance logistic support in challenging terrains.

For the Navy, the AoN was granted for the acquisition of landing platform docks (LPDs), 30 mm naval surface guns, advanced light weight torpedoes (ALWTs), electro-optical infrared search-and-track systems, and smart ammunition for 76 mm super rapid gun mounts.

The LPDs will augment the Navy's amphibious warfare capabilities and enable it to undertake joint operations with the Army and Air Force. They will also enhance India's capacity to conduct peacekeeping, humanitarian assistance, and disaster relief (HADR) missions. The indigenously developed ALWT by the DRDO's Naval Science and Technological Laboratory is capable of engaging conventional, nuclear, and midget submarines.

For the Indian Air Force, the AoN was accorded for

the collaborative long-range target saturation/destruction system (CLRTS/DS) and other related systems. The CLRTS/DS features autonomous take-off and landing, navigation, target detection and payload delivery capabilities, aimed at augmenting the IAF's long-range precision engagement capacity.

The approvals reflect the government's continuing emphasis on modernisation, self-reliance and indigenisation under the 'Aatmanirbhar Bharat' initiative, officials said.

Tri-services to get systems, platforms for ₹79,000 cr.

तीन सेवाओं को ₹79,000 करोड़ के सिस्टम और प्लेटफॉर्म मिलेंगे

- The acquisitions are designed to enhance lethality, mobility and intelligence-gathering capabilities across the services; Defence Acquisition Council, chaired by Rajnath, approves the proposals.

ये अधिग्रहण सैनिक, नौसेना और वायु सेना में घातक क्षमता, गतिशीलता और खुफिया-संग्रहण क्षमताओं को बढ़ाने के लिए डिज़ाइन किए गए हैं; रक्षा अधिग्रहण परिषद (DAC), जिसकी अध्यक्षता राजनाथ सिंह ने की, ने प्रस्तावों को मंजूरी दी।

- The Defence Acquisition Council (DAC), chaired by Defence Minister Rajnath Singh, on Thursday approved a series of capital acquisition proposals worth around ₹79,000 crore aimed at strengthening the operational capabilities of the Army, Navy and Air Force.

रक्षा अधिग्रहण परिषद (DAC), जिसकी अध्यक्षता रक्षा मंत्री राजनाथ सिंह ने की, ने गुरुवार को लगभग





₹79,000 करोड़ के पूंजीगत अधिग्रहण प्रस्तावों की श्रृंखला को मंजूरी दी, जिसका उद्देश्य सेना, नौसेना और वायु सेना की संचालन क्षमताओं को मजबूत करना है।

- The **Defence Ministry** said the approvals granted during a meeting at **South Block** would cover a wide spectrum of **platforms and systems designed to enhance lethality, mobility, and intelligence-gathering capabilities across the Services.**
रक्षा मंत्रालय ने कहा कि साउथ ब्लॉक में बैठक के दौरान दी गई मंजूरी में उन सभी प्लेटफॉर्म और सिस्टम को शामिल किया गया है जो सेवाओं में घातक क्षमता, गतिशीलता और खुफिया-संग्रहण क्षमताओं को बढ़ाने के लिए डिज़ाइन किए गए हैं।
- For the **Army**, the DAC accorded **Acceptance of Necessity (AoN)** for the procurement of the **Nag missile system (tracked) Mk-II (NAMIS), ground-based mobile ELINT System (GBMES), and high-mobility vehicles (HMsVs) with material handling cranes.**
सेना के लिए, DAC ने नाग मिसाइल सिस्टम (ट्रैकड) Mk-II (NAMIS), ग्राउंड-बेस्ड मोबाइल ELINT सिस्टम (GBMES), और हाई-मोबिलिटी व्हीकल्स (HMsVs) मटेरियल हैंडलिंग क्रेन के साथ की खरीद के लिए आवश्यकता की स्वीकृति (AoN) दी।
- The **NAMIS (Tracked)** will bolster the Army's ability to **destroy enemy armoured vehicles, bunkers, and other fortified positions**, while the **GBMES** will provide **round-the-clock electronic intelligence on enemy emitters.**
NAMIS (Tracked) सेना की क्षमता को बढ़ाएगा कि वह शत्रु के बख्तरबंद वाहन, बंकर और अन्य मजबूत पोजीशन को नष्ट कर सके, जबकि **GBMES** शत्रु उत्सर्जकों पर 24 घंटे इलेक्ट्रॉनिक खुफिया प्रदान करेगा।
- The induction of **HMsVs** is expected to significantly enhance **logistic support in challenging terrains.**
HMsVs की स्थापना से कठिन भू-भाग में लॉजिस्टिक सपोर्ट में महत्वपूर्ण वृद्धि होने की उम्मीद है।
- For the **Navy**, the AoN was granted for the acquisition of **landing platform docks (LPDs), 30 mm naval surface guns, advanced light weight torpedoes (ALWTs), electro-optical infrared search-and-track systems, and smart ammunition for 76 mm super rapid gun mounts.**
नौसेना के लिए, AoN लैंडिंग प्लेटफॉर्म डॉक (LPDs), 30 मिमी नौसैनिक सतही तोप, उन्नत हल्के वजन वाले टॉरपीडो (ALWTs), इलेक्ट्रो-ऑप्टिकल इन्फ्रारेड सर्च-एंड-ट्रैक सिस्टम, और 76 मिमी सुपर रैपिड गन माउंट्स के लिए स्मार्ट गोला-बारूद की खरीद के लिए दी गई।
- The **LPDs** will augment the Navy's **amphibious warfare capabilities** and enable it to undertake **joint operations with the Army and Air Force.**
LPDs नौसेना की एम्फीबियस युद्ध क्षमता को बढ़ाएंगे और इसे सेना और वायु सेना के साथ संयुक्त अभियान संचालित करने में सक्षम बनाएंगे।
- They will also enhance India's capacity to conduct **peacekeeping, humanitarian assistance, and disaster relief (HADR) missions.**
ये भारत की शांति स्थापना, मानवतावादी सहायता और आपदा राहत (HADR) मिशन संचालित करने की क्षमता को भी बढ़ाएंगे।
- The indigenously developed **ALWT** by the **DRDO's Naval Science and Technological Laboratory** is capable of engaging **conventional, nuclear, and midget submarines.**
DRDO के नेवल साइंस एंड टेक्नोलॉजिकल लैबोरेटरी द्वारा स्वदेशी रूप से विकसित **ALWT** परंपरागत, परमाणु और छोटे पनडुब्बियों से मुकाबला करने में सक्षम है।
- For the **Indian Air Force**, the AoN was accorded for the **collaborative long-range target saturation/destruction system (CLRTS/DS)** and other related systems.
भारतीय वायु सेना के लिए, AoN सहयोगी लंबी दूरी लक्षित संतृप्ति/विनाश प्रणाली (CLRTS/DS) और अन्य संबंधित प्रणालियों के लिए दी गई।
- The **CLRTS/DS** features **autonomous take-off and landing, navigation, target detection, and payload delivery capabilities**, aimed at augmenting the **IAF's long-range precision engagement capacity.**
CLRTS/DS में स्वायत्त टेक-ऑफ और लैंडिंग, नेविगेशन, लक्ष्य पहचान और पेलोड डिलीवरी क्षमताएं शामिल हैं, जिसका उद्देश्य **IAF** की लंबी दूरी की सटीक मार क्षमता को बढ़ाना है।
- The approvals reflect the government's continuing emphasis on **modernisation, self-reliance and indigenisation under the 'Aatmanirbhar Bharat' initiative**, officials said.
अधिकारियों ने कहा कि ये मंजूरीयाँ सरकार की 'आत्मनिर्भर भारत' पहल के तहत आधुनिकीकरण, आत्मनिर्भरता और स्वदेशीकरण पर निरंतर जोर को दर्शाती हैं।



90% of Gaganyaan development work done: ISRO chief

GS III: S&T

The Hindu Bureau
BENGALURU

Indian Space Research Organisation (ISRO) Chairman V. Narayanan on Thursday said that about 90% of the development work on the Gaganyaan mission had been completed.

"The Gaganyaan mission is going on very well. A lot of technological development has to take place. Number one, the rocket has to be human-rated, the life support system, the crew escape system and of course, human-centric products. I can say today that approximately 90% of the development work has been completed," Mr. Narayanan told presspersons in Bengaluru. He added that the crewed mission to launch the Indian astronauts into space would take place in 2027 and prior to that, ISRO would undertake three uncrewed missions.

"Three uncrewed missions have to be accomplished, the first uncrewed mission with the humanoid Vyomitra is expected to take flight by the end of this year. We want to accomplish the crewed mission by 2027," he said.



V. Narayanan

The Gaganyaan project envisages demonstration of human spaceflight capability by launching a crew of three members to an orbit of 400 km for a three-day mission and bringing them back safely to Earth by landing in Indian sea waters.

On the NASA-ISRO Synthetic Aperture Radar (NISAR) satellite launched on July 30, 2025, Mr. Narayanan said that the satellite was healthy and it would be declared operational in another 10-15 days.

NISAR is the first satellite to observe the earth with a dual-frequency Synthetic Aperture Radar (SAR) – NASA's L-band and ISRO's S-band – both using NASA's 12-metre unfurlable mesh reflector antenna, integrated with ISRO's modified I3K satellite bus.

demonstration of **human spaceflight capability** by launching a **crew of three members to an orbit of 400 km for a three-day mission** and bringing them back safely to **Earth** by **landing in Indian sea waters**.

गगनयान परियोजना का उद्देश्य मानव अंतरिक्ष उड़ान क्षमता का प्रदर्शन करना है, जिसके तहत तीन सदस्यों के दल को 400 किमी की कक्षा में तीन दिवसीय मिशन पर भेजा जाएगा और उन्हें भारतीय समुद्री जल में सुरक्षित लैंडिंग के माध्यम से पृथ्वी पर वापस लाया जाएगा।

- On the **NASA-ISRO Synthetic Aperture Radar (NISAR)** satellite launched on **July 30, 2025**, Mr. Narayanan said that the **satellite was healthy** and it would be **declared operational** in

90% of Gaganyaan development work done: ISRO chief

गगनयान के 90% विकास कार्य पूरे हुए: इसरो प्रमुख

- Indian Space Research Organisation (ISRO) Chairman V. Narayanan** on Thursday said that about **90% of the development work on the Gaganyaan mission** had been completed.

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) के अध्यक्ष वी. नारायणन ने गुरुवार को कहा कि **गगनयान मिशन के लगभग 90% विकास कार्य पूरे हो चुके हैं।**

- "The **Gaganyaan mission** is going on very well. A lot of technological development has to take place. Number one, the **rocket has to be human-rated**, the **life support system**, the **crew escape system** and of course, **human-centric products**. I can say today that approximately **90% of the development work has been completed**," Mr. Narayanan told presspersons in **Bengaluru**.

"गगनयान मिशन बहुत अच्छी तरह चल रहा है। कई तकनीकी विकास कार्य होने बाकी हैं। सबसे पहले, **रोकेट को मानव-सक्षम बनाना होगा**, **जीवन समर्थन प्रणाली**, **क्यू एस्केप सिस्टम** और निश्चित रूप से **मानव-केंद्रित उत्पाद** तैयार करने होंगे। मैं आज कह सकता हूँ कि **लगभग 90% विकास कार्य पूरे हो चुके हैं**," श्री नारायणन ने **बेंगलुरु** में पत्रकारों से कहा।

- He added that the **crewed mission** to launch the **Indian astronauts into space** would take place in **2027** and prior to that, **ISRO would undertake three uncrewed missions**.

उन्होंने कहा कि **भारतीय अंतरिक्ष यात्रियों को अंतरिक्ष में भेजने वाला मानवयुक्त मिशन 2027** में किया जाएगा और उससे पहले **इसरो तीन मानवरहित मिशन** संचालित करेगा।

- "**Three uncrewed missions** have to be accomplished, the **first uncrewed mission with the humanoid Vyomitra** is expected to take flight **by the end of this year**. We want to accomplish the **crewed mission by 2027**," he said.

"तीन मानवरहित मिशन पूरे किए जाने हैं, पहला मानवरहित मिशन जिसमें मानवाकृति 'व्योमित्रा' शामिल होगी, उसकी उड़ान **इस वर्ष के अंत तक** होने की संभावना है। हम **2027 तक मानवयुक्त मिशन पूरा करना चाहते हैं**," उन्होंने कहा।

- The **Gaganyaan project** envisages demonstration of **human spaceflight capability** by launching a **crew of three members to an orbit of 400 km for a three-day mission** and bringing them back safely to **Earth** by **landing in Indian sea waters**.



another 10-15 days.

30 जुलाई, 2025 को प्रक्षेपित नासा-इसरो सिंथेटिक एपर्चर रडार (NISAR) उपग्रह के बारे में श्री नारायणन ने कहा कि उपग्रह स्वस्थ है और इसे अगले 10-15 दिनों में परिचालन योग्य घोषित किया जाएगा।

- NISAR is the first satellite to observe the Earth with a dual-frequency Synthetic Aperture Radar (SAR) — NASA's L-band and ISRO's S-band — both using NASA's 12-metre unfurlable mesh reflector antenna, integrated with ISRO's modified I3K satellite bus. NISAR दोहरी आवृत्ति वाले सिंथेटिक एपर्चर रडार (SAR) — नासा के L-बैंड और इसरो के S-बैंड — से पृथ्वी का अवलोकन करने वाला पहला उपग्रह है। दोनों में नासा का 12-मीटर का खुलने योग्य जाल एंटीना उपयोग किया गया है, जिसे इसरो के संशोधित I3K सैटेलाइट बस के साथ एकीकृत किया गया है।

DCGI brings in stricter norms for tracking supply chain of high-risk solvents

GS III: S&T

Bindu Shajan Perappadan
NEW DELHI

The Drugs Controller General (India) has directed digital monitoring on the Online National Drugs Licensing System (ONDLS) for tracking the supply chain of high-risk solvents.

The order, issued earlier this week, comes following serious safety concerns after the death of over 20 children under the age of five years allegedly due to contamination of cough syrups with diethylene glycol (DEG) recently in Madhya Pradesh. DEG is a toxic colourless and odourless liquid with a sweet taste, often used as an industrial solvent.

ONDLS is a single-window digital platform in India for processing drug- and cosmetic-related applications for manufacturing



A digital monitoring system on the ONDLS portal has to be set up for monitoring the supply chain of the high-risk solvents. GETTY IMAGES

and sales licences, and various certificates.

In his letter, DCGI head Rajeev Singh Raghuvanshi noted, "It has been decided that a Digital Monitoring System on the ONDLS portal needs to be established for monitoring the supply chain as well as the quality of the high-risk solvents, including Propylene Glycol."

Dr. Raghuvanshi said

that as per the latest order, all the manufacturers of pharma grade solvents should obtain manufacturing licence through the ONDLS portal. The letter noted that in case the manufacturer already held the manufacturing licence, he must register on the ONDLS portal and submit the data through Old Licence Management under ONDLS.



DCGI brings in stricter norms for tracking supply chain of high-risk solvents DCGI ने उच्च-जोखिम वाले सॉल्वेंट्स की आपूर्ति श्रृंखला को ट्रैक करने के लिए कड़े नियम लागू किए

- The **Drugs Controller General (India)** has directed **digital monitoring on the Online National Drugs Licensing System (ONDLS)** for tracking the supply chain of high-risk solvents.

ड्रग्स कंट्रोलर जनरल (भारत) ने ऑनलाइन नेशनल ड्रग्स लाइसेंसिंग सिस्टम (ONDLS) पर उच्च-जोखिम वाले सॉल्वेंट्स की आपूर्ति श्रृंखला को ट्रैक करने के लिए डिजिटल निगरानी का आदेश दिया है।



- The order, issued earlier this week, comes following **serious safety concerns** after the death of over 20 children under the age of five years allegedly due to contamination of cough syrups with **diethylene glycol (DEG)** recently in **Madhya Pradesh**.

इस आदेश को इस सप्ताह की शुरुआत में जारी किया गया, जो गंभीर सुरक्षा चिंताओं के बाद आया, जब मध्य प्रदेश में हाल ही में पांच वर्ष से कम उम्र के 20 से अधिक बच्चों की मौत कथित तौर पर खांसी की सिरप में डाईएथिलीन ग्लाइकोल (DEG) के मिल जाने के कारण हुई।

- DEG** is a toxic colourless and odourless liquid with a **sweet taste**, often used as an industrial solvent.

DEG एक विषाक्त, रंगहीन और गंधहीन तरल है जिसका मीठा स्वाद होता है और इसे अक्सर औद्योगिक सॉल्वेंट के रूप में इस्तेमाल किया जाता है।

- ONDLS** is a single-window digital platform in India for processing drug- and cosmetic-related applications for manufacturing and sales licences, and various certificates.

ONDLS भारत में एक सिंगल-विंडो डिजिटल प्लेटफॉर्म है जो दवा और कॉस्मेटिक से संबंधित आवेदन को निर्माण और बिक्री लाइसेंस और विभिन्न प्रमाणपत्रों के लिए प्रोसेस करता है।

- In his letter, **DCGI head Rajeev Singh Raghuvanshi** noted, "It has been decided that a **Digital Monitoring System on the ONDLS portal** needs to be established for monitoring the supply chain as well as the quality of the high-risk solvents, including **Propylene Glycol**."

अपने पत्र में, DCGI प्रमुख राजीव सिंह रघुवंशी ने कहा, "यह निर्णय लिया गया है कि ONDLS पोर्टल पर एक डिजिटल मॉनिटरिंग सिस्टम स्थापित किया जाना चाहिए ताकि उच्च-जोखिम वाले सॉल्वेंट्स, जिसमें प्रोपलीन ग्लाइकोल शामिल है, की आपूर्ति श्रृंखला और गुणवत्ता की निगरानी की जा सके।"

- Dr. Raghuvanshi said that as per the latest order, all the **manufacturers of pharma grade solvents** should obtain **manufacturing licence through the ONDLS portal**.

डॉ. रघुवंशी ने कहा कि नवीनतम आदेश के अनुसार, सभी फार्मा ग्रेड सॉल्वेंट्स के निर्माता को ONDLS पोर्टल के माध्यम से निर्माण लाइसेंस लेना चाहिए।

- The letter noted that in case the manufacturer already held the **manufacturing licence**, he must **register on the ONDLS portal** and **submit the data through Old Licence Management under ONDLS**.

पत्र में उल्लेख किया गया कि यदि निर्माता के पास पहले से निर्माण लाइसेंस है, तो उसे ONDLS पोर्टल पर पंजीकरण करना होगा और पुराने लाइसेंस प्रबंधन के माध्यम से डेटा जमा करना होगा।



Life after mastectomy: navigating challenges, heralding new beginnings

India has taken giant strides in creating breast cancer awareness and promoting early detection, and survival rates are improving significantly; but true healing includes emotional rehabilitation, body acceptance, and a compassionate support system that acknowledges the full weight of what women go through after a mastectomy

SS III S&T

Shradha Modi

When I meet a woman diagnosed with breast cancer, the first thing I notice is not fear, but determination. Beneath the disbelief, fear, and anger that follow later, lies quiet resilience. That strength becomes evident when we start discussing treatment options, particularly a mastectomy – the surgical removal of one or both breasts, either to treat or prevent breast cancer.

For most women, a mastectomy is more than just a procedure. It represents survival, and also a profound personal loss. The breast, associated with femininity, motherhood, and identity, holds an emotional significance that medicine cannot measure. When a woman agrees to part with it to save her life, she is making one of the bravest decisions imaginable.

The emotional landscape

The journey after a mastectomy is complex – it involves the mind and the body. While the physical scar is visible, the emotional one often is not.

Women may withdraw from daily activities, avoid social interactions, or decline invitations to family gatherings. They may fear judgement, feel self-conscious, or worry about how others – children, spouses, friends, colleagues – perceive their changed bodies. This self-consciousness can amplify feelings of isolation and anxiety.

One of the most profound challenges is intimacy. Cancer itself can disrupt relationships; but breast cancer and mastectomy often affect intimacy on an entirely different level. Women may feel disconnected from their partner or fearful of sexual rejection, and partners may struggle to understand the emotional and physical adjustments required.

Counselling, therefore, must extend beyond the patient. Involving spouses and close family members in therapy or support sessions is crucial. When couples communicate openly, with guidance from professionals, intimacy can gradually be rebuilt, and partners can become active allies in the healing process. Support groups for families also help loved ones understand the realities of recovery, fostering a compassionate environment at home.

The physical recovery

Physical recovery after a mastectomy requires patience. Some women experience stiffness, numbness, or swelling in the arm due to lymphoedema. Simple physiotherapy routines, arm elevation, and gentle stretching exercises can help restore strength and flexibility. Lifestyle, too, becomes part of the healing process. A balanced diet,



Health campaign: CanWalk, a breast cancer awareness walkathon organised by the Thrissur Obstetrics and Gynaecology Society in Kerala. K.K.NAJEEB

A balanced diet, moderate exercise, adequate sleep, and regular follow-ups with the oncology team are essential not only for recovery but for preventing recurrence

moderate exercise, adequate sleep, and regular follow-ups with the oncology team are essential not only for recovery but for preventing recurrence.

This is also a time to reflect on long-term wellness – to eat consciously, manage stress, and cultivate habits that nurture both physical and emotional health.

Practical tips

Reconnecting socially: Start small: Attend close family gatherings before larger social events. Bring a trusted friend or family member for support in public spaces. Give yourself permission to decline invitations until you feel ready – there's no timeline for comfort.

Navigating intimacy: Open communication with your partner is key. Share fears, needs, and feelings. Consider couple counselling to rebuild emotional and physical closeness. Take small steps to re-ignite intimacy with touch, conversation, or non-sexual affection before moving to sexual activity.

Family involvement: Educate family members about the physical and emotional aspects of recovery. Encourage loved ones to attend counselling or support group sessions with you. Empathy and patience from family members significantly boost emotional recovery.

Self-compassion and body acceptance: Practice self-care routines with gentle exercises, skincare, and mindful activities. Mirror exercises or journaling can help rebuild confidence. Reframe your "normal" as life after mastectomy as a new chapter.

Professional support: Physiotherapy, nutrition counselling, and mental health support are integral parts of recovery. Survivor networks can provide inspiration, guidance, and a sense of belonging.

Redefining normal

Advances in reconstructive surgery have transformed what life after a mastectomy can look like. Women can now choose from several options, from silicone implants to autologous reconstruction using their own tissue, allowing for a more natural look and feel. These procedures can be performed immediately during the mastectomy or at a later stage, depending on the treatment plan and patient preference.

But reconstruction isn't the only path

to healing. Many women choose to "go flat," opting not to reconstruct; and that is equally empowering. This choice, when made freely and without societal pressure, reflects a powerful acceptance of one's new body and identity.

A mastectomy creates a new normal and I have seen many patients rediscover themselves in extraordinary ways – through art, writing, community service, or advocacy. Some become mentors for newly-diagnosed patients; others focus on simply living more intentionally.

One of my patients, a 38-year-old mother of two, once told me: "Cancer took my breast, but it gave me back my voice." That sentence has stayed with me because it captures what many survivors come to realise – that survival is not the end of the story, but the beginning of a different, deeper one.

Awareness, diagnosis, support

A mastectomy may change how a body looks, but it rarely diminishes the courage, grace, or spirit of the woman who lives through it.

Life after mastectomy is not one of loss, but of resilience – of women who emerge stronger, wiser, and ready to live again, on their own new terms.

(Dr. Shradha Modi is associate consultant, breast oncology & oncoplastic surgery, Narayana Health City, Bengaluru. shradha.modi.dr@narayanahealth.org)

THE GIST

The journey after a mastectomy is complex – it involves the mind and the body. While the physical scar is visible, the emotional one often is not

One of the most profound challenges is intimacy. Counselling, therefore, must extend beyond the patient. Involving spouses and close family members in therapy or support sessions is crucial

Advances in reconstructive surgery have transformed what life after a mastectomy can look like. Women can now choose from several options, from silicone implants to autologous reconstruction using their own tissue, allowing for a more natural look and feel

Life after mastectomy: navigating challenges, heralding new beginnings
मास्टेक्टॉमी के बाद का जीवन: चुनौतियों का सामना और नई शुरुआत की ओर



The Emotional and Physical Journey After a Mastectomy मास्टेक्टॉमी के बाद का भावनात्मक और शारीरिक सफर



- When I meet a woman diagnosed with **breast cancer**, the first thing I notice is not fear, but **determination**. Beneath the disbelief, fear, and anger that follow later, lies quiet **resilience**.
जब मैं किसी स्तन कैंसर (breast cancer) से पीड़ित महिला से मिलती हूँ, तो मैं सबसे पहले डर नहीं बल्कि दृढ़ निश्चय (determination) देखती हूँ। अविश्वास, भय और क्रोध के नीचे एक शांत सहनशीलता (resilience) छिपी होती है।
- That strength becomes evident when we start discussing **treatment options**, particularly a **mastectomy — the surgical removal of one or both breasts, either to treat or prevent breast cancer**.
यह शक्ति (strength) तब स्पष्ट होती है जब हम उपचार विकल्पों (treatment options) पर चर्चा करते हैं, विशेषकर मास्टेक्टॉमी (mastectomy) — जो कि एक या दोनों स्तनों को सर्जरी द्वारा हटाने (surgical removal) की प्रक्रिया है।
- For most women, a **mastectomy** is more than just a procedure. It represents **survival**, and also a profound **personal loss**.
अधिकांश महिलाओं के लिए मास्टेक्टॉमी सिर्फ एक प्रक्रिया नहीं है। यह जीवित रहने (survival) और एक गहरी व्यक्तिगत हानि (personal loss) का प्रतीक है।
- The **breast**, associated with **femininity**, **motherhood**, and **identity**, holds an **emotional significance** that medicine cannot measure.
स्तन (breast), जो नारीत्व (femininity), मातृत्व (motherhood) और पहचान (identity) से जुड़ा है, उसका भावनात्मक महत्व (emotional significance) ऐसा है जिसे चिकित्सा नहीं माप सकती।
- When a woman agrees to part with it to **save her life**, she is making one of the **bravest decisions imaginable**.
जब कोई महिला अपनी जान बचाने (save her life) के लिए इससे अलग होने का निर्णय लेती है, तो वह एक अकल्पनीय साहसिक निर्णय (bravest decision) ले रही होती है।

The Emotional Landscape भावनात्मक परिदृश्य

- The journey after a **mastectomy** is **complex** — it involves both **mind** and **body**.
मास्टेक्टॉमी के बाद की यात्रा जटिल (complex) होती है — इसमें मन (mind) और शरीर (body) दोनों शामिल होते हैं।
- While the **physical scar** is visible, the **emotional one** often is not.
जहां शारीरिक घाव (physical scar) दिखता है, वहीं भावनात्मक घाव (emotional scar) अक्सर दिखाई नहीं देता।
- Women may **withdraw** from daily activities, **avoid social interactions**, or **decline invitations to family gatherings**.
महिलाएं दैनिक गतिविधियों से दूर (withdraw) हो सकती हैं, सामाजिक संपर्कों (social interactions) से बच सकती हैं, या परिवारिक आयोजनों में जाने से इंकार कर सकती हैं।
- They may **fear judgement**, **feel self-conscious**, or **worry about how others — children, spouses, friends, colleagues — perceive their changed bodies**.
वे निर्णय के भय (fear of judgement), आत्मचेतना (self-consciousness) या दूसरों — बच्चों, पति, मित्रों, सहकर्मियों — द्वारा अपने बदले हुए शरीर को कैसे देखा जाएगा, इस चिंता में रहती हैं।
- This **self-consciousness** can amplify **feelings of isolation** and **anxiety**.
यह आत्मचेतना (self-consciousness) अलगाव (isolation) और चिंता (anxiety) की भावनाओं को बढ़ा सकती है।
- One of the most profound challenges is **intimacy**.
सबसे गहरी चुनौतियों में से एक है निकटता (intimacy)।
- Cancer** itself can disrupt **relationships**, but **breast cancer** and **mastectomy** often affect intimacy on a different level.
कैंसर (cancer) अपने आप में संबंधों (relationships) को बाधित कर सकता है, लेकिन स्तन कैंसर (breast cancer) और मास्टेक्टॉमी (mastectomy) इस पर एक अलग स्तर पर प्रभाव डालते हैं।



- Women may feel **disconnected** from their partners or **fearful of rejection**, and partners may struggle to **understand** the emotional and physical changes.
महिलाएं अपने साथियों से **अलगाव (disconnected)** महसूस कर सकती हैं या **अस्वीकार किए जाने का डर (fear of rejection)** रख सकती हैं, और साथी इन **भावनात्मक और शारीरिक परिवर्तनों (emotional and physical changes)** को **समझने (understand)** में संघर्ष कर सकते हैं।
- **Counselling** must extend beyond the patient — including **spouses and close family members** in therapy is crucial.
काउंसलिंग (Counselling) केवल मरीज तक सीमित नहीं रहनी चाहिए — इसमें **पति (spouses)** और **करीबी परिवार के सदस्य (close family members)** को शामिल करना आवश्यक है।
- **Open communication** with professional guidance can help **rebuild intimacy**, and **partners** can become **active allies** in the healing process.
पेशेवर मार्गदर्शन (professional guidance) के साथ **खुला संवाद (open communication)** निकटता (**intimacy**) को पुनर्स्थापित करने में मदद करता है, और **साथी (partners)** उपचार प्रक्रिया में **सक्रिय सहयोगी (active allies)** बन सकते हैं।
- **Support groups** for families also help in **understanding recovery** and **fostering compassion** at home.
परिवारों के लिए **सहायता समूह (support groups)** भी **स्वस्थ होने की प्रक्रिया (recovery)** को समझने और घर में **सहानुभूति (compassion)** बढ़ाने में मदद करते हैं।

The Physical Recovery शारीरिक पुनर्प्राप्ति

- **Physical recovery** after a mastectomy requires **patience**.
मास्टेक्टॉमी के बाद शारीरिक पुनर्प्राप्ति (**physical recovery**) में **धैर्य (patience)** की आवश्यकता होती है।
- Some women experience **stiffness, numbness, or swelling** in the arm due to **lymphoedema**.
कुछ महिलाओं को **लिम्फोएडेमा (lymphoedema)** के कारण हाथ में **कठोरता (stiffness)**, **सुन्नपन (numbness)** या **सूजन (swelling)** का अनुभव होता है।
- **Physiotherapy routines, arm elevation, and gentle stretching exercises** help restore **strength and flexibility**.
फिजियोथेरेपी (Physiotherapy), **हाथ ऊपर उठाना (arm elevation)** और **हल्के स्ट्रेचिंग व्यायाम (gentle stretching exercises)** शक्ति (**strength**) और **लचीलापन (flexibility)** को पुनर्स्थापित करने में मदद करते हैं।
- **Lifestyle plays a vital role in recovery — a balanced diet, moderate exercise, adequate sleep, and regular follow-ups are essential**.
जीवनशैली (Lifestyle) पुनर्प्राप्ति में महत्वपूर्ण भूमिका निभाती है — **संतुलित आहार (balanced diet)**, **मध्यम व्यायाम (moderate exercise)**, **पर्याप्त नींद (adequate sleep)** और **नियमित जांच (regular follow-ups)** आवश्यक हैं।
- These are not only for **healing** but also for **preventing recurrence**.
यह केवल **उपचार (healing)** के लिए नहीं बल्कि **पुनरावृत्ति रोकने (preventing recurrence)** के लिए भी हैं।
- This is also a time to reflect on **long-term wellness** — to **eat consciously, manage stress, and nurture emotional and physical health**.
यह **दीर्घकालिक स्वास्थ्य (long-term wellness)** पर विचार करने का समय भी है — **सजग भोजन (eat consciously)**, **तनाव प्रबंधन (manage stress)** और **भावनात्मक एवं शारीरिक स्वास्थ्य (emotional and physical health)** को पोषित करने के लिए।

Practical tips व्यावहारिक सुझाव

- **Reconnecting socially:** Start small: Attend **close family gatherings** before larger social events. Bring a **trusted friend or family member** for support in public spaces. Give yourself permission to **decline invitations** until you feel ready — there's **no timeline for comfort**.



सामाजिक रूप से दोबारा जुड़ना: शुरुआत छोटे स्तर से करें — बड़े सामाजिक आयोजनों से पहले करीबी पारिवारिक कार्यक्रमों में शामिल हों। सार्वजनिक स्थानों पर समर्थन के लिए विश्वसनीय मित्र या परिवार के सदस्य को साथ लाएँ। जब तक तैयार न हों, आमंत्रण ठुकराने की अनुमति खुद को दें — आराम महसूस करने के लिए कोई समय सीमा नहीं होती।

- **Navigating intimacy: Open communication** with your partner is key. Share fears, needs, and feelings. Consider **couple counselling** to rebuild **emotional and physical closeness**. Take **small steps** to re-ignite intimacy with **touch, conversation, or non-sexual affection** before moving to sexual activity.

निकटता को संभालना: अपने साथी के साथ खुली बातचीत बहुत महत्वपूर्ण है। डर, ज़रूरतें और भावनाएँ साझा करें। युगल परामर्श पर विचार करें ताकि **भावनात्मक और शारीरिक निकटता** को दोबारा बनाया जा सके। छोटे कदमों से शुरुआत करें — जैसे स्पर्श, बातचीत, या गैर-यौन स्नेह — फिर आगे बढ़ें।

- **Family involvement: Educate family members** about the **physical and emotional aspects of recovery**. Encourage loved ones to **attend counselling or support group sessions** with you. **Empathy and patience** from family members **significantly boost emotional recovery**.
परिवार की भागीदारी: परिवार के सदस्यों को **शारीरिक और भावनात्मक पुनर्प्राप्ति के पहलुओं** के बारे में जागरूक करें। अपने प्रियजनों को **काउंसलिंग या सपोर्ट ग्रुप सत्रों में शामिल होने** के लिए प्रेरित करें। परिवार के सदस्यों की **सहानुभूति और धैर्य भावनात्मक पुनर्प्राप्ति को काफी बढ़ावा देते हैं**।

- **Self-compassion and body acceptance: Practice self-care routines with gentle exercises, skincare, and mindful activities. Mirror exercises or journaling can help rebuild confidence. Reframe your "normal" as life after mastectomy — a new chapter.**

आत्म-दया और शरीर की स्वीकृति: हल्के व्यायाम, त्वचा की देखभाल और मानसिक रूप से सजग गतिविधियों के साथ **स्व-देखभाल दिनचर्या** अपनाएँ। दर्पण अभ्यास या जर्नलिंग **आत्मविश्वास पुनर्निर्माण** में मदद कर सकते हैं। अपने **"सामान्य"** को **मास्टेक्टॉमी के बाद का जीवन मानें** — एक नया अध्याय।

- **Professional support: Physiotherapy, nutrition counselling, and mental health support are integral parts of recovery. Survivor networks can provide inspiration, guidance, and a sense of belonging.**

व्यावसायिक समर्थन: फिजियोथेरेपी, पोषण परामर्श और मानसिक स्वास्थ्य सहायता **पुनर्प्राप्ति के आवश्यक हिस्से हैं**। सर्वाइवर नेटवर्क्स प्रेरणा, मार्गदर्शन, और अपनत्व की भावना प्रदान कर सकते हैं।

Redefining normal

'सामान्य' को पुनर्परिभाषित करना

- Advances in **reconstructive surgery** have transformed what **life after a mastectomy** can look like. Women can now choose from **silicone implants** to **autologous reconstruction** using their own tissue, allowing for a **more natural look and feel**.

पुनर्निर्माण सर्जरी में प्रगति ने यह बदल दिया है कि **मास्टेक्टॉमी के बाद का जीवन** कैसा दिख सकता है। महिलाएँ अब **सिलिकॉन इम्प्लांट्स** या अपने **ऊतकों से पुनर्निर्माण (ऑटोलॉगस रिंक्स्ट्रक्शन)** में से चुन सकती हैं, जिससे **अधिक प्राकृतिक रूप और अनुभव प्राप्त होता है**।

- These procedures can be performed **immediately during the mastectomy or later**, depending on the **treatment plan and patient preference**.

ये प्रक्रियाएँ **मास्टेक्टॉमी के दौरान तुरंत या बाद में** की जा सकती हैं, यह **उपचार योजना और रोगी की पसंद पर निर्भर करता है**।

- But **reconstruction isn't the only path to healing**. Many women choose to **go flat**, opting not to reconstruct — and that is **equally empowering**.

लेकिन **पुनर्निर्माण ही उपचार का एकमात्र मार्ग नहीं है**। कई महिलाएँ **"फ्लैट रहना"** चुनती हैं, यानी पुनर्निर्माण नहीं कराती — और यह निर्णय भी **उतना ही सशक्तिकारी होता है**।

- This choice, when made **freely and without societal pressure**, reflects a **powerful acceptance** of one's **new body and identity**.

यह निर्णय, जब **स्वतंत्र रूप से और सामाजिक दबाव के बिना** लिया जाता है, तो यह अपने **नए शरीर और पहचान की सशक्त स्वीकृति** को दर्शाता है।

- A mastectomy creates a **new normal**, and many patients **rediscover themselves** through **art, writing, community service, or advocacy**.

मास्टेक्टॉमी एक नया सामान्य बनाती है, और कई मरीज **कला, लेखन, सामुदायिक सेवा या वकालत** के माध्यम से **खुद को पुनः खोजते हैं**।



- Some become **mentors for newly diagnosed patients**, others focus on **living more intentionally**.
कुछ नए मरीजों के लिए मार्गदर्शक (मेंटर्स) बनते हैं, जबकि अन्य अधिक उद्देश्यपूर्ण जीवन जीने पर ध्यान केंद्रित करते हैं।
- A 38-year-old **mother of two** once said, “**Cancer took my breast, but it gave me back my voice.**”
38 वर्षीय दो बच्चों की माँ ने कहा था, “कैंसर ने मेरा स्तन छीन लिया, लेकिन मेरी आवाज़ लौटा दी।”
- This captures what many survivors realize — that **survival is not the end, but the beginning of a deeper story**.
यह उस सच्चाई को दर्शाता है जिसे कई सर्वाइवर समझते हैं — कि जीवित रहना अंत नहीं, बल्कि एक गहरी कहानी की शुरुआत है।

Awareness, diagnosis, support जागरूकता, निदान, समर्थन

- A **mastectomy** may change how a **body looks**, but it rarely diminishes the **courage, grace, or spirit** of the woman.
मास्टेक्टॉमी यह बदल सकती है कि शरीर कैसा दिखता है, लेकिन यह शायद ही कभी महिला के साहस, गरिमा या आत्मा को कम करती है।
- Life after mastectomy is not one of **loss**, but of **resilience** — of women who **emerge stronger, wiser, and ready to live again**.

मास्टेक्टॉमी के बाद का जीवन हानि का नहीं, बल्कि लचीलापन और शक्ति का है — उन महिलाओं का, जो और अधिक मजबूत, बुद्धिमान और फिर से जीवन जीने के लिए तैयार होकर उभरती हैं।

Synthetic media

The requirement of labelling

AI-generated imagery is a good start

Arificial Intelligence (AI)-generated deep-fakes, or synthetically generated images and videos, have been proliferating on social media ever since generative AI made photorealistic content as easy as typing a description of a given scene. As this technology developed rapidly over 2024, concerns were raised over electoral integrity and disinformation amplified with the aid of such AI-generated content. While those concerns did not reach the peaks of the feared outcomes, AI “slop” has become pervasive, from low-budget advertisements to high-budget political caricatures. In this context, the Union government’s move to propose mandatory labelling of AI-generated content with an amendment to the IT Rules, 2021, advances the global conversation somewhat in navigating this phenomenon. It is unclear how big the problem of being unable to identify AI slop is for Internet users in India — also the world’s second largest AI user base. Two key factors tilt the scales in favour of acting: as with pre-AI disinformation and misinformation, lies and misleading content may at any time explode into virality, granting them a disproportionate place in the democratic setup; and the technology to create photorealistic content that deceives many people is improving every week. Public personalities have frequently complained, sometimes in court, of the usurpation of their likenesses in the service of unscrupulous projects.

Unlike mandatory smoking warnings at the cinema and on OTT streaming services, an intervention that had little industry buy-in before being imposed on entertainment producers and consumers alike with nothing to reliably show for impact, labelling has been offered up by large social media and AI firms from the very beginning of synthetic content’s increasing accessibility. Meta, Inc. decided last year to label AI-generated content on Facebook, while the Coalition for Content Provenance and Authenticity (C2PA) has brought industry players together for working on “digital provenance” issues, borrowing a concept from the art appraisal world. Subordinate legislation may not have been the ideal instrument to effect this change — the IT Rules already regulate streaming services, social media content removals and the now-prohibited real money gaming industry, all without being tested in Parliament. At some point, these rules need to be explicitly considered by people’s representatives. Technology policymakers have mused throughout the Internet-era that regulation lags behind innovation. The government must be willing to dynamically follow up this proposal with agile action both in terms of relaxing rules that have outlived their utility, and introducing new ones according to requirement.

Synthetic Media कृत्रिम मीडिया

• **Artificial Intelligence (AI)-generated deepfakes, or synthetically generated images and videos**, have been proliferating on **social media** ever since **generative AI** made **photorealistic content** creation as easy as typing a description of a given scene.

कृत्रिम बुद्धिमत्ता (AI) द्वारा उत्पन्न **डीपफेक्स** या **कृत्रिम रूप से बनाए गए चित्र और वीडियो** सोशल मीडिया पर तेजी से बढ़ रहे हैं, क्योंकि **जनरेटिव AI** ने **फोटो-यथार्थ सामग्री** बनाना किसी दृश्य का विवरण टाइप करने जितना आसान बना दिया है।

• As this technology developed rapidly over **2024**, concerns were raised over **electoral integrity** and **disinformation** amplified with the aid of such AI-generated content.

जैसे-जैसे यह तकनीक **2024** में तेजी से विकसित हुई, **निर्वाचन की अखंडता** और **भ्रामक सूचनाओं (disinformation)** के प्रसार को लेकर चिंताएँ बढ़ीं।

• While those concerns did not reach the peaks of the feared outcomes, **AI “slop”** has become pervasive — from **low-budget advertisements** to **high-budget political caricatures**.

यद्यपि ये चिंताएँ उतनी गंभीर नहीं रहीं जितनी आशंका थी, लेकिन **AI “slop”** अब व्यापक हो गया है — **कम बजट के विज्ञापनों** से लेकर **उच्च बजट के राजनीतिक कार्टूनों** तक।

• In this context, the **Union government’s move to propose mandatory labelling of AI-generated content with an amendment to the IT Rules, 2021**, advances the global conversation somewhat in navigating this phenomenon.

इस संदर्भ में, **केंद्र सरकार द्वारा IT नियम, 2021** में संशोधन के माध्यम से **AI-जनित सामग्री की अनिवार्य लेबलिंग** का प्रस्ताव इस वैश्विक मुद्दे से निपटने की दिशा में एक कदम आगे है।

• It is unclear how big the problem of being unable to identify **AI slop** is for **Internet users in India** — also the **world’s second largest AI user base**.



यह स्पष्ट नहीं है कि भारत के इंटरनेट उपयोगकर्ताओं (जो दुनिया का दूसरा सबसे बड़ा AI उपयोगकर्ता समूह है) के लिए AI slop की पहचान न कर पाना कितना गंभीर मुद्दा है।

- Two key factors tilt the scales in favour of acting: as with **pre-AI disinformation**, lies and misleading content may at any time **explode into virality**, granting them a **disproportionate influence in democracy**; and the **technology to create photorealistic content** is improving every week.

कार्रवाई के पक्ष में दो प्रमुख कारण हैं: जैसे AI से पहले के भ्रामक प्रचार (disinformation) में होता था, वैसे ही झूठ और गलत सामग्री कभी भी वायरल हो सकती है, जिससे उन्हें लोकतंत्र में असंतुलित प्रभाव मिल जाता है; और फोटो-यथार्थ सामग्री बनाने की तकनीक हर हफ्ते बेहतर हो रही है।

- **Public personalities** have frequently complained, sometimes in **court**, of the **usurpation of their likenesses** in the service of **unscrupulous projects**.

लोकप्रिय व्यक्तित्वों ने कई बार, कभी-कभी अदालत में, अपनी छवि का दुरुपयोग होने की शिकायत की है, जो अनैतिक परियोजनाओं में किया गया था।

- Unlike **mandatory smoking warnings at the cinema and on OTT streaming services**, **labelling has been offered by large social media and AI firms from the very beginning of synthetic content's increasing accessibility**.

सिनेमा और OTT प्लेटफॉर्म पर धूम्रपान चेतावनियों के विपरीत, AI और सोशल मीडिया कंपनियों ने कृत्रिम सामग्री की बढ़ती उपलब्धता के साथ ही लेबलिंग प्रणाली को अपनाया है।

- **Meta, Inc.** decided last year to **label AI-generated content on Facebook**, while the **Coalition for Content Provenance and Authenticity (C2PA)** brought industry players together for working on **digital provenance** issues, borrowing a concept from the **art appraisal world**.

Meta, Inc. ने पिछले वर्ष Facebook पर AI-जनित सामग्री को लेबल करने का निर्णय लिया, जबकि C2PA (Coalition for Content Provenance and Authenticity) ने डिजिटल मूल (digital provenance) से संबंधित मुद्दों पर काम करने के लिए उद्योग जगत को एक साथ लाया — यह अवधारणा कला मूल्यांकन क्षेत्र से ली गई थी।

- **Subordinate legislation** may not have been the ideal instrument to effect this change — the **IT Rules** already regulate **streaming services, social media content removals**, and the **now-prohibited real money gaming industry**, all **without being tested in Parliament**.

उप-विधायी नियमावली (Subordinate legislation) इस बदलाव को लागू करने का आदर्श माध्यम नहीं हो सकती — क्योंकि IT नियम पहले से ही स्ट्रीमिंग सेवाओं, सोशल मीडिया सामग्री हटाने, और अब प्रतिबंधित वास्तविक धन गेमिंग उद्योग को नियंत्रित करते हैं, जबकि इन्हें संसद में परीक्षण के बिना लागू किया गया है।

- At some point, these rules need to be **explicitly considered by people's representatives**. किसी बिंदु पर, इन नियमों पर **जन प्रतिनिधियों द्वारा स्पष्ट रूप से विचार** किया जाना आवश्यक है।

- **Technology policymakers** have often observed that **regulation lags behind innovation in the Internet era**.

प्रौद्योगिकी नीति-निर्माताओं ने अक्सर देखा है कि इंटरनेट युग में **नियमन (regulation)** हमेशा **नवाचार (innovation)** से पीछे रहता है।

- The government must be willing to **dynamically follow up this proposal with agile action**, both in terms of **relaxing outdated rules** and **introducing new ones** as per evolving requirements.

सरकार को इस प्रस्ताव पर **गतिशील रूप से आगे बढ़ना** होगा, जिसमें **पुराने हो चुके नियमों को शिथिल करना और नई आवश्यकताओं के अनुरूप नए नियम बनाना** शामिल है।



GS III: Disaster Management

Good job

Factories must provide facilities for women employed in hazardous jobs

Small, incremental steps are what set a flywheel in motion. As far as labour laws go, the Tamil Nadu government's proposal to allow women to be employed in about 20 operations listed as 'dangerous', and from which they were prohibited from being employed in so far, is progressive. The government has proposed amendments to the Tamil Nadu Factories Rules, 1950, to allow women to take up even jobs titled hazardous or dangerous, when these Rules come into practice; only pregnant women and young persons will be barred from these jobs. Earlier, the government had amended the Rules to allow women to be deployed on the night shift in factories, changing the historic practice of keeping them out. In this recent amendment, which was hosted in the public realm for feedback in September, factories are also required to get the woman's consent in writing for the night shift. These are changes that have come literally, rule by rule, but in effect, the government has shrugged off its patriarchal stance here, freeing up women from the perception that they are vulnerable and weak and will have to be protected by the State. The operations which are set to be opened for women include electrolytic process, glass manufacture, manufacture and treatment of lead, generation of gas and petroleum, blasting, liming and tanning of raw hides and skins, graphite powdering, manufacture of dichromates and carcinogenic dye intermediates, fireworks and match factories, manufacture of manganese, dangerous pesticides, use of benzene, and operations involving high noise and vibration levels.

Removing legal barriers is the first step toward implementing progressive measures that will facilitate more equitable workplaces. However crucial this first step is in rectifying age-old patriarchy-reinforced assigned gender roles in society and industry, it is not enough. This should be followed up by provision of adequate amenities and facilities for women, including separate toilets, changing rooms, and closed areas for conducting medical checks which are mandated for such industries, besides drop home facilities in places that have hitherto had no women workers at all. This will clearly require some investment, close involvement of the management, and at least initially, active monitoring by State labour authorities. The government must also take care to ensure that women who are in circumstances that might not enable their participation in these jobs are not forced into them, or penalised for not opting for these tasks. Without this being set in place, any progressive measure to dismantle the barriers that keep Indian society from being a more equitable job market will turn out to be a damp squib.

जिन कार्यों को अब महिलाओं के लिए खोला गया है उनमें इलेक्ट्रोलाइटिक प्रक्रिया, कांच निर्माण, सीसा उपचार, गैस और पेट्रोलियम उत्पादन, ब्लास्टिंग, चमड़ा टैनिंग, ग्रेफाइट पाउडरिंग, डाई निर्माण, पटाखा

Good job

अच्छा काम

- Factories must provide facilities for women employed in hazardous jobs

खतरनाक नौकरियों में कार्यरत महिलाओं के लिए कारखानों को सुविधाएँ प्रदान करनी होंगी

Women in Dangerous Operations — Tamil Nadu's Progressive Labour Reform

खतरनाक कार्यों में महिलाएँ — तमिलनाडु का प्रगतिशील श्रम सुधार

- Small, incremental steps are what set a flywheel in motion. As far as labour laws go, the Tamil Nadu government's proposal to allow women to be employed in about 20 operations listed as 'dangerous', and from which they were prohibited so far, is progressive.

छोटे-छोटे क्रमिक कदम ही एक पहिया को गति देते हैं। जहाँ तक श्रम कानूनों की बात है, तमिलनाडु सरकार का प्रस्ताव, जिसमें महिलाओं को लगभग 20 'खतरनाक' सूचीबद्ध कार्यों में काम करने की अनुमति दी गई है, जिसे अब तक उन्हें रोका गया था, एक प्रगतिशील कदम है।

- The government has proposed amendments to the Tamil Nadu Factories Rules, 1950, to allow women to take up even jobs titled hazardous or dangerous, when these Rules come into practice; only pregnant women and young persons will be barred.

सरकार ने तमिलनाडु फैक्ट्री नियम, 1950 में संशोधन का प्रस्ताव रखा है, ताकि महिलाएँ खतरनाक कार्यों में भी कार्य कर सकें; केवल गर्भवती महिलाएँ और किशोर इससे वंचित रहेंगे।

- Earlier, the government had amended the Rules to allow women to work night shifts in factories, changing the historic practice of keeping them out.

पहले, सरकार ने नियमों में संशोधन कर महिलाओं को रात की पाली (night shift) में काम करने की अनुमति दी थी, जिससे उन्हें बाहर रखने की पुरानी परंपरा खत्म हुई।

- In the recent amendment, factories are required to get the woman's consent in writing for night shifts. These changes came rule by rule, but effectively the government has moved away from patriarchal attitudes, freeing women from the perception of being vulnerable.

हाल के संशोधन में, कारखानों को महिलाओं से लिखित सहमति प्राप्त करनी होगी। ये बदलाव नियम दर नियम आए हैं, लेकिन वास्तव में सरकार ने पितृसत्तात्मक दृष्टिकोण से दूरी बनाई है और महिलाओं को कमज़ोर समझे जाने की मानसिकता से मुक्त किया है।

- The operations now open to women include electrolytic processes, glass manufacture, lead treatment, gas and petroleum generation, blasting, tanning, graphite powdering, dichromates and carcinogenic dyes manufacture, fireworks and match factories, manganese production, pesticides, benzene use, and high noise/vibration tasks.



और माचिस फैक्ट्री, मैंगनीज़ उत्पादन, कीटनाशक कार्य, बेंज़ीन का उपयोग, और उच्च शोर/कंपन वाले कार्य शामिल हैं।

Removing Legal Barriers and Ensuring Equity कानूनी बाधाएँ हटाना और समानता सुनिश्चित करना

- **Removing legal barriers is the first step toward creating equitable workplaces.** However, this must be followed by **adequate amenities** such as **separate toilets, changing rooms, and medical check areas**, especially in industries that previously had **no women workers**. कानूनी बाधाओं को हटाना समान कार्यस्थल बनाने की पहली कड़ी है। लेकिन इसके बाद अलग शौचालय, कपड़े बदलने के कमरे, और चिकित्सा जांच क्षेत्र जैसी पर्याप्त सुविधाएँ सुनिश्चित करनी होंगी, विशेष रूप से उन उद्योगों में जहाँ पहले महिलाएँ कार्यरत नहीं थीं।
- **There should also be drop-home facilities for women working late hours.** This will require **investment, management involvement, and monitoring by State labour authorities**. देर रात तक कार्यरत महिलाओं के लिए घर छोड़ने की सुविधा (drop-home facility) भी होनी चाहिए। इसके लिए निवेश, प्रबंधन की भागीदारी, और राज्य श्रम अधिकारियों द्वारा निगरानी आवश्यक होगी।
- The government must ensure that **no woman is forced into such jobs or penalised for opting out** due to personal circumstances. सरकार को यह सुनिश्चित करना होगा कि किसी महिला को इन कार्यों के लिए मजबूर न किया जाए या इनकार करने पर दंडित न किया जाए।
- Without proper support, any **progressive measure** aimed at breaking the **barriers of gender inequality** in India's job market could **fail to achieve its purpose**. यदि उचित सहयोग न मिला तो लैंगिक असमानता की बाधाओं को तोड़ने के लिए उठाए गए प्रगतिशील कदम भी अपने उद्देश्य में असफल हो सकते हैं।

Should India take global leadership on climate change?

GS III: Environment
Interview
PARLEY



Hisham Mundol
Chief Adviser,
India,
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Ulka Kelkar
Executive
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Director -
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A head of Conference of the Parties (COP)30 in November in Belém, Brazil, global headwinds have left many developed countries in the West increasingly reluctant to take on the mantle of climate leadership. India, like other countries, is expected to update climate commitments and present an adaptation plan. Should India take global leadership on climate change? Hisham Mundol and Ulka Kelkar discuss the question in a conversation moderated by Jacob Koshy. Edited excerpts:

This seems to be a very unusual lead-up to a COP. The U.S. has withdrawn from the Paris Agreement, the European Union is reluctant to assume leadership on climate, and Brazil, which is hosting COP30, appears only to be stressing on implementation. Are we heading towards a washout?

Hisham Mundol: I am by nature a 'glass half full' person. Before most COPs, there is often a lack of direction. We live in particularly turbulent geopolitical times and I imagine we may not get sweeping new outcomes like we did in 2015, with the Paris Agreement. Despite the U.S.'s exit from the Paris Agreement, I see the emergence of an 'Axis of Good' – a number of countries working with one another consistently on climate change. We're seeing Europeans and Indians working on climate technology. I wouldn't be surprised if Brazil and India work on areas where there is common ground, such as forests. India has never been the most glamorous player on international climate negotiations, but it has something far more valuable than glamour, and that is a steady hand. Climate change is not a politically divisive issue in India. We have made commitments and are working towards them. Finally, an 'implementation COP' may not sound ambitious but it we manage to implement the promises already made, that would be real progress.

Ulka Kelkar: First, I expect that this COP will emphasise the need for finance for climate adaptation and not just for (mitigation) actions where there is already private sector revenue. So, not just (finance for) solar power or electric vehicles, but also for adaptation to potential climate impacts in sectors such as agriculture and water resources.

Second, the emphasis on implementation means that developing countries like ours need to create a pipeline of projects that we can invest in – not just sectors but specific projects.

And third, this big number of \$1.3 trillion (an



A man rides a motorcycle along the solar panels in Gujarat Solar Park in Patan district, Gujarat. REUTERS

annual figure that must be raised by 2035 as climate finance) should feature in the title of the 'Baku to Belém' road map that will come up for discussion at this COP. This road map should include the entire financial system – not just public finance, but also the private sector, multilateral development banks, and philanthropies – to discuss how the finance flows can become greener.

Isn't implementation something that countries ought to be doing locally? Why do we need a COP for that?

UK: Many COPs end up reaching a point where there is a near-breakdown of negotiations and attempts are made to salvage it in the last minute. But that drama aside, the process continues and each COP is an incremental development over the previous one.

Implementation cannot happen without discussing the means of implementation, which is primarily finance. It can also mean technology and skilling. We hope that there will be discussions on innovative new sources of finance that can be added to the pool of money required for adapting to and mitigating climate change. Once these discussions happen, on the means of implementation, countries can go back and implement (projects) on some practical basis. Otherwise, if (implementation) is left to just how much public funding countries can raise domestically; and how much private investment businesses and banks can bring in based on profit considerations alone.

The scientific reality is that even official commitments by countries to cut carbon emissions are unlikely to reduce global emissions enough to keep them below the Paris Agreement target of a 2°C rise by 2100. This is partly because of the high costs



India has never been the most glamorous player on international climate negotiations, but it has something far more valuable than glamour, and that is a steady hand.

HISHAM MUNDOL

involved, as we had earlier discussed. How do we ensure that countries don't get stuck in a blame game, and instead evolve creative solutions regarding funding adaptations?

HM: International cooperation has worked best when driven not by largesse but by individual, national, strategic, and security interests. When the world responded to HIV-AIDS, it was because it realised that if large parts of sub-Saharan Africa were going to be ravaged by the epidemic, it would cause unrest. The cost of a security intervention is dramatically more than a developmental intervention. China is not building a green economy because it loves the environment, but because it realises that that is the future. Big industrial conglomerates in India, such as the Adani Group and Reliance Group, are investing as much as they are in green energy because they see that there is shareholder value to be created. Consider carbon pricing: many countries are looking at establishing some form of carbon market (where individual reductions in carbon emissions can be traded for profit).

UK: Often, I think that the scale of the challenge for India is not always understood in the West and sometimes the opportunity that that scale offers is also not fully appreciated. So, one thing that has come out in the news recently is that for the first time, emissions from India's power sector have actually stopped growing because there is so much more renewable energy now in the electricity system. If you look at model projections for the future, you will see that even decades into the future, despite being a growing economy where houses have to be built, manufacturing jobs have to be created, and power has to be supplied for a variety of applications from transport to cooking, India's power sector emissions are actually not projected to grow. So, there is a kind of decoupling that has already happened between energy and emissions. The scale of this is not really always appreciated by those in the West.

On the adaptation side, the scale really matters. Innovative aggregated solutions, such as the PM-KUSUM scheme, which uses solar energy in the agriculture sector, or electric buses for public transport, can drive down costs

and make services and public goods cheaper.

Second, we really need to actively look for projects where there are both adaptation and mitigation benefits. For example, projects that would not only help counter the impacts of heat or flood risks but also bring down emissions. An example would be cold-chain storage systems in agriculture that are solar powered.

Ahead of COP30, India, like other countries, is expected to submit updated Nationally Determined Contributions (NDCs). India is also expected to submit a National Adaptation Plan (NAP). According to you, how should these look?

HM: India already has an ambitious target of drawing 50% of its electricity mix from non-fossil sources by 2030. A lot of progress has happened on this front: renewables account for about half of the country's installed power capacity. Since green hydrogen production relies on renewable energy, explicitly codifying this link, such as by recognising renewable energy for green hydrogen, would be a good move. Even if such a move is incremental in terms of national commitments, incorporating it into the NDCs would send a signal of intent.

UK: The biggest source of greenhouse gas emissions is industry. This is a hard-to-abate sector because a lot of emissions come not from the use of energy where you can switch the fuel, but from process emissions. Unless you have a different way of making cement or a different way of making steel, it is going to be very difficult to change those process emissions. So, it might be time to consider as a long-term signal, some kind of new NDC target for the industry sector. It can mean bringing in more electrification, which itself can come from renewable or cleaner sources.

Second, we can look at ways of prioritising certain projects. Sometime ago, India had come up a list of projects where it would be willing to participate in the international carbon market. It said, for example, we don't want to sell credits based on just solar; we would like to consider solar plus storage (by using batteries). So why not have a wish list of priority projects like that for adaptation as well, which could, of course, be modified by each State in the country? And with that, indicate certain types of models where finance can be 'blended' (partly funded by private and public sector)?



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Should India take global leadership on climate change? क्या भारत को जलवायु परिवर्तन पर वैश्विक नेतृत्व लेना चाहिए?

Conference of the Parties (COP)30 and Climate Leadership कॉन्फ्रेंस ऑफ द पार्टिज़ (COP)30 और जलवायु नेतृत्व

- Ahead of **Conference of the Parties (COP)30** in **November** in **Belém, Brazil**, global headwinds have left many **developed countries** in the **West** increasingly reluctant to take on the mantle of **climate leadership**.
ब्राज़ील के बेलém में नवंबर में होने वाली **Conference of the Parties (COP)30** से पहले, वैश्विक चुनौतियों ने कई **पश्चिमी विकसित देशों** को **जलवायु नेतृत्व** की जिम्मेदारी लेने में हिचकिचाहट में डाल दिया है।
- **India**, like other countries, is expected to update **climate commitments** and present an **adaptation plan**.
अन्य देशों की तरह, **भारत** से अपेक्षा की जा रही है कि वह अपने **जलवायु प्रतिबद्धताओं** को अपडेट करे और एक **अनुकूलन योजना** प्रस्तुत करे।
- Should **India** take **global leadership** on **climate change**? Hisham Mundol and Ulka Kelkar discuss the question in a conversation moderated by **Jacob Koshy**. Edited excerpts:
क्या **भारत** को **जलवायु परिवर्तन** पर **वैश्विक नेतृत्व** लेना चाहिए? **हिशाम मुंडोल** और **उल्का केलकर** इस सवाल पर **जेकब कोशी** के मॉडरेशन में चर्चा कर रहे हैं। संपादित अंश:
- This seems to be a very unusual lead-up to a **COP**. The **U.S.** has withdrawn from the **Paris Agreement**, the **European Union** is reluctant to assume leadership on climate, and **Brazil**, which is hosting **COP30**, appears only to be stressing on **implementation**. Are we heading towards a **washout**?
यह **COP** के लिए एक बहुत असामान्य तैयारी लगती है। **अमेरिका** ने **पेरिस समझौते** से वापसी कर ली है, **यूरोपीय संघ** जलवायु नेतृत्व लेने में हिचक रहा है, और **ब्राज़ील**, जो **COP30** की मेज़बानी कर रहा है, केवल **कार्यान्वयन** पर जोर दे रहा है। क्या हम **निराशाजनक परिणाम** की ओर बढ़ रहे हैं?
- **Hisham Mundol**: I am by nature a 'glass half full' person. Before most **COPs**, there is often a lack of direction.
हिशाम मुंडोल: मैं स्वभाव से 'अर्ध भरा ग्लास' वाला व्यक्ति हूँ। अधिकांश **COPs** से पहले अक्सर दिशा की कमी होती है।
- We live in particularly **turbulent geopolitical times** and I imagine we may not get sweeping new outcomes like we did in 2015, with the **Paris Agreement**.
हम विशेष रूप से **उथल-पुथल वाले भू-राजनीतिक समय** में जी रहे हैं और मुझे लगता है कि हमें 2015 के **पेरिस समझौते** जैसे व्यापक नए परिणाम नहीं मिल सकते।
- Despite the **U.S.'s exit**, I see the emergence of an '**Axis of Good**' — a number of countries working with one another consistently on **climate change**.
अमेरिका के **बाहर निकलने** के बावजूद, मैं '**Axis of Good**' का उदय देखता हूँ — कई देश जो लगातार **जलवायु परिवर्तन** पर एक साथ काम कर रहे हैं।
- We're seeing **Europeans** and **Indians** working on **climate technology**.
हम देख रहे हैं कि **यूरोपीय** और **भारतीय जलवायु तकनीक** पर काम कर रहे हैं।
- I wouldn't be surprised if **Brazil** and **India** work on areas where there is **common ground**, such as **forests**.
मुझे आश्चर्य नहीं होगा यदि **ब्राज़ील** और **भारत** उन क्षेत्रों में काम करें जहां **साझा हित** है, जैसे कि **वन क्षेत्र**।
- **India** has never been the most glamorous player on **international climate negotiations**, but it has something far more valuable than glamour, and that is a **steady hand**.
भारत कभी भी **अंतरराष्ट्रीय जलवायु वार्ता** में सबसे आकर्षक खिलाड़ी नहीं रहा है, लेकिन इसके पास ग्लैमर से कहीं अधिक मूल्यवान चीज़ है, और वह है **स्थिर हाथ**।
- **Climate change** is not a **politically divisive issue** in **India**. We have made **commitments** and are working towards them.
भारत में **जलवायु परिवर्तन** कोई **राजनीतिक विवादास्पद मुद्दा** नहीं है। हमने **प्रतिबद्धताएं** की हैं और उनके लिए काम कर रहे हैं।
- Finally, an '**implementation COP**' may not sound ambitious but if we manage to **implement the promises** already made, that would be **real progress**.



अंत में, एक 'कार्यान्वयन COP' महत्वाकांक्षी नहीं लग सकता, लेकिन यदि हम पहले से किए गए प्रतिबद्धताओं को कार्यान्वित करने में सक्षम होते हैं, तो यह वास्तविक प्रगति होगी।

- **Ulka Kelkar:** First, I expect that this COP will emphasise the need for **finance for climate adaptation** and not just for **mitigation actions** where there is already **private sector revenue**.

उल्का केलकर: सबसे पहले, मुझे उम्मीद है कि यह COP जलवायु अनुकूलन के लिए वित्त की आवश्यकता पर जोर देगा और केवल उन उपायों पर नहीं जहां पहले से निजी क्षेत्र की आय है।

- So, not just **finance for solar power or electric vehicles**, but also for **adaptation to potential climate impacts** in sectors such as **agriculture** and **water resources**.
इसलिए, केवल सौर ऊर्जा या इलेक्ट्रिक वाहनों के लिए वित्त नहीं, बल्कि कृषि और जल संसाधन जैसे क्षेत्रों में संभावित जलवायु प्रभावों के लिए भी अनुकूलन।

- Second, the emphasis on **implementation** means that **developing countries** like ours need to create a **pipeline of projects** that we can invest in — not just **sectors** but **specific projects**.

दूसरे, कार्यान्वयन पर जोर का मतलब है कि हमारे जैसे विकासशील देशों को एक परियोजना पाइपलाइन तैयार करनी होगी जिसमें हम निवेश कर सकें — केवल क्षेत्र नहीं बल्कि विशिष्ट परियोजनाएं।

- And third, this big number of **\$1.3 trillion** (an annual figure that must be raised by **2035** as **climate finance**) should feature in the title of the **'Baku to Belém'** road map that will come up for discussion at this COP.

और तीसरे, यह बड़ा आंकड़ा \$1.3 ट्रिलियन (एक वार्षिक राशि जो 2035 तक जलवायु वित्त के रूप में जुटानी होगी) को उस 'Baku to Belém' रोड मैप के शीर्षक में दिखाया जाना चाहिए जो इस COP में चर्चा के लिए आएगा।

- This **road map** should include the entire **financial system** — not just **public finance**, but also the **private sector**, **multilateral development banks**, and **philanthropies** — to discuss how the **finance flows** can become **greener**.

इस रोड मैप में पूरे वित्तीय प्रणाली को शामिल किया जाना चाहिए — केवल सार्वजनिक वित्त नहीं, बल्कि निजी क्षेत्र, बहुपक्षीय विकास बैंक, और दानशालाएं — ताकि यह चर्चा की जा सके कि वित्त प्रवाह कैसे और अधिक हरित बन सकते हैं।

Implementation and Role of COP

कार्यान्वयन और COP की भूमिका

- Isn't **implementation** something that **countries** ought to be doing **locally**? Why do we need a **COP** for that?

क्या कार्यान्वयन कुछ ऐसा नहीं है जो देशों को स्थानीय स्तर पर करना चाहिए? इसके लिए हमें COP क्यों चाहिए?

- **UK:** Many **COPs** end up reaching a point where there is a near-breakdown of **negotiations** and attempts are made to salvage it in the **last minute**.

यूके: कई COPs ऐसे मोड़ तक पहुँचते हैं जहां वार्ताओं का लगभग विफल होना होता है और अंतिम क्षण में इसे बचाने का प्रयास किया जाता है।

- But that **drama** aside, the **process** continues and each **COP** is an **incremental development** over the previous one.

लेकिन उस नाटकीयता को छोड़कर, प्रक्रिया जारी रहती है और प्रत्येक COP पिछली की तुलना में एक क्रमिक विकास होता है।

- **Implementation** cannot happen without discussing the **means of implementation**, which is primarily **finance**.

कार्यान्वयन कार्यान्वयन के साधनों पर चर्चा किए बिना नहीं हो सकता, जो मुख्य रूप से वित्त है।

- It can also mean **technology** and **skilling**.

इसका मतलब प्रौद्योगिकी और कौशल विकास भी हो सकता है।

- We hope that there will be discussions on **innovative new sources of finance** that can be added to the **pool of money** required for **adapting to** and **mitigating climate change**.

हमें उम्मीद है कि नवोन्मेषी नए वित्त स्रोतों पर चर्चा होगी, जिन्हें जलवायु परिवर्तन के अनुकूलन और निवारण के लिए आवश्यक धन के पूल में जोड़ा जा सकता है।

- Once these discussions happen, on the **means of implementation**, **countries** can go back and **implement projects** on some **practical basis**.



जब ये चर्चाएं कार्यान्वयन के साधनों पर हो जाएंगी, तो देश कुछ व्यावहारिक आधार पर परियोजनाओं को लागू कर सकते हैं।

- Otherwise, it (implementation) is left to just how much **public funding** countries can raise **domestically**; and how much **private investment** businesses and banks can bring in based on **profit considerations** alone.

अन्यथा, यह (कार्यान्वयन) केवल इस पर निर्भर रहेगा कि देश कितना **सार्वजनिक वित्त घरेलू स्तर पर** जुटा सकते हैं; और कितना **निजी निवेश** व्यवसाय और बैंक केवल **लाभ के आधार पर** ला सकते हैं।

- The **scientific reality** is that even **official commitments** by **countries** to cut **carbon emissions** are unlikely to reduce **global emissions** enough to keep them below the **Paris Agreement target** of a **2°C rise by 2100**.

वैज्ञानिक वास्तविकता यह है कि यहां तक कि देशों द्वारा किए गए **आधिकारिक प्रतिबद्धताएं** भी **कार्बन उत्सर्जन** को पर्याप्त रूप से कम करने के लिए पर्याप्त नहीं हैं ताकि उन्हें **पेरिस समझौते के लक्ष्य 2100 तक 2°C वृद्धि** से नीचे रखा जा सके।

- This is partly because of the **high costs** involved, as we had earlier discussed.

यह आंशिक रूप से शामिल **उच्च लागतों** के कारण है, जैसा कि हमने पहले चर्चा की थी।

- How do we ensure that **countries** don't get stuck in a **blame game**, and instead evolve **creative solutions** regarding **funding adaptations**?

हम यह कैसे सुनिश्चित करें कि **देश दोषारोपण खेल** में फंस न जाएं, और इसके बजाय **अनुकूलन वित्तपोषण** के लिए **रचनात्मक समाधान** विकसित करें?

- **HM: International cooperation** has worked best when driven not by **largesse** but by **individual, national, strategic, and security interests**.

हिशाम मुंडोल: अंतरराष्ट्रीय सहयोग सबसे अच्छा तब काम करता है जब इसे **उदारता** द्वारा नहीं बल्कि **व्यक्तिगत, राष्ट्रीय, रणनीतिक और सुरक्षा हितों** द्वारा चलाया जाता है।

- When the world responded to **HIV-AIDS**, it was because it realised that if large parts of **sub-Saharan Africa** were going to be ravaged by the epidemic, it would cause **unrest**.

जब दुनिया ने **HIV-AIDS** का जवाब दिया, तो इसका कारण यह था कि यदि **सब-सहारा अफ्रीका** के बड़े हिस्से महामारी से प्रभावित होते, तो इससे **अशांति** होती।

- The cost of a **security intervention** is dramatically more than a **developmental intervention**.

सुरक्षा हस्तक्षेप की लागत **विकासात्मक हस्तक्षेप** से नाटकीय रूप से अधिक होती है।

- **China** is not building a **green economy** because it loves the **environment**, but because it realises that this is the **future**.

चीन हरित अर्थव्यवस्था इसलिए नहीं बना रहा कि वह **पर्यावरण** से प्यार करता है, बल्कि इसलिए कि उसे एहसास है कि यह **भविष्य** है।

- Big **industrial conglomerates** in **India**, such as the **Adani Group** and **Reliance Group**, are investing as much as they are in **green energy** because they see that there is **shareholder value** to be created.

भारत में बड़े **औद्योगिक समूह**, जैसे कि **अडानी ग्रुप** और **रिलायंस ग्रुप**, **हरित ऊर्जा** में उतना ही निवेश कर रहे हैं क्योंकि उन्हें दिखाई देता है कि **शेयरधारक मूल्य** बनाया जा सकता है।

- Consider **carbon pricing**: many **countries** are looking at establishing some form of **carbon market** (where individual reductions in **carbon emissions** can be traded for **profit**).

कार्बन मूल्य निर्धारण पर विचार करें: कई **देश** कुछ प्रकार के **कार्बन बाजार** की स्थापना पर विचार कर रहे हैं (जहां व्यक्तिगत **कार्बन उत्सर्जन में कमी** को **लाभ** के लिए व्यापार किया जा सकता है)।

- **UK**: Often, I think that the **scale of the challenge** for **India** is not always understood in the **West**, and sometimes the **opportunity** that that scale offers is also not fully appreciated.

यूके: अक्सर, मुझे लगता है कि **भारत** के लिए **चुनौती के पैमाने** को हमेशा **पश्चिम में** समझा नहीं जाता, और कभी-कभी वह **अवसर** जो यह पैमाना प्रदान करता है, पूरी तरह सराहा नहीं जाता।

- For the first time, **emissions** from **India's power sector** have actually **stopped growing** because there is so much more **renewable energy** now in the **electricity system**.

पहली बार, **भारत के पावर सेक्टर** से **उत्सर्जन** वास्तव में **बढ़ना बंद** हो गया है क्योंकि अब **विद्युत प्रणाली** में बहुत अधिक **नवीकरणीय ऊर्जा** है।

- Model **projections** for the **future** show that even decades into the future, despite being a **growing economy** where **houses** have to be built, **manufacturing jobs** created, and **power** supplied for a variety of applications from **transport** to **cooking**, **India's power sector emissions** are actually not projected to **grow**.



भविष्य के लिए मॉडल प्रक्षेपण दिखाते हैं कि भविष्य के दशकों में भी, एक विकासशील अर्थव्यवस्था होने के बावजूद जहां घरों का निर्माण करना है, उद्योगिक नौकरियां बनानी हैं, और विद्युत को परिवहन से लेकर खाना पकाने तक विभिन्न उपयोगों के लिए आपूर्ति करनी है, भारत के पावर सेक्टर के उत्सर्जन वास्तव में बढ़ने की अपेक्षा नहीं है।

- There is a kind of **decoupling** that has already happened between **energy** and **emissions**. The **scale** of this is not always appreciated by those in the **West**.
ऊर्जा और उत्सर्जन के बीच पहले से ही एक तरह का वियोजन हो चुका है। इस पैमाने की हमेशा पश्चिम में सराहना नहीं की जाती।
- On the **adaptation** side, the **scale** really matters. Innovative **aggregated solutions**, such as the **PM-KUSUM scheme**, which uses **solar energy** in the **agriculture sector**, or **electric buses** for **public transport**, can drive down **costs** and make **services** and **public goods** cheaper.
अनुकूलन पक्ष पर, पैमाना वास्तव में महत्वपूर्ण है। नवोन्मेषी समेकित समाधान, जैसे कि **PM-KUSUM योजना**, जो कृषि क्षेत्र में सौर ऊर्जा का उपयोग करती है, या सार्वजनिक परिवहन के लिए इलेक्ट्रिक बसें, लागत को कम कर सकती हैं और सेवाओं और सार्वजनिक वस्तुओं को सस्ता बना सकती हैं।
- We really need to actively look for **projects** where there are both **adaptation** and **mitigation benefits**.
हमें वास्तव में सक्रिय रूप से उन परियोजनाओं की तलाश करनी चाहिए जहां अनुकूलन और निवारण लाभ दोनों हों।
- For example, projects that would not only help counter the impacts of **heat** or **flood risks** but also bring down **emissions**. An example would be **cold-chain storage systems** in **agriculture** that are **solar powered**.
उदाहरण के लिए, ऐसी परियोजनाएं जो केवल गर्मी या बाढ़ जोखिम के प्रभावों का मुकाबला करने में मदद नहीं करेंगी, बल्कि उत्सर्जन को भी कम करेंगी। एक उदाहरण होगा कृषि में सौर ऊर्जा चालित ठंड-श्रृंखला भंडारण प्रणाली।

India's NDCs and NAP Ahead of COP30 COP30 से पहले भारत के NDCs और NAP

- Ahead of **COP30**, **India**, like other countries, is expected to submit updated **Nationally Determined Contributions (NDCs)**.
COP30 से पहले, भारत, अन्य देशों की तरह, अपडेटेड राष्ट्रीय रूप से निर्धारित योगदान (NDCs) प्रस्तुत करने की अपेक्षा है।
- **India** is also expected to submit a **National Adaptation Plan (NAP)**.
भारत से यह भी अपेक्षा की जाती है कि वह एक राष्ट्रीय अनुकूलन योजना (NAP) प्रस्तुत करे।
- According to you, how should these look?
आपके अनुसार, ये कैसे दिखने चाहिए?
- **HM: India** already has an ambitious target of drawing **50% of its electricity mix** from **non-fossil sources** by **2030**.
हिशाम मुंडोल: भारत के पास पहले से ही एक महत्वाकांक्षी लक्ष्य है कि वह 2030 तक अपनी विद्युत मिश्रण का 50% अजीवाश्म स्रोतों से प्राप्त करे।
- A lot of progress has happened on this front: **renewables** account for about **half of the country's installed power capacity**.
इस मोर्चे पर बहुत प्रगति हुई है: नवीकरणीय ऊर्जा देश की स्थापित विद्युत क्षमता का लगभग आधा हिस्सा है।
- Since **green hydrogen production** relies on **renewable energy**, explicitly codifying this link, such as by recognising **renewable energy for green hydrogen**, would be a good move.
चूंकि ग्रीन हाइड्रोजन उत्पादन नवीकरणीय ऊर्जा पर निर्भर करता है, इस लिंक को स्पष्ट रूप से कानूनबद्ध करना, जैसे कि ग्रीन हाइड्रोजन के लिए नवीकरणीय ऊर्जा को मान्यता देना, एक अच्छा कदम होगा।
- Even if such a move is incremental in terms of **national commitments**, incorporating it into the **NDCs** would send a **signal of intent**.
भले ही ऐसा कदम राष्ट्रीय प्रतिबद्धताओं के मामले में क्रमिक हो, इसे NDCs में शामिल करना एक इरादे का संकेत देगा।
- **UK:** The biggest source of **greenhouse gas emissions** is **industry**.
यूके: सबसे बड़ा स्रोत ग्रीनहाउस गैस उत्सर्जन का उद्योग है।



- This is a **hard-to-abate sector** because a lot of emissions come not from the use of **energy** where you can switch the **fuel**, but from **process emissions**.
यह एक **कठिन-निवारण वाला क्षेत्र** है क्योंकि बहुत सा उत्सर्जन **ऊर्जा** के उपयोग से नहीं आता है जहां आप **ईंधन बदल** सकते हैं, बल्कि यह **प्रक्रिया उत्सर्जन** से आता है।
- Unless you have a different way of making **cement** or a different way of making **steel**, it is going to be very difficult to change those **process emissions**.
जब तक आपके पास **सीमेंट** बनाने का अलग तरीका या **इस्पात** बनाने का अलग तरीका नहीं है, उन **प्रक्रिया उत्सर्जनों** को बदलना बहुत मुश्किल होगा।
- So, it might be time to consider as a **long-term signal**, some kind of new **NDC target** for the **industry sector**.
इसलिए, इसे एक **दीर्घकालिक संकेत** के रूप में विचार करने का समय हो सकता है, जैसे **उद्योग क्षेत्र** के लिए कुछ नया **NDC लक्ष्य**।
- It can mean bringing in more **electrification**, which itself can come from **renewable or cleaner sources**.
इसका मतलब अधिक **विद्युतिकरण** लाना हो सकता है, जो स्वयं **नवीकरणीय** या **साफ-सुथरे स्रोतों** से आ सकता है।
- Second, we can look at ways of **prioritising certain projects**.
दूसरा, हम कुछ **परियोजनाओं को प्राथमिकता देने** के तरीकों पर विचार कर सकते हैं।
- Some time ago, **India** had come up a **list of projects** where it would be willing to participate in the **international carbon market**.
कुछ समय पहले, **भारत** ने उन **परियोजनाओं की सूची** तैयार की थी जहां यह **अंतरराष्ट्रीय कार्बन बाजार** में भाग लेने के लिए तैयार था।
- It said, for example, we don't want to sell **credits** based on just **solar**; we would like to consider **solar plus storage** (by using **batteries**).
उदाहरण के लिए, इसमें कहा गया कि हम केवल **सौर ऊर्जा** पर आधारित **क्रेडिट** बेचना नहीं चाहते; हम **सौर + भंडारण (बैटरियों का उपयोग करके)** पर विचार करना चाहेंगे।
- So why not have a **wish list of priority projects** like that for **adaptation** as well, which could, of course, be **modified by each State** in the **country**?
तो क्यों न **अनुकूलन** के लिए भी ऐसी **प्राथमिकता परियोजनाओं की इच्छाशक्ति सूची** बनाई जाए, जिसे, निश्चित रूप से, **देश के प्रत्येक राज्य** द्वारा **संशोधित** किया जा सके?
- And with that, indicate certain types of **models** where **finance** can be '**blended**' (partly funded by the private and **public sector**)?
और इसके साथ, कुछ प्रकार के **मॉडल** बताएं जहां **वित्त** को '**मिश्रित**' किया जा सकता है (आंशिक रूप से **निजी** और **सार्वजनिक क्षेत्र** द्वारा वित्तपोषित)।



Is Punjab's stubble burning problem really declining?

Are fewer fires hiding larger burnt areas? How do satellite limitations affect the accuracy of fire detection?

GS III: Environment

Vikas Vasudeva

The story so far:

Paddy harvesting has picked up momentum in Punjab, the country's key grain-producing State, and so have stubble burning incidents. This year, stubble burning has been relatively fewer because the State faced one of its worst floods in decades, leaving vast stretches of farmland inundated. Close to the autumn season every year, paddy stubble burning is considered to be one of the contributing factors of air pollution across the country's northern region, including New Delhi. The paddy crop, harvested using combine harvester machines, leaves behind a stubble of stalks. To destroy this stubble, the farmers consider setting the crop residue on fire the most 'effective' method, as they need to prepare the fields for sowing the next winter crop. The short time window between paddy harvesting and wheat sowing – roughly three weeks – is a key reason why farmers resort to stubble burning.

Are stubble burning incidents declining?

The governments, including the State and the Centre, have claimed that incidents of paddy stubble burning have significantly declined over the years, thanks to a range of measures, including stricter enforcement, access to subsidised machinery for crop residue management. Punjab government data, based on satellite aggregation, shows that in 2024, there were 10,909 cases of farm fires in the State, compared to 36,663 in 2023, marking a 70% decline.

While Punjab has reported a significant drop in farm fire incidents since 2021, the total area scorched by these fires has largely expanded. Satellite data from the Punjab Remote Sensing Centre and the Punjab Pollution Control Board show that in 2024, the area under 'residue burning for paddy', which gives a relatively stronger sense of farm fire menace, stood at around 19.17 lakh hectares, compared to around 19.14 lakh hectares in 2023.

In 2022, it was nearly 15.40 lakh hectares, while in 2021, it was

approximately 15.60 lakh hectares.

Why do the data differ?

Although the number of stubble fire counts has significantly declined, experts believe that the total burnt area could have increased for several reasons. Fire count measurements often miss smaller, low-intensity, or partial burns.

Farm fire incidents in Punjab, and in other States as well, are recorded by satellites using thermal imaging based on temperature differences. A recent study conducted by the Indian Institute of Science Education and Research, Mohali, published in *Science of the Total Environment*, highlights several limitations of satellites in collecting fire emissions. The study notes that satellites like MODIS and VIIRS pass over the region only a few times a day, and since most fires are lit in the late afternoon or evening, many events are missed. Haze or clouds can obstruct satellite detection of fires, leading to underreporting. Moreover, north-west States have small landholdings, and farmers often burn

crop residue in fragmented, short-duration fires, which are harder for satellites to detect compared to large-scale forest fires. The study also points out that farmers are increasingly aware of satellite monitoring and may cover up burnt areas before the next satellite overpass.

Senior scientist and Professor Ravindra Khaiwal at Environmental Health, Department of Community Medicine and School of Public Health in Chandigarh-based Post Graduate Institute of Medical Education and Research, points out that burnt-area estimation has become more precise with advancements in remote sensing. He says, "While thermal sensors may miss fires due to heat signal blockage, optical sensors like Sentinel-2 can identify post-fire discoloration and burn scars, providing a more accurate assessment of the total burnt area."

What is the way forward?

Asserting that for accurate assessment of incidents, fire data should be generated by integrating thermal and optical satellite observations and validated through systematic ground verification through ground surveys, Dr. Khaiwal says: "increased burnt area does not necessarily imply higher stubble burning 'emissions'. Many of these burns are low-intensity, partial, or short-duration fires, releasing relatively less particulate matter and gaseous emissions compared to widespread fires. Hence, emissions must be assessed using fire intensity, fuel load, and duration, not burnt area alone."

THE GIST

While farm fire incidents in Punjab have declined significantly in recent years, the total area scorched by stubble burning remains high, highlighting a discrepancy between fire counts and actual burnt land.

Satellite limitations, short sowing windows, and farm practices – like burning residual stubble from combine harvesters – contribute to under-detection and continued environmental impact despite government measures.

Is Punjab's stubble burning problem really declining? क्या पंजाब की पराली जलाने की समस्या वास्तव में कम हो रही है?

- Are fewer fires hiding larger burnt areas? How do satellite limitations affect the accuracy of fire detection?
क्या कम आग के मामले बड़े जलाए गए क्षेत्रों को छिपा रहे हैं? सैटेलाइट सीमाओं का आग की पहचान की सटीकता पर क्या असर पड़ता है?
- Paddy harvesting has picked up momentum in Punjab, the country's key grain-producing State, and so have stubble burning incidents.
धान की कटाई पंजाब, देश के प्रमुख अन्न उत्पादक राज्य में तेज़ी से हो रही है, और पराली जलाने की घटनाएँ भी बढ़ रही हैं।
- This year, stubble burning has been relatively fewer because the State faced one of its worst floods in decades, leaving vast stretches of farmland inundated.
इस वर्ष, पराली जलाने की घटनाएँ अपेक्षाकृत कम रही हैं क्योंकि राज्य को दशकों में सबसे गंभीर बाढ़ का सामना करना पड़ा, जिससे विशाल खेत जलमग्न हो गए।
- Close to the autumn season every year, paddy stubble burning is considered to be one of the contributing factors of air pollution across the country's northern region, including New Delhi.
हर साल पतझड़ के मौसम के करीब, धान की पराली जलाना देश के उत्तरी क्षेत्र में वायु प्रदूषण के कारकों में से एक माना जाता है, जिसमें नई दिल्ली भी शामिल है।
- The paddy crop, harvested using combine harvester machines, leaves behind a stubble of stalks.
धान की फसल, जिसे कंबाइन हार्वेस्टर मशीन से काटा जाता है, के पीछे डंठलों की पराली बचती है।
- To destroy this stubble, the farmers consider setting the crop residue on fire the most 'effective' method, as they need to prepare the fields for sowing the next winter crop.
इस पराली को नष्ट करने के लिए किसान इसे आग लगाना सबसे 'प्रभावी' तरीका मानते हैं, क्योंकि उन्हें अगली सर्दियों की फसल बोन के लिए खेत तैयार करने होते हैं।



- The short time window between **paddy harvesting and wheat sowing — roughly three weeks** — is a key reason why farmers resort to **stubble burning**.
धान की कटाई और गेहूं की बुवाई के बीच छोटा समय अंतराल — लगभग तीन सप्ताह — एक मुख्य कारण है कि किसान पराली जलाने का सहारा लेते हैं।

Are stubble burning incidents declining? क्या पराली जलाने की घटनाएँ घट रही हैं?

- The governments, including the **State and the Centre**, have claimed that incidents of **paddy stubble burning have significantly declined** over the years, thanks to a range of measures, including **stricter enforcement, access to subsidised machinery** for crop residue management.
सरकारों, जिनमें राज्य और केंद्र शामिल हैं, ने दावा किया है कि वर्षों में धान की पराली जलाने की घटनाएँ काफी कम हुई हैं, इसके पीछे कई उपाय हैं, जिनमें कड़े कानून लागू करना और सब्सिडी वाली मशीनरी की उपलब्धता शामिल है।
- Punjab government data**, based on **satellite aggregation**, shows that in 2024, there were **10,909 cases of farm fires** in the State, compared to **36,663 in 2023**, marking a **70% decline**.
पंजाब सरकार का डेटा, जो सैटेलाइट संग्रहण पर आधारित है, दिखाता है कि 2024 में राज्य में 10,909 खेतों में आग लगी, जबकि 2023 में यह संख्या 36,663 थी, जो 70% गिरावट दर्शाती है।
- While Punjab has reported a significant drop in **farm fire incidents** since 2021, the **total area scorched** by these fires has largely expanded.
जबकि पंजाब ने 2021 के बाद खेतों में आग की घटनाओं में महत्वपूर्ण गिरावट रिपोर्ट की है, इन आगों द्वारा कुल जलाए गए क्षेत्र में काफी वृद्धि हुई है।
- Satellite data** from the Punjab Remote Sensing Centre and the Punjab Pollution Control Board show that in 2024, the area under '**residue burning for paddy**', which gives a relatively stronger sense of **farm fire menace**, stood at around **19.17 lakh hectares**, compared to around **19.14 lakh hectares in 2023**.
पंजाब रिमोट सेंसिंग सेंटर और पंजाब प्रदूषण नियंत्रण बोर्ड के सैटेलाइट डेटा से पता चलता है कि 2024 में 'धान की पराली जलाने' का क्षेत्र लगभग 19.17 लाख हेक्टेयर था, जबकि 2023 में यह लगभग 19.14 लाख हेक्टेयर था।
- In 2022, it was nearly **15.40 lakh hectares**, while in 2021, it was approximately **15.60 lakh hectares**.
2022 में यह लगभग 15.40 लाख हेक्टेयर था, जबकि 2021 में यह लगभग 15.60 लाख हेक्टेयर था।

Why do the data differ? डेटा में अंतर क्यों है?

- Although the number of **stubble fire counts has significantly declined**, experts believe that the **total burnt area could have increased** for several reasons.
हालांकि पराली आग की घटनाओं की संख्या में काफी कमी आई है, विशेषज्ञ मानते हैं कि कुल जलाया गया क्षेत्र कई कारणों से बढ़ सकता है।
- Fire count measurements** often miss smaller, low-intensity, or partial burns.
आग की संख्या मापने में अक्सर छोटे, कम तीव्रता वाले, या आंशिक जलाने वाले क्षेत्र छूट जाते हैं।
- Farm fire incidents** in Punjab, and in other States as well, are recorded by **satellites using thermal imaging based on temperature differences**.
पंजाब और अन्य राज्यों में खेतों में आग की घटनाओं को सैटेलाइट द्वारा तापमान भिन्नता पर आधारित थर्मल इमेजिंग से रिकॉर्ड किया जाता है।
- A recent study conducted by the **Indian Institute of Science Education and Research, Mohali**, published in **Science of the Total Environment**, highlights several **limitations of satellites in collecting fire emissions**.
हाल ही में भारतीय विज्ञान शिक्षा और अनुसंधान संस्थान, मोहाली द्वारा की गई एक अध्ययन, जो **Science of the Total Environment** में प्रकाशित हुई, ने सैटेलाइट द्वारा आग उत्सर्जन इकट्ठा करने में कई सीमाओं को उजागर किया।



- The study notes that satellites like **MODIS** and **VIIRS** pass over the region only a few times a day, and since most fires are lit in the late afternoon or evening, many events are missed.
अध्ययन में बताया गया कि **MODIS** और **VIIRS** जैसे सैटेलाइट क्षेत्र पर दिन में केवल कुछ बार गुजरते हैं, और चूंकि अधिकांश आग दोपहर के बाद या शाम को लगाई जाती है, कई घटनाएँ छूट जाती हैं।
- Haze or clouds can **obstruct satellite detection of fires**, leading to **underreporting**.
धुंध या बादल **सैटेलाइट की आग की पहचान** में बाधा डाल सकते हैं, जिससे **अधूरा रिपोर्टिंग** होता है।
- Moreover, **north-west States have small landholdings**, and farmers often burn crop residue in **fragmented, short-duration fires**, which are harder for satellites to detect compared to **large-scale forest fires**.
इसके अलावा, **उत्तर-पश्चिमी राज्य छोटे खेत** रखते हैं, और किसान अक्सर फसल अवशेष को **टुकड़ों में और कम समय की आग** में जलाते हैं, जिन्हें **बड़े जंगल की आग** की तुलना में सैटेलाइट द्वारा पहचानना कठिन होता है।
- The study also points out that **farmers are increasingly aware of satellite monitoring** and may **cover up burnt areas** before the next satellite overpass.
अध्ययन यह भी बताता है कि **किसान सैटेलाइट मॉनिटरिंग के प्रति जागरूक** हो रहे हैं और अगली सैटेलाइट गुजरने से पहले **जलाए गए क्षेत्रों को छुपा सकते हैं**।
- Senior scientist and Professor **Ravindra Khaiwal** at Environmental Health, Department of Community Medicine and School of Public Health in Chandigarh-based **Post Graduate Institute of Medical Education and Research**, points out that **burnt-area estimation has become more precise** with advancements in **remote sensing**.
चंडीगढ़ स्थित **पोस्ट ग्रेजुएट इंस्टीट्यूट ऑफ मेडिकल एजुकेशन एंड रिसर्च** के पर्यावरण स्वास्थ्य, सामुदायिक चिकित्सा और सार्वजनिक स्वास्थ्य स्कूल के वरिष्ठ वैज्ञानिक और प्रोफेसर **रविंद्र खैवाल** ने कहा कि **जलाए गए क्षेत्र का अनुमान रिमोट सेंसिंग** में प्रगति के साथ अधिक सटीक हो गया है।
- He says, “While **thermal sensors may miss fires due to heat signal blockage**, **optical sensors like Sentinel-2** can identify **post-fire discolouration and burn scars**, providing a more accurate assessment of the **total burnt area**.”
उन्होंने कहा, “जबकि **थर्मल सेंसर गर्मी संकेत अवरोध के कारण आग को चूक सकते हैं**, **सेंटीनेल-2 जैसे ऑप्टिकल सेंसर** आग के बाद **रंग बदलना और जलने के निशान पहचान सकते हैं**, जो **कुल जलाए गए क्षेत्र** का अधिक सटीक मूल्यांकन प्रदान करता है।”
- **What is the way forward?**
आगे का रास्ता क्या है?
- Asserting that for accurate assessment of incidents, **fire data should be generated by integrating thermal and optical satellite observations and validated through systematic ground verification through ground surveys**, Dr. Khaiwal says:
घटनाओं का सटीक मूल्यांकन करने के लिए, **थर्मल और ऑप्टिकल सैटेलाइट अवलोकन को एकीकृत करके आग का डेटा उत्पन्न किया जाना चाहिए और नियमित ग्राउंड सर्वेक्षण के माध्यम से सत्यापित किया जाना चाहिए**, डॉ. खैवाल कहते हैं:
- “**Increased burnt area does not necessarily imply higher stubble burning emissions**. Many of these burns are **low-intensity, partial, or short-duration fires**, releasing relatively **less particulate matter and gaseous emissions** compared to widespread fires. Hence, **emissions must be assessed using fire intensity, fuel load, and duration, not burnt area alone**.”
“**जलाए गए क्षेत्र में वृद्धि का मतलब जरूरी नहीं कि पराली जलाने से अधिक उत्सर्जन हुआ**। इनमें से कई आगें **कम तीव्रता वाली, आंशिक या कम समय की** होती हैं, जो बड़े पैमाने की आग की तुलना में अपेक्षाकृत **कम कण और गैसीय उत्सर्जन** करती हैं। इसलिए, **उत्सर्जन का मूल्यांकन केवल जलाए गए क्षेत्र के बजाय आग की तीव्रता, ईंधन की मात्रा और अवधि के आधार पर करना चाहिए**।”



Why cloud seeding is not a solution to Delhi's air pollution crisis

Delhi's air remains polluted due to emissions from vehicles, construction, power plants, waste burning and agricultural fires; cloud seeding cannot create rain without clouds, provides only temporary relief at best, and diverts attention from evidence-based solutions that address the root causes

GS III: Environment, S&T

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The story so far:

Delhi's plan for cloud seeding is being sold as a bold solution to air pollution. In reality, it is a textbook case of science misapplied and ethics ignored.

Why is Delhi's air fouler in winter?

Across North India, air quality is poor throughout the year, but it reaches extreme levels in the post-monsoon and winter months. After the monsoon withdraws, dry continental air masses from the northwest dominate the region. The winds weaken and the air becomes stagnant, keeping pollutants from being dispersed efficiently.

Cooler air holds less absolute water vapour and the stable, high-pressure systems that prevail during these months suppress the upward motion needed for clouds to form. The sky may look hazy, but that haze comes from trapped pollution, not from rain-bearing clouds. Rain cannot be conjured out of thin air. It needs water vapour.

For most of the highly polluted cooler months, the atmosphere is too dry and stable to support significant rainfall. Rain does occur occasionally during these months, but these brief spells are typically caused by western disturbances,

weather systems that originate in the Mediterranean region and can bring moisture from that region or interact with local systems drawing up moisture from our neighbouring seas. These events can be predicted a few days in advance, but are not a reliable or consistent source of rainfall for North India.

Does cloud seeding help?

Cloud seeding depends on natural clouds; it can't create them. And even when clouds exist, the evidence that seeding reliably increases rainfall remains weak and contested. And when it rains and reduces pollution, the respite is temporary at best. The overwhelming evidence is that pollution levels go back up within a day or two.

The air pollution problem is not just confined to Delhi. Across North India, air quality is dangerously poor year-round. Yet public debate often treats smog as a seasonal nuisance, normalising pollution and noticing it only when it becomes unbearable. Cloud seeding is just another gimmick in a series of similar unscientific ideas, like smog towers, suggesting that flashy interventions can substitute for serious, structural solutions.

What are the risks of cloud seeding?

The temptation to engineer a shortcut to fix air pollution is understandable – but it raises deeper ethical questions about how

science is used, what risks are justified, and who bears responsibility when things go wrong.

Even if the science behind cloud seeding were robust, which it is not, it still involves dispersing compounds such as silver iodide or sodium chloride into clouds to trigger condensation. Silver iodide works for cloud seeding because its crystal structure is very similar to that of ice, so it 'tricks' water droplets in the clouds into freezing onto it. These newly formed ice crystals then grow heavy and fall as rain or snow. While generally considered low risk in small doses, repeated use can accumulate in soils and water bodies. The long-term effects on agriculture, ecosystems, and human health remain poorly understood.

Beyond these environmental risks, there is the question of accountability. If cloud seeding coincides with intense rainfall that leads to flooding, causing damage to infrastructure, crops, and livelihoods, or loss of life, who will be responsible? Even if the rainfall and flooding are unrelated to seeding, public perception could still link the two, undermining trust in both science and governance.

What can 'fix' the air?

Science has long identified the real cause of North India's hazardous air: the lack of effective control over emissions from

vehicles, industry, construction, power plants, waste burning, and seasonal agricultural fires, compounded by unfavourable meteorology during the cooler months. The solutions are equally clear but remain largely unimplemented: cleaner transport, sustainable energy, better waste management, and urban planning that actually reduces pollution sources. Yet, instead of reinforcing these priorities, parts of the scientific ecosystem – researchers, advisors, and institutions – are lending credibility to a costly spectacle that will do little to address the sources of the crisis. By attaching their authority to the illusion of quick fixes, they risk wasting scarce public resources, undermining trust, and diverting attention from systemic changes that could make a real difference.

Snake-oil solutions will not clear the air in Delhi or the rest of North India. Instead, courage is required on the ground: to reduce the sources of pollution and pursue equitable, evidence-based action. Anything less is not just misplaced science – it is an ethical failure, a diversion from the patient, unglamorous work needed to ensure clean air throughout the year.

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Why Cloud Seeding is Not a Solution to Delhi's Air Pollution Crisis क्यों क्लाउड सीडिंग दिल्ली के वायु प्रदूषण संकट का समाधान नहीं है

Delhi's Plan for Cloud Seeding दिल्ली की क्लाउड सीडिंग योजना

- Delhi's plan for cloud seeding is being sold as a bold solution to air pollution. दिल्ली की योजना क्लाउड सीडिंग के लिए वायु प्रदूषण का साहसिक समाधान बताई जा रही है।
- In reality, it is a textbook case of science misapplied and ethics ignored. वास्तविकता में, यह विज्ञान के गलत प्रयोग और नैतिकता की अनदेखी का एक पाठ्यपुस्तक उदाहरण है।

Why is Delhi's Air Fouler in Winter?

सर्दियों में दिल्ली की हवा इतनी खराब क्यों है?

- Across North India, air quality is poor throughout the year, but it reaches extreme levels in the post-monsoon and winter months. पूरे उत्तर भारत में वायु गुणवत्ता पूरे वर्ष खराब रहती है, लेकिन मानसून के बाद और सर्दियों में यह अत्यधिक स्तर तक पहुँच जाती है।





- After the **monsoon withdraws**, **dry continental air masses** from the **northwest** dominate the region.
मानसून के पीछे हटने के बाद, उत्तर-पश्चिम से शुष्क महाद्वीपीय वायु द्रव्यमान क्षेत्र पर हावी हो जाते हैं।
- The **winds weaken** and the air becomes **stagnant**, keeping **pollutants** from being **dispersed efficiently**.
हवाएं कमजोर हो जाती हैं और हवा स्थिर हो जाती है, जिससे प्रदूषक सही ढंग से फैल नहीं पाते।
- **Cooler air** holds less **absolute water vapour** and the **stable, high-pressure systems** that prevail during these months **suppress the upward motion** needed for **clouds to form**.
ठंडी हवा में कम पूर्ण जलवाष्प होता है और इन महीनों में हावी स्थिर, उच्च-दाबाव प्रणाली वह ऊर्ध्व गति दबाती है जो बादल बनने के लिए जरूरी है।
- The **sky** may look **hazy**, but that haze comes from **trapped pollution**, not from **rain-bearing clouds**.
आकाश धुंधला लग सकता है, लेकिन वह धुंध अटके हुए प्रदूषण से आती है, बारिश लाने वाले बादल से नहीं।
- **Rain cannot be conjured out of thin air**. It needs **water vapour**.
बारिश को हवा से जादू की तरह नहीं बनाया जा सकता। इसके लिए जलवाष्प की आवश्यकता होती है।
- For most of the **highly polluted cooler months**, the **atmosphere** is too **dry and stable** to support **significant rainfall**.
अधिकांश प्रदूषित ठंडे महीनों में, वायुमंडल बहुत शुष्क और स्थिर होता है जिससे प्रमुख वर्षा नहीं हो पाती।
- **Rain** does occur occasionally during these months, but these brief spells are typically caused by **western disturbances, weather systems** that originate in the **Mediterranean region**.
इन महीनों में कभी-कभार बारिश होती है, लेकिन ये छोटे-छोटे मौसम परिवर्तन आमतौर पर पश्चिमी विक्षोभ के कारण होते हैं, जो मेडिटेरेनियन क्षेत्र से उत्पन्न होते हैं।
- These events can be predicted a few days in advance, but are not a **reliable** or **consistent source of rainfall** for **North India**.
इन घटनाओं की कुछ दिन पहले भविष्यवाणी की जा सकती है, लेकिन ये उत्तर भारत के लिए विश्वसनीय या संगत वर्षा स्रोत नहीं हैं।

Does Cloud Seeding Help?

क्या क्लाउड सीडिंग मदद करती है?

- **Cloud seeding** depends on **natural clouds**; it can't create them.
क्लाउड सीडिंग प्राकृतिक बादलों पर निर्भर करती है; यह उन्हें निर्मित नहीं कर सकती।
- Even when **clouds exist**, the **evidence** that seeding **reliably increases rainfall** remains **weak and contested**.
जब बादल मौजूद होते हैं, तब भी यह सबूत कि सीडिंग विश्वसनीय रूप से वर्षा बढ़ाती है, कमजोर और विवादित है।
- When it **rains** and reduces **pollution**, the respite is **temporary** at best.
जब बारिश होती है और प्रदूषण कम होता है, तब राहत अल्पकालिक होती है।
- The overwhelming **evidence** is that **pollution levels** go back up within a **day or two**.
प्रबल साक्ष्य यह है कि प्रदूषण स्तर एक-दो दिन में वापस बढ़ जाते हैं।
- The **air pollution problem** is not just confined to **Delhi**. Across **North India**, **air quality** is **dangerously poor** year-round.
वायु प्रदूषण की समस्या केवल दिल्ली तक सीमित नहीं है। पूरे उत्तर भारत में वायु गुणवत्ता पूरे वर्ष खतरनाक रूप से खराब रहती है।
- Public debate often treats **smog** as a **seasonal nuisance, normalising pollution** and noticing it only when it becomes **unbearable**.
सार्वजनिक बहस अक्सर स्मॉग को मौसमी परेशानी मानती है, जिससे प्रदूषण सामान्य समझा जाता है और इसे केवल तब देखा जाता है जब यह असहनीय हो जाए।
- **Cloud seeding** is just another **gimmick** in a series of similar **unscientific ideas**, like **smog towers**.
क्लाउड सीडिंग केवल एक और चाल है, इसी तरह के कई अवैज्ञानिक विचारों की श्रृंखला में, जैसे स्मॉग टॉवर्स।
- These suggest that **flashy interventions** can substitute for **serious, structural solutions**.
ये सुझाव देते हैं कि आकर्षक हस्तक्षेप गंभीर, संरचनात्मक समाधानों की जगह नहीं ले सकते।



What are the Risks of Cloud Seeding?

क्लाउड सीडिंग के खतरे क्या हैं?

- The temptation to **engineer a shortcut** to fix **air pollution** is understandable — but it raises **ethical questions** about how **science is used**, what **risks are justified**, and who **bears responsibility** when things go wrong.
वायु प्रदूषण को ठीक करने के लिए **संक्षिप्त उपाय करने** की लालसा समझ में आती है — लेकिन यह **नैतिक प्रश्न** उठाता है कि **विज्ञान का उपयोग कैसे होता है**, कौन से **जोखिम उचित** हैं, और जब चीजें गलत होती हैं तो कौन **जिम्मेदारी** लेता है।
- Even if the **science behind cloud seeding** were robust, it involves dispersing compounds such as **silver iodide** or **sodium chloride** into **clouds** to trigger **condensation**.
भले ही **क्लाउड सीडिंग** के पीछे की **विज्ञान मजबूत** हो, इसमें **बादलों में सिल्वर आयोडाइड** या **सोडियम क्लोराइड** जैसे यौगिक फैलाना शामिल है ताकि **संघनन** हो सके।
- **Silver iodide** works because its **crystal structure** is very similar to that of **ice**, so it **tricks water droplets** in the clouds into **freezing** onto it.
सिल्वर आयोडाइड इसलिए काम करता है क्योंकि इसकी **क्रिस्टल संरचना बरफ** जैसी होती है, जिससे यह बादलों में **पानी की बूंदों को जमने के लिए बहकाता** है।
- These newly formed **ice crystals** grow heavy and fall as **rain or snow**.
ये नए बने **बरफ के क्रिस्टल** भारी हो जाते हैं और **बारिश या बर्फ** के रूप में गिरते हैं।
- While generally considered **low risk in small doses**, repeated use can **accumulate in soils and water bodies**.
जबकि **छोटी मात्रा** में आमतौर पर इसे **कम जोखिम वाला** माना जाता है, बार-बार उपयोग **मिट्टी और जल स्रोतों में जमा** हो सकता है।
- The long-term effects on **agriculture, ecosystems, and human health** remain poorly understood.
कृषि, पारिस्थितिकी तंत्र और मानव स्वास्थ्य पर इसके दीर्घकालिक प्रभाव अभी तक **अच्छी तरह से समझे नहीं गए** हैं।
- Beyond these **environmental risks**, there is the question of **accountability**.
इन **पर्यावरणीय जोखिमों** के अलावा, **जिम्मेदारी** का सवाल भी है।
- If **cloud seeding** coincides with intense **rainfall** that leads to **flooding**, causing **damage to infrastructure, crops, and livelihoods**, or **loss of life**, who will be **responsible**?
अगर **क्लाउड सीडिंग** के दौरान **भारी बारिश** होती है जिससे **बाढ़** आती है और **अवसंरचना, फसल और आजीविका** को **नुकसान**, या **जीवन की हानि** होती है, तो कौन **जिम्मेदार** होगा?
- Even if the **rainfall and flooding** are unrelated to seeding, **public perception** could still link the two, undermining trust in both **science and governance**.
भले ही **बारिश और बाढ़** का **सीडिंग** से कोई संबंध न हो, **सार्वजनिक धारणा** फिर भी दोनों को जोड़ सकती है, जिससे **विज्ञान और शासन** पर भरोसा कमजोर होगा।

What Can 'Fix' the Air?

हवा को 'सुधारने' वाला उपाय क्या हो सकता है?

- Science has long identified the real cause of **North India's hazardous air**: lack of effective **control over emissions** from **vehicles, industry, construction, power plants, waste burning**, and **seasonal agricultural fires**, compounded by **unfavourable meteorology** during the **cooler months**.
विज्ञान ने लंबे समय से **उत्तर भारत की खतरनाक हवा** का वास्तविक कारण पहचाना है: **वाहन, उद्योग, निर्माण, पावर प्लांट, कचरा जलाना, और मौसमी कृषि आग** से उत्सर्जन पर **प्रभावी नियंत्रण की कमी**, जो **ठंडे महीनों में प्रतिकूल मौसम** के साथ जुड़ती है।
- The solutions are equally clear but remain largely **unimplemented: cleaner transport, sustainable energy, better waste management, and urban planning** that actually reduces **pollution sources**.
समाधान भी स्पष्ट हैं लेकिन ज्यादातर **लागू नहीं हुए: स्वच्छ परिवहन, टिकाऊ ऊर्जा, बेहतर कचरा प्रबंधन, और शहरी नियोजन** जो वास्तव में **प्रदूषण स्रोतों** को कम करे।
- Instead of reinforcing these **priorities**, parts of the **scientific ecosystem** — **researchers, advisors, and institutions** — are lending **credibility** to a **costly spectacle** that will do little



to address the **sources of the crisis**.

इन **प्राथमिकताओं** को मजबूत करने के बजाय, **वैज्ञानिक तंत्र** के कुछ हिस्से — **अनुसंधानकर्ता, सलाहकार और संस्थान** — एक **महंगे तमाशे** को **विश्वसनीयता** दे रहे हैं जो **संकट के स्रोतों** को हल करने में कम मदद करेगा।

- By attaching their **authority** to the illusion of **quick fixes**, they risk **wasting scarce public resources**, **undermining trust**, and diverting attention from **systemic changes** that could make a real difference.

त्वरित समाधानों के भ्रम से अपनी **अधिकारिता** जोड़कर, वे **सीमित सार्वजनिक संसाधनों की बर्बादी, भरोसा कम करना, और सिस्टमिक बदलावों** से ध्यान हटाने का जोखिम उठाते हैं, जो वास्तविक फर्क डाल सकते हैं।

- **Snake-oil solutions** will not clear the air in **Delhi** or the rest of **North India**.
फर्जी समाधान दिल्ली या बाकी **उत्तर भारत** की हवा को साफ नहीं करेंगे।
- Instead, **courage** is required on the ground: to reduce **sources of pollution** and pursue **equitable, evidence-based action**.
इसके बजाय, जमीन पर **साहस** की जरूरत है: **प्रदूषण के स्रोतों को कम करने और समान, साक्ष्य-आधारित कार्रवाई** को आगे बढ़ाने के लिए।
- Anything less is not just **misplaced science** — it is an **ethical failure**, a diversion from the **patient, unglamorous work** needed to ensure **clean air** throughout the year.
इससे कम कुछ भी केवल **गलत विज्ञान** नहीं है — यह एक **नैतिक विफलता** है, और पूरे वर्ष **स्वच्छ हवा** सुनिश्चित करने के लिए आवश्यक **धैर्यपूर्ण, सरल काम** से ध्यान भटकाने वाला है।

GS III: S&T

Questions and Answers to the previous day's daily quiz: 1. In 1939, Gerhard Domagk was not allowed by his government to accept the prize, but he later received a medal and diploma. Which government prevented him?

Ans: Nazi government

2. There were years in which the prize was not awarded, such as during World Wars I and II. How many years went by without the Prize for Medicine being announced? **Ans: 9 years**

3. Of the 14 women who received the Nobel Prize in Medicine, only one did not have to share it with others. Name this independent woman Nobel Laureate.

Ans: Barbara McClintock

4. Who was the youngest ever awardee of the Nobel Prize for medicine, and what was he awarded for? **Ans: Frederick G. Banting, for the discovery of insulin**

5. This Nobel laureate entered France's Institut Pasteur quite by accident as a volunteer. She went on to complete her PhD and was among three people who were awarded the Prize in 2008, for discoveries that helped the world understand viruses wreaking havoc. Who is she? **Ans: Françoise Barré-Sinoussi, for the discovery of the human immunodeficiency virus**

Visual: What makes this pair of Nobel Medicine laureates unique? **Ans: Gerty and Carl Cori — the first married couple to share the Nobel for Medicine in 1947. Gerty was also the first woman to be awarded a Nobel Prize in Medicine.**

Early Birds: Parimal Das | Sukdev Shet | Siddhartha Viswanathan | Sunil Madhavan | Rownak Mondal | Jyoti

QUIZ

Gerhard Domagk and the 1939 Nobel Prize Controversy

Introduction to Gerhard Domagk

- **Gerhard Domagk (1895–1964)** was a German pathologist and bacteriologist renowned for his discovery of the antibacterial properties of **sulfonamides**, particularly **prontosil**.
 - This breakthrough marked the advent of the **sulfa drug era**, revolutionizing the treatment of bacterial infections.
 - In recognition of his work, he was **awarded the Nobel Prize in Physiology or Medicine in 1939**.

The Nazi Government's Intervention

- In 1935, the Nobel Peace Prize was awarded to **Carl von Ossietzky**, a German pacifist and journalist imprisoned for his anti-Nazi stance.
 - This angered **Adolf Hitler**, leading to a decree on **January 31, 1937**, prohibiting **German nationals from accepting any Nobel Prize**.
- When Domagk was selected for the Nobel Prize in 1939, he sought permission from the Nazi authorities to accept it.
 - Despite his willingness to contribute **100,000 Deutsche Marks** to the war effort, the government **refused his request**.
 - Domagk was **arrested by the Gestapo on November 17, 1939**, detained for a week, and **coerced into declining the award**.

Post-War Recognition



- Following the end of **World War II** and the fall of the Nazi regime, Domagk was officially **presented with the Nobel diploma and medal in 1947**.
- The **monetary portion** of the prize had already been returned to the Nobel Foundation.

Conclusion

- The **Nazi government's intervention** in the Nobel Prize process exemplifies the regime's control over scientific and cultural affairs.
- Despite political pressures, Domagk's contributions to medicine remain a **significant achievement** in the history of medical science.

Nobel Prize in Physiology or Medicine: Years Without an Award

Introduction

The **Nobel Prize in Physiology or Medicine** is one of the five original Nobel Prizes established by **Alfred Nobel** in 1895. Since its inception in 1901, the prize has been awarded annually, with a few exceptions. Notably, there have been **nine years** in which the prize was not awarded. These omissions occurred during periods of global conflict, specifically during **World War I** and **World War II**.

Years Without an Award

The Nobel Prize in Physiology or Medicine was not awarded in the following years:

- 1915
- 1916
- 1917
- 1918
- 1921
- 1925
- 1940
- 1941
- 1942

Reasons for the Omissions

The Nobel Foundation's statutes state that if none of the works under consideration is deemed of sufficient importance, the prize money shall be reserved until the following year. If, even then, the prize cannot be awarded, the amount shall be added to the Foundation's restricted funds. During World War I and II, fewer Nobel Prizes were awarded, including the Medicine prize, due to the global turmoil and challenges in evaluating and selecting laureates.

Barbara McClintock: The Only Independent Woman Nobel Laureate in Medicine

Introduction

- **Barbara McClintock (1902–1992)** was an American cytogeneticist renowned for her groundbreaking research on **genetic transposition**, commonly known as "**jumping genes**".
- She conducted her pioneering work largely independently, without co-researchers, which is **rare among Nobel Prize winners**.
- Barbara McClintock was awarded the **Nobel Prize in Physiology or Medicine in 1983** for her discoveries on **genetic regulation and transposable elements in maize**.

Significance of Her Work



- McClintock's discovery of **transposable elements** demonstrated that genes are not static but can move within the genome, altering genetic expression.
- This fundamentally changed the understanding of **genetics and heredity**, paving the way for modern **molecular biology and genomics**.
- Her work provided insight into **genetic regulation, mutation, and evolution**.

Unique Achievement

- Of the **14 women who have received the Nobel Prize in Medicine**, Barbara McClintock is the **only one to receive it independently**, highlighting her exceptional contribution to science.
- Most other female laureates shared the prize with colleagues, reflecting the collaborative nature of modern scientific research.

Historical Context and Recognition

- McClintock's research was conducted at a time when **women in science faced significant barriers**, yet her meticulous experimental work earned global recognition.
- She conducted decades of research on **maize cytogenetics**, often working alone in her laboratory, which underscores her dedication and scientific rigor.

Conclusion

- **Barbara McClintock** remains an iconic figure in biology, not only for her Nobel-winning discoveries but also as a symbol of **independent scientific achievement**.
- Her work continues to influence **genetics, biotechnology, and genomics**, inspiring future generations of scientists, particularly women in STEM fields.

Frederick G. Banting: Youngest Ever Nobel Laureate in Medicine

Introduction

- **Frederick Grant Banting (1891–1941)** was a Canadian physician, surgeon, and medical scientist.
- He became the **youngest ever recipient of the Nobel Prize in Physiology or Medicine** at the age of **32** in **1923**.
- Banting was recognized for his groundbreaking work in the **discovery of insulin**, a hormone crucial for the treatment of **diabetes mellitus**.

Discovery of Insulin

- Prior to Banting's research, diabetes was often a fatal disease due to the body's inability to regulate blood sugar.
- Banting, working with **Charles Best** under the supervision of **John Macleod** at the University of Toronto, successfully **isolated insulin from the pancreas**.
- Their experiments demonstrated that **insulin injections could lower blood sugar levels**, revolutionizing the treatment of diabetes.
- This discovery transformed diabetes from a **fatal condition** into a **manageable disease**, saving millions of lives worldwide.

Significance of the Award

- Banting shared the Nobel Prize with **John Macleod**, recognizing their collaborative contribution, though Banting famously **shared his prize money with Charles Best**.
- The award highlighted the importance of **translational research**—taking scientific discoveries from the lab to practical clinical application.
- Banting's achievement also underscores the potential of **young scientists** to make monumental contributions to medicine.

Legacy



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

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

CONTACT: 9971932488



- Frederick Banting is remembered as a **pioneer in endocrinology and diabetes treatment**.
- His work laid the foundation for modern **insulin therapy** and continues to impact medical research and patient care.
- November 14, Banting's birthday, is commemorated as **World Diabetes Day** in honor of his contributions

Françoise Barré-Sinoussi: Nobel Laureate for HIV Discovery

Introduction

- **Françoise Barré-Sinoussi (b. 1947)** is a French virologist who made pioneering contributions to understanding **human immunodeficiency virus (HIV)**, the virus responsible for **AIDS**.
- She began her career at **France's Institut Pasteur** as a **volunteer**, an accidental entry that eventually led to a **PhD and a career in virology**.
- In **2008**, she was awarded the **Nobel Prize in Physiology or Medicine**, shared with **Luc Montagnier** and **Harald zur Hausen**, for their work on the **discovery of HIV**.

Significance of the Discovery

- HIV was identified as the **cause of AIDS**, a global epidemic affecting millions of people.
- Barré-Sinoussi and her team **isolated the virus from patients' lymph nodes**, demonstrating its link to immune system failure.
- This discovery provided the foundation for **diagnostic tests, antiretroviral therapy, and global HIV/AIDS control efforts**.

Scientific Contributions

- She specialized in **retrovirology**, focusing on the biology of HIV and its interaction with the human immune system.
- Her research has led to better understanding of **viral replication, immune response, and potential strategies for vaccine development**.
- Barré-Sinoussi has also advocated for **public health measures, patient care, and ethical research practices**.

Impact and Recognition

- The 2008 Nobel Prize recognized the **crucial role of her research** in identifying HIV, which transformed **epidemiology, virology, and global health responses**.
- She remains a **leading figure in HIV/AIDS research**, mentoring scientists and promoting international collaboration.
- Her journey from volunteer to Nobel laureate underscores the **importance of dedication, curiosity, and perseverance in scientific careers**.



'UPI leads in payment volume, RTGS value; debit card deals dip'

In the half year ended June 2025, payment transaction volume was 12,549 crore, amounting to ₹1,572 lakh crore, according to a RBI report

GS III: Economy

Lalatendu Mishra

MUMBAI

In terms of volume, payment transactions grew from 3,248 crore in Calendar Year (CY) 2019 to 20,849 crore in CY 2024 and in terms of value from ₹1,775 lakh crore to ₹2,830 lakh crore during this period, according to Payment Systems Report, a bi-annual publication released by the Reserve Bank of India (RBI).

In the half year (HY) ended June, transaction volume was 12,549 crore, amounting to ₹1,572 lakh crore. Almost all of the growth in payments was attributable to digital payment transactions.

"In CY19, digital payments accounted for approximately 96.7% of the total payment transactions by volume and 95.5% by value," as per the report.

By CY24, these figures had risen to 99.7% in terms of volume and 97.5% in terms of value.

The volume of UPI transactions has increased significantly from 1,079 crore transactions in CY19 to 17,221 crore transactions in CY24. The total value of transactions grew from ₹18.4 lakh crore in CY19 to ₹246.8 lakh crore in CY24.

In HI of CY25, the volume of UPI transactions stood at 10,637 crore amounting to ₹143.3 lakh



Small but big: Lower average size of UPI transactions indicates it is used mainly for small value transactions. GETTYIMAGES/ISTOCK

crore in value. During the period CY19 to CY24, NEFT transactions more than tripled in terms of volume, from 262.2 crore to 926.8 crore. However, during the same period, in terms of value, they grew from ₹232.9 lakh crore to ₹432.8 lakh crore.

In HI of CY25, NEFT already processed 490.5 crore transactions, worth ₹237 lakh crore, indicating sustained growth and widespread adoption.

RTGS surges

Large value payment system RTGS transactions volume grew from 14.8 crore in CY19 to 29.5 crore in CY24, while transaction value rose from ₹1,388.7 lakh crore to ₹1,938.2 lakh crore during this period.

In CY25, by HI alone, RTGS recorded 16.1 crore transactions amounting to ₹1,079.2 lakh crore, indi-

cating sustained growth and usage.

Debit cards dip

Transactions in debit cards witnessed a decline since 2019, both in volume and value. In volume terms, debit card transactions declined from 495.32 crore in CY19 to 173.80 crore in CY24, while in value terms, they declined from ₹6.83 lakh crore to ₹5.15 lakh crore during this period.

In HI 2025, debit cards recorded 69.09 crore transactions valued at ₹2.22 lakh crore. While Prepaid Payment Instrument (PPI) transaction volume rose from 516.2 crore in CY19 to 698.9 crore in CY24, transaction value remained almost at the same level of ₹2.23 lakh crore during this period. During HI of 2025, PPIs recorded transaction volume of 404.7 crore and value of ₹1.23 lakh crore.

UPI leads in payment volume, RTGS value; debit card deals dip'

'UPI भुगतान मात्रा में अग्रणी, RTGS मूल्य में बढ़त; डेबिट कार्ड लेनदेन में गिरावट'

• In the half year ended June 2025, payment transaction volume was 12,549 crore, amounting to ₹1,572 lakh crore, according to a RBI report.



जून 2025 में समाप्त अर्धवार्षिक अवधि में, भुगतान लेनदेन की मात्रा 12,549 करोड़ थी, जिसकी कुल राशि ₹1,572 लाख करोड़ थी, RBI रिपोर्ट के अनुसार।

• In terms of volume, payment transactions grew from 3,248 crore in Calendar Year (CY) 2019 to 20,849 crore in CY 2024 and in terms of value from ₹1,775 lakh crore to ₹2,830 lakh crore during this period, according to Payment Systems Report, a bi-annual publication released by the Reserve Bank of India (RBI).

मात्रा के लिहाज से, भुगतान लेनदेन 3,248 करोड़ से बढ़कर कैलेंडर वर्ष (CY) 2019 में 20,849 करोड़ और मूल्य के हिसाब से ₹1,775 लाख करोड़ से बढ़कर ₹2,830 लाख करोड़ हो गया, Payment Systems Report, जो Reserve Bank of India (RBI) द्वारा प्रकाशित अर्धवार्षिक रिपोर्ट है, के अनुसार।

• In the half year (HY) ended June, transaction volume was 12,549 crore, amounting to ₹1,572 lakh crore. Almost all of the growth in payments was attributable to digital payment transactions.

जून में समाप्त अर्धवार्षिक अवधि (HY) में, लेनदेन की मात्रा 12,549 करोड़ थी, जिसकी राशि ₹1,572 लाख करोड़ थी। भुगतान में लगभग सभी वृद्धि डिजिटल भुगतान लेनदेन के कारण हुई।

• "In CY19, digital payments accounted for approximately 96.7% of the total payment transactions by volume and 95.5% by value," as per the report.

रिपोर्ट के अनुसार, "CY19 में, डिजिटल भुगतान कुल लेनदेन का लगभग 96.7% मात्रा के हिसाब से और 95.5% मूल्य के हिसाब से था।"

- By CY24, these figures had risen to 99.7% in terms of volume and 97.5% in terms of value. **CY24 तक**, ये आंकड़े मात्रा के लिहाज से 99.7% और मूल्य के लिहाज से 97.5% तक बढ़ गए।
- The **volume of UPI transactions** has increased significantly from 1,079 crore transactions in CY19 to 17,221 crore transactions in CY24. **UPI लेनदेन की मात्रा** CY19 में 1,079 करोड़ से बढ़कर CY24 में 17,221 करोड़ हो गई।
- The **total value of transactions** grew from ₹18.4 lakh crore in CY19 to ₹246.8 lakh crore in CY24. **लेनदेन का कुल मूल्य** CY19 में ₹18.4 लाख करोड़ से बढ़कर CY24 में ₹246.8 लाख करोड़ हो गया।



- In H1 of CY25, the volume of **UPI transactions** stood at 10,637 crore amounting to ₹143.3 lakh crore in value.
CY25 की H1 में, **UPI लेनदेन की मात्रा** 10,637 करोड़ थी, जिसकी कुल राशि ₹143.3 लाख करोड़ थी।
- During the period CY19 to CY24, **NEFT transactions** more than tripled in terms of volume, from 262.2 crore to 926.8 crore.
CY19 से CY24 के बीच, **NEFT लेनदेन** मात्रा के लिहाज से 262.2 करोड़ से बढ़कर 926.8 करोड़ हो गए, यानी तीन गुना से अधिक।
- However, during the same period, in terms of **value**, they grew from ₹232.9 lakh crore to ₹432.8 lakh crore.
हालांकि, उसी अवधि में **मूल्य** के लिहाज से यह ₹232.9 लाख करोड़ से बढ़कर ₹432.8 लाख करोड़ हो गया।
- In H1 of CY25, **NEFT** already processed 490.5 crore transactions, worth ₹237 lakh crore, indicating sustained growth and widespread adoption.
CY25 की H1 में, **NEFT** ने पहले ही 490.5 करोड़ लेनदेन किए, जिनकी कुल मूल्य ₹237 लाख करोड़ थी, जो निरंतर वृद्धि और व्यापक अपनाने को दर्शाता है।

RTGS surges RTGS में उछाल

- Large value payment system **RTGS transactions volume** grew from 14.8 crore in CY19 to 29.5 crore in CY24, while **transaction value** rose from ₹1,388.7 lakh crore to ₹1,938.2 lakh crore during this period.
बड़े मूल्य वाले भुगतान प्रणाली **RTGS लेनदेन की मात्रा** CY19 में 14.8 करोड़ से बढ़कर CY24 में 29.5 करोड़ हो गई, जबकि **लेनदेन का मूल्य** ₹1,388.7 लाख करोड़ से बढ़कर ₹1,938.2 लाख करोड़ हो गया।
- In CY25, by H1 alone, **RTGS** recorded 16.1 crore transactions amounting to ₹1,079.2 lakh crore, indicating sustained growth and usage.
CY25 में, केवल H1 तक, **RTGS** ने 16.1 करोड़ लेनदेन दर्ज किए, जिनकी राशि ₹1,079.2 लाख करोड़ थी, जो निरंतर वृद्धि और उपयोग को दर्शाता है।

Debit cards dip डेबिट कार्ड में गिरावट

- Transactions in **debit cards** witnessed a decline since 2019, both in volume and value.
डेबिट कार्ड में लेनदेन 2019 से मात्रा और मूल्य दोनों में गिरावट दर्ज कर रहे हैं।
- In volume terms, **debit card transactions** declined from 495.32 crore in CY19 to 173.80 crore in CY24, while in value terms, they declined from ₹6.83 lakh crore to ₹5.15 lakh crore during this period.
मात्रा के हिसाब से, **डेबिट कार्ड लेनदेन** CY19 में 495.32 करोड़ से घटकर CY24 में 173.80 करोड़ हो गया, जबकि मूल्य के हिसाब से यह ₹6.83 लाख करोड़ से घटकर ₹5.15 लाख करोड़ हो गया।
- In H1 2025, **debit cards** recorded 69.09 crore transactions valued at ₹2.22 lakh crore.
H1 2025 में, **डेबिट कार्ड** ने 69.09 करोड़ लेनदेन दर्ज किए, जिनकी कुल मूल्य ₹2.22 लाख करोड़ थी।
- While **Prepaid Payment Instrument (PPI) transaction volume** rose from 516.2 crore in CY19 to 698.9 crore in CY24, transaction value remained almost at the same level of ₹2.23 lakh crore during this period.
जबकि **पूर्व-भुगतान भुगतान उपकरण (PPI) लेनदेन की मात्रा** CY19 में 516.2 करोड़ से बढ़कर CY24 में 698.9 करोड़ हो गई, लेनदेन का मूल्य लगभग समान ₹2.23 लाख करोड़ रहा।
- During H1 of 2025, **PPIs recorded transaction volume** of 404.7 crore and value of ₹1.23 lakh crore.
2025 की H1 में, **PPI** ने **404.7 करोड़ लेनदेन की मात्रा** और ₹1.23 लाख करोड़ का मूल्य दर्ज किया।



India's Russian crude imports in October remain 'robust': Kpler

GS III: Oil Import

The Hindu Bureau
NEW DELHI

India's imports of Russian crude oil remain 'robust', tracking at approximately 1.8 million barrels per day at present, provisionally up by 2,50,000 barrels per day from September, maritime data and analytics provider Kpler mentioned in a blogpost on Tuesday.

The blogpost added Russian barrels remained the 'largest single source of crude for India accounting for about 34% of the overall share and entailed 'compelling discounts' which were 'too significant for refiners to ignore'.

Thus, it sought to infer U.S. President Donald Trump's remarks initially made on October 15 suggesting India would reduce Russian crude imports, are "likely pressure tactics linked to trade negotiations." India's Russian oil-purchases have been the single major point of con-



Russian oil accounting for 34% of India's overall share: Kpler

tention in the talks for a favourable U.S. trade deal.

'Cutting imports costly'

With Moscow accounting for 30-35% of the Indian basket off late, the blog held, "substitution would require rapid scaling from multiple suppliers at higher costs."

Kpler also observed though there has been a stronger push for diversification, Russian contracts are typically signed 6-10 weeks before arrival. "Rewiring all that takes time."

single major point of contention in the talks for a favourable U.S. trade deal.

भारत की रूसी तेल खरीद एक अनुकूल अमेरिकी व्यापार समझौते के लिए वार्ता में एक प्रमुख विवाद का बिंदु रही है।

'Cutting imports costly'

'आयात घटाना महंगा'

- With Moscow accounting for 30-35% of the Indian basket of late, the blog held, "substitution would require rapid scaling from multiple suppliers at higher costs."
हाल ही में मॉस्को भारत की तेल बास्केट का 30-35% हिस्सा रखता है, ब्लॉग ने कहा, "प्रतिस्थापन के लिए कई आपूर्तिकर्ताओं से तेजी से आपूर्ति बढ़ाना और उच्च लागत का सामना करना पड़ेगा।"
- Kpler also observed though there has been a stronger push for diversification, Russian contracts are typically signed 6-10 weeks before arrival.
Kpler ने यह भी देखा कि हालांकि विविधीकरण के लिए अधिक जोर दिया गया है, रूसी अनुबंध आमतौर पर आगमन से 6-10 सप्ताह पहले हस्ताक्षरित किए जाते हैं।

India's Russian crude imports in October remain 'robust': Kpler
अक्टूबर में भारत के रूसी कूड आयात 'मजबूत' बने हुए हैं: Kpler

- India's imports of **Russian crude oil** remain 'robust', tracking at approximately 1.8 million barrels per day at present, provisionally up by 2,50,000 barrels per day from September, maritime data and analytics provider **Kpler** mentioned in a blogpost on Tuesday.



भारत का **रूसी कच्चा तेल आयात** 'मजबूत' बना हुआ है, वर्तमान में लगभग 1.8 मिलियन बैरल प्रति दिन की दर से ट्रैक कर रहा है, जो सितंबर से अस्थायी रूप से 2,50,000 बैरल प्रति दिन की वृद्धि दर्शाता है, समुद्री डेटा और एनालिटिक्स प्रदाता **Kpler** ने मंगलवार को एक ब्लॉग पोस्ट में उल्लेख किया।

- The blogpost added Russian barrels remained the 'largest single source of crude for India accounting for about 34% of the overall share and entailed 'compelling discounts' which were 'too significant for refiners to ignore'.

ब्लॉग पोस्ट में यह भी जोड़ा गया कि रूसी बैरल भारत के लिए कच्चे तेल का 'सबसे बड़ा एकल स्रोत' बना हुआ है, जो कुल हिस्सेदारी का लगभग 34% है और इसमें 'प्रभावशाली छूट' शामिल है, जिसे 'परिष्कर्ताओं द्वारा अनदेखा करना मुश्किल' है।

- Thus, it sought to infer U.S. President **Donald Trump's** remarks initially made on October 15 suggesting India would reduce Russian crude imports, are "likely pressure tactics linked to trade negotiations."

इसलिए, इसने यह अनुमान लगाने की कोशिश की कि अमेरिकी राष्ट्रपति **डोनाल्ड ट्रम्प** के 15 अक्टूबर को किए गए प्रारंभिक बयान, जिसमें भारत के रूसी कच्चा तेल आयात घटाने का संकेत दिया गया था, "संभावित दबाव रणनीतियाँ हैं जो व्यापार वार्ता से जुड़ी हैं।"

- India's Russian oil purchases have been the



- “Rewiring all that takes time.”
“सभी प्रक्रियाओं को फिर से व्यवस्थित करने में समय लगता है।”

What France and others can learn from Sweden’s hard budget lessons

Sweden’s public finances among the best in Europe; fiscal strength built on belt-tightening after crash in 1990s; among the most critical changes was a shift in pension system political polarisation makes lessons hard for Europe to follow; deeper crisis need prompt action from debt-heavy nations

GS III: Budgeting

NEWS ANALYSIS

Reuters
STOCKHOLM

When Sweden’s then-Finance Minister Goran Persson dashed to New York during the country’s early 1990s financial crisis to plead with Wall Street investors to keep buying its debt, he stayed in a budget hotel infested with cockroaches.

That reflected the Finance Ministry’s strict “absolutely no extravagance” policy, Mr. Persson, who later became PM, wrote in his 1997 book “Those Who Are in Debt Are Not Free”. Penny-pinching on Ministerial travel was one small part of a decades-long austerity drive, which has created fiscal leeway much of the belt-tightening Europe is lacking, allowing Sweden this year to pledge billions for defence, energy and tax cuts in its largest public spending package in decades.

The lessons for other countries, especially France, deep in its own budget crisis, are simple, if not easy. First, things may need to get really bad before politicians are ready to act. Secondly, buy-in from voters, unions and opposition parties is crucial for long-term success.

Finally, a strong global economy and a slice of



Trial by fire: Former Swedish PM Goran Persson during his visit to Tallinn, Estonia. REUTERS (FILE)

luck on timing really help.

Living beyond means

After decades of living beyond its means, Sweden’s debt had by 1994 roughly doubled to around 80% of gross domestic product from 44% in 1990. At worst, the budget deficit hit 12% and investor confidence collapsed and the Riksbank briefly hiked interest rates to 500%.

The government responded with cuts in spending on welfare, defence and education worth 8% of GDP. The economy shrank more than 1% three years in a row, unemployment soared and bank credit losses piled up in Sweden’s worst downturn since the 1930s Great Depression.

“We had a banking cri-



After decades of living beyond its means, Sweden’s debt had by 1994 roughly doubled to around 80% of gross domestic product from 44% in 1990

sis, a foreign exchange crisis and a debt crisis,” said Stefan Ingves, a former central bank governor who oversaw the clean up of Sweden’s “bad banks” after the crash.

“In some sense, we were at the end of the road,” he told Reuters.

The government set a spending ceiling and budgeted for surpluses over

the economic cycle. Pensions were reformed to encourage private savings and deepen capital markets, while labour unions and employers agreed to limit wage growth.

Gradually those reforms, helped by the fact that a weakened currency was boosting exports, started to work: the economy grew 4.1% in 1994, and debt fell below 50% of GDP within a decade.

“In an open economy, structural change pays,” Ingves said.

Among the most critical changes was a shift to a pension system where payments are adjusted for market returns and life expectancy, easing the pressure on the budget from the ageing population and

passing the shortfall risk onto individuals.

France, where the retirement age remains a hot-button issue, spends just over 13% of its GDP on pensions compared with 10.7% in Sweden, according to Eurostat data, and the gap is bigger when healthcare and other social benefits are included.

No free lunch

To be sure, it came at a price: thousands of public employees lost their jobs and Sweden was left with a legacy of underinvestment in infrastructure, from energy and transport networks to hospital beds. But painful memories of the crisis have ensured there has been no backsliding.

“Government after government has held the line,” Finance Minister Elisabeth Svantesson told Reuters. “There is a consensus, which is a strength for Sweden.”

Decades of frugality are now paying dividends. With public debt now at just over a third of GDP, Sweden was able to hike defence spending to 3.5% of GDP, pump up to 440 billion crowns (\$46.73 billion) into nuclear power expansion and provide 105 billion crowns to support Ukraine.

At the same time, the government cut income taxes and VAT on food and raised spending on job measures and yet its bor-

rowing costs remain lower than Germany’s. Unlike many other developed nations, Sweden also managed to ride out the financial crisis of 2008-2009 and the COVID pandemic without piling on much new debt. Replicating Sweden’s path, however, will be hard for France and other euro zone countries faced with rising debt.

Sweden’s exporters operated in a buoyant 1990s world economy fuelled by an IT boom and rapid globalisation – a far cry from the protectionist tilt seen from Washington to Beijing now. “Sweden was not okay, but the rest of the world was reasonably okay,” noted Ingves.

Moreover, since the 1990s the political landscape has become more fragmented with the rise of far-right parties across Europe – including in Sweden – making it much harder to build consensus on unpopular measures, such as tax hikes or welfare cuts. Ultimately, some argue, France has not yet reached a tipping point like Sweden did in the 1990s and Ireland, Portugal, Italy and Greece two decades later during the euro zone sovereign debt crisis, which forced them to repair their public finances.

Despite all its woes, France still has access to borrowing at a reasonably affordable 3.35%, allowing it to muddle through.

What France and others can learn from Sweden’s hard budget lessons

फ्रांस और अन्य देशों को स्वीडन के कड़े बजट पाठ से क्या सीखना चाहिए

- Sweden’s public finances are among the best in Europe; fiscal strength built on belt-tightening after the crash in 1990s; among the most critical changes was a shift in pension system; political polarisation makes lessons hard for Europe to follow; deeper crises need prompt action from debt-heavy nations.

स्वीडन की सार्वजनिक वित्त यूरोप में सबसे बेहतरीन में से हैं; वित्तीय मजबूती 1990 के दशक के संकट के बाद सख्त बजट नियंत्रण पर आधारित थी; सबसे महत्वपूर्ण बदलावों में से एक पेंशन प्रणाली में बदलाव था। राजनीतिक ध्रुवीकरण के कारण यूरोप के लिए इस पाठ का पालन करना मुश्किल है; गहरे संकट के लिए ऋण-भारी देशों से तुरंत कार्रवाई की आवश्यकता है।

- When Sweden’s then-Finance Minister Goran Persson dashed to New York during the country’s early 1990s financial crisis to plead with Wall Street investors to keep buying its debt, he stayed in a budget hotel infested with cockroaches.





जब स्वीडन के तब के वित्त मंत्री गोरान पर्सन ने देश के 1990 के दशक के प्रारंभिक वित्तीय संकट के दौरान न्यूयॉर्क की यात्रा की और वॉल स्ट्रीट निवेशकों से अपने ऋण खरीदते रहने की अपील की, तो उन्होंने एक बजट होटल में ठहराव किया जो कीड़े-मकोड़ों से भरा था।

- That reflected the Finance Ministry's strict "**absolutely no extravagance**" policy, Mr. Persson, who later became PM, wrote in his 1997 book "**Those Who Are in Debt Are Not Free**".
यह वित्त मंत्रालय की सख्त "कुल्लतावादी खर्च नहीं" नीति को दर्शाता था, जिसे बाद में पीएम बने श्री पर्सन ने अपनी 1997 की पुस्तक "जो लोग ऋण में हैं, वे स्वतंत्र नहीं हैं" में लिखा।
- **Penny-pinching on Ministerial travel** was one small part of a decades-long **austerity drive**, which has created **fiscal leeway** much of the belt-tightening Europe is lacking, allowing Sweden this year to pledge **billions for defence, energy and tax cuts** in its largest public spending package in decades.
मंत्री यात्रा पर तंगहाली कई दशकों की कठिन बजट नीति का एक छोटा हिस्सा थी, जिसने **वित्तीय गुंजाइश** पैदा की, जो यूरोप में बहुत कम है, और इसने स्वीडन को इस साल अपने सबसे बड़े सार्वजनिक खर्च पैकेज में **रक्षा, ऊर्जा और कर कटौती के लिए अरबों** देने की अनुमति दी।
- The lessons for other countries, especially **France**, deep in its own **budget crisis**, are simple, if not easy.
अन्य देशों के लिए पाठ, विशेष रूप से **फ्रांस**, जो अपनी **बजट संकट** में डूबा हुआ है, सरल हैं, अगर आसान नहीं हैं।
- First, things may need to get really bad before politicians are ready to act.
पहले, चीजें वास्तव में खराब हो सकती हैं इससे पहले कि राजनेता कार्रवाई करने के लिए तैयार हों।
- Secondly, **buy-in from voters, unions and opposition parties** is crucial for **long-term success**.
दूसरे, **मतदाताओं, संघों और विपक्षी दलों से समर्थन** दीर्घकालिक सफलता के लिए महत्वपूर्ण है।
- Finally, a **strong global economy** and a slice of **luck on timing** really help.
अंत में, एक **मजबूत वैश्विक अर्थव्यवस्था** और **समय पर थोड़ी किस्मत** वास्तव में मदद करती है।

Living beyond means आय से अधिक जीवन जीना

- After decades of living beyond its means, Sweden's **debt** had by **1994 roughly doubled** to around **80% of GDP** from **44% in 1990**.
आय से अधिक जीवन जीने के दशकों बाद, स्वीडन का ऋण **1994 तक लगभग दोगुना** हो गया था, जो **1990 में 44%** से बढ़कर **GDP का 80%** हो गया।
- At worst, the **budget deficit hit 12%** and **investor confidence collapsed** and the **Riksbank briefly hiked interest rates to 500%**.
सबसे खराब समय में, **बजट घाटा 12% तक पहुंच गया** और **निवेशक विश्वास ध्वस्त हो गया**, और **रिक्सबैंक ने अस्थायी रूप से ब्याज दरों को 500% तक बढ़ा दिया**।
- The government responded with **cuts in spending on welfare, defence and education worth 8% of GDP**.
सरकार ने **कल्याण, रक्षा और शिक्षा पर खर्च में कटौती GDP का 8%** करके प्रतिक्रिया दी।
- The economy shrank more than **1% three years in a row**, unemployment soared and **bank credit losses piled up** in Sweden's worst downturn since the **1930s Great Depression**.
अर्थव्यवस्था लगातार **तीन साल से अधिक 1%** सिकुड़ गई, बेरोजगारी बढ़ी और स्वीडन के सबसे खराब मंदी में **बैंक ऋण हानि बढ़ गई**, जो **1930 के दशक के महान मंदी** के बाद की सबसे खराब स्थिति थी।
- "We had a banking crisis, a foreign exchange crisis and a debt crisis," said **Stefan Ingves**, a former **central bank governor** who oversaw the clean up of Sweden's "**bad banks**" after the crash.
"हमारे पास बैंकिंग संकट, विदेशी मुद्रा संकट और ऋण संकट था," कहा **स्टेफन इंग्वेस**, एक पूर्व **सेंट्रल बैंक गवर्नर**, जिन्होंने क्रेश के बाद स्वीडन के "**खराब बैंकों**" की सफाई देखी।
- "In some sense, we were at the end of the road," he told **Reuters**.
"किसी मायने में, हम रास्ते के अंत पर थे," उन्होंने **रॉयटर्स** से कहा।
- The government set a **spending ceiling** and budgeted for **surpluses over the economic cycle**.
सरकार ने **खर्च की छत** तय की और **आर्थिक चक्र के दौरान अधिशेष** के लिए बजट बनाया।



- **Pensions** were reformed to encourage **private savings** and deepen **capital markets**, while **labour unions and employers agreed to limit wage growth**.
पेंशन को निजी बचत को प्रोत्साहित करने और पूंजी बाजारों को गहरा करने के लिए सुधार किया गया, जबकि श्रम संघों और नियोजकों ने वेतन वृद्धि को सीमित करने पर सहमति दी।
- Gradually those reforms, helped by the fact that a **weakened currency was boosting exports**, started to work: the economy grew **4.1% in 1994**, and debt fell below **50% of GDP within a decade**.
धीरे-धीरे ये सुधार, इस तथ्य की मदद से कि **कमजोर मुद्रा निर्यात बढ़ा रही थी**, काम करने लगे: अर्थव्यवस्था **1994 में 4.1% बढ़ी**, और ऋण एक दशक के भीतर **GDP का 50% से नीचे गिर गया**।
- “In an open economy, structural change pays,” **Ingves** said.
“एक खुली अर्थव्यवस्था में, संरचनात्मक बदलाव फल देता है,” **इंग्वेस** ने कहा।
- Among the most critical changes was a shift to a **pension system** where payments are **adjusted for market returns and life expectancy**, easing the pressure on the budget from the **ageing population** and passing the **shortfall risk onto individuals**.
सबसे महत्वपूर्ण बदलावों में से एक **पेंशन प्रणाली में बदलाव** था, जहां भुगतान **बाजार रिटर्न और जीवन प्रत्याशा के अनुसार समायोजित** होते हैं, **बुजुर्ग आबादी** से बजट पर दबाव कम करते हैं और **घाटे का जोखिम व्यक्तियों पर डालते हैं**।
- France, where the **retirement age remains a hot-button issue**, spends just over **13% of its GDP on pensions** compared with **10.7% in Sweden**, according to **Eurostat data**, and the gap gets bigger when **healthcare and other social benefits are included**.
फ्रांस, जहां **सेवानिवृत्ति आयु एक संवेदनशील मुद्दा** बनी हुई है, **GDP का सिर्फ 13% पेंशन पर खर्च** करता है, जबकि **स्वीडन में 10.7% है**, **यूरोस्टैट डेटा** के अनुसार, और जब **स्वास्थ्य देखभाल और अन्य सामाजिक लाभ शामिल** होते हैं, तो अंतर और बढ़ जाता है।

No free lunch

कोई मुफ्त का भोजन नहीं

- To be sure, it came at a price: **thousands of public employees lost their jobs** and Sweden was left with a legacy of **underinvestment in infrastructure**, from energy and transport networks to hospital beds.
निश्चित रूप से, इसका एक मूल्य था: **हजारों सार्वजनिक कर्मचारियों ने अपनी नौकरी खो दी** और स्वीडन **इन्फ्रास्ट्रक्चर में कम निवेश की विरासत** के साथ रह गया, ऊर्जा और परिवहन नेटवर्क से लेकर अस्पताल के बिस्तरों तक।
- But painful memories of the crisis have ensured there has been **no backsliding**.
लेकिन संकट की पीड़ादायक यादों ने सुनिश्चित किया है कि **कोई पीछे हटाव नहीं हुआ**।
- “Government after government has held the line,” Finance Minister **Elisabeth Svantesson** told **Reuters**. “There is a **consensus**, which is a **strength for Sweden**.”
“सरकार दर सरकार ने सीमा बनाए रखी है,” वित्त मंत्री **एलिज़ाबेथ स्वांटेसेन** ने **रॉयटर्स** से कहा। “एक **सहमति है**, जो स्वीडन के लिए **मजबूती है**।”
- Decades of frugality are now **paying dividends**.
कई दशकों की कफायत अब **फायदा दे रही है**।
- With public debt now at just over a **third of GDP**, Sweden was able to **hike defence spending to 3.5% of GDP**, pump up to **440 billion crowns (\$46.73 billion)** into nuclear power expansion and provide **105 billion crowns to support Ukraine**.
सार्वजनिक ऋण अब सिर्फ **GDP का एक तिहाई से अधिक** होने के साथ, स्वीडन **रक्षा खर्च को GDP का 3.5% तक बढ़ाने**, **न्यूक्लियर पावर विस्तार में 440 बिलियन क्रोन (\$46.73 बिलियन)** डालने और **यूक्रेन का समर्थन करने के लिए 105 बिलियन क्रोन** देने में सक्षम था।
- At the same time, the government **cut income taxes and VAT on food** and raised spending on **job measures** and yet its **borrowing costs remain lower than Germany's**.
साथ ही, सरकार ने **आयकर और खाद्य पदार्थों पर VAT कम किया** और **रोजगार उपायों पर खर्च बढ़ाया** और फिर भी इसका **ऋण लागत जर्मनी से कम बनी हुई है**।
- Unlike many other developed nations, Sweden also managed to **ride out the financial crisis of 2008-2009 and the COVID pandemic without piling on much new debt**.
कई अन्य विकसित देशों के विपरीत, स्वीडन ने भी **2008-2009 के वित्तीय संकट और COVID महामारी का सामना बिना ज्यादा नया ऋण लिए किया**।



- Replicating Sweden's path, however, will be **hard for France and other euro zone countries faced with rising debt.**
हालांकि, स्वीडन के रास्ते को दोहराना फ्रांस और अन्य यूरो ज़ोन देशों के लिए, जो बढ़ते ऋण का सामना कर रहे हैं, मुश्किल होगा।
- Sweden's **exporters operated in a buoyant 1990s world economy** fuelled by an IT boom and rapid globalisation — a far cry from the **protectionist tilt seen from Washington to Beijing now.**
स्वीडन के निर्यातक 1990 के दशक की प्रफुल्लित विश्व अर्थव्यवस्था में काम कर रहे थे, जो IT बूम और तेजी से वैश्वीकरण से प्रेरित थी — यह अब वाशिंगटन से बीजिंग तक देखे जा रहे संरक्षणवादी झुकाव से बहुत अलग था।
- "Sweden was not okay, but the rest of the world was reasonably okay," noted **Ingves.**
"स्वीडन ठीक नहीं था, लेकिन दुनिया का बाकी हिस्सा काफी हद तक ठीक था," इंग्वेस ने नोट किया।
- Moreover, since the 1990s the **political landscape has become more fragmented** with the rise of **far-right parties across Europe - including in Sweden** - making it much harder to build **consensus on unpopular measures**, such as **tax hikes or welfare cuts.**
इसके अलावा, 1990 के दशक के बाद से राजनीतिक परिदृश्य अधिक विभाजित हो गया है, यूरोप में अत्यधिक-दक्षिणपंथी दलों के उदय के साथ - स्वीडन सहित - जिससे अप्रिय उपायों पर सहमति बनाना, जैसे कर वृद्धि या कल्याण कटौती, बहुत कठिन हो गया है।
- Ultimately, some argue, France has not yet reached a **tipping point** like Sweden did in the 1990s and Ireland, Portugal, Italy and Greece two decades later during the **euro zone sovereign debt crisis**, which forced them to repair their **public finances.**
अंततः, कुछ का तर्क है, फ्रांस अभी तक एक निर्णायक बिंदु तक नहीं पहुंचा है जैसा कि स्वीडन ने 1990 के दशक में किया था और आयरलैंड, पुर्तगाल, इटली और ग्रीस दो दशक बाद यूरो ज़ोन **sovereign debt crisis** के दौरान पहुंचे थे, जिसने उन्हें अपने सार्वजनिक वित्त सुधारने के लिए मजबूर किया।
- Despite all its woes, France still has access to borrowing at a reasonably **affordable 3.35%**, allowing it to muddle through.
अपनी सभी परेशानियों के बावजूद, फ्रांस अभी भी **तर्कसंगत रूप से किफायती 3.35%** दर पर ऋण लेने की सुविधा रखता है, जिससे इसे मुश्किल हालात में भी गुजरना आसान हो जाता है।