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# PATRIOTIC IAS

## THE HINDU NEWSPAPER

### DAILY CURRENT AFFAIRS

#### 21 APRIL 2025

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

1. Cloudburst Havoc in Jammu and Kashmir

जम्मू और कश्मीर में बादल फटने की तबाही

2. Vance meets Pope on Easter Sunday after tangle over migration

प्रवासन पर विवाद के बाद वेंस ने ईस्टर संडे पर पोप से मुलाकात की

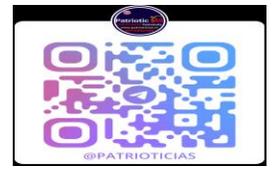
3. DR Congo authorities suspend party of former President Kabila

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डीआर कांगो प्रशासन ने पूर्व राष्ट्रपति कबीला की पार्टी को निलंबित किया

#### 4. Rising military role and threats against journalists raise alarm in Indonesia

इंडोनेशिया में बढ़ती सैन्य भूमिका और पत्रकारों को धमकियाँ चिंता का कारण बनीं

#### 5. Cut off from medical aid, neighbours save wounded in besieged Sudan city

चिकित्सीय सहायता से कटे सूडान के घिरे शहर में पड़ोसी बचा रहे हैं घायल

## Five feared dead in J&K in cloudburst havoc

Govt. yet to issue official number of people dead or injured; more than 100 rescued in Ramban after landslips, flash floods leave people stranded; IMD forecasts inclement weather till Tuesday; five places along the Srinagar-Jammu National Highway at Ramban were blocked; CM Omar Abdullah says the focus now is on managing situation

GS Paper I: Geography  
**Peerzada Ashiq**  
SRINAGAR

Jammu and Kashmir grappled with the trail of destruction left behind by cloudbursts and flash floods over the weekend, with at least five people feared dead and hundreds more left stranded and needing rescue. Scores of vehicles were either pushed into deep gorges or buried under unprecedented landslips in Ramban district.

Three people, two children among them, were killed when a house collapsed in Bagna in Ramban, officials said. However, the J&K government has not issued any official death toll or the number of the injured.

Gujjar community leader Talib Hussain said two people were killed after lightning struck Jameedi village in Arnas, Reasi, on Sunday. He added that



Swept away: Vehicles stuck in debris after heavy rain and flash floods in Ramban, J&K, on Sunday. PTI

around 40 cattle were killed in the lightning.

Senior Superintendent of Police (SSP), Ramban, Kulbir Singh told presspersons that more than 100 people had been rescued in the district.

Chief Minister Omar Abdullah said he was extremely anguished by the

tragic events, "which have caused considerable damage to life and property".

#### Freaky weather

Parts of the Union Territory witnessed freaky weather over a 48-hour-period, marked by lightning, gusty winds, hailstorms, and snowfall.

Five places along the Srinagar-Jammu National Highway at Ramban were blocked following the sudden change in weather. Debris from the landslip-damaged houses and shops along the highway and parts of the highway itself. Dozens of commuters also remained stranded on

the highway that connects the Kashmir Valley with the Jammu division.

#### Rescue and relief

"We are in touch with the local administration to ensure immediate rescue efforts wherever needed. Later today, I will be reviewing restoration, relief, and repair plans. For now, the focus remains on managing the situation on the ground. Citizens are advised to follow travel advisories and avoid non-essential movement in vulnerable areas," Mr. Abdullah said.

Union Minister and BJP MP for Udhampur Jitendra Singh posted on X: "There was a heavy hailstorm, multiple landslides and fast winds throughout the night in the Ramban region, including the areas surrounding the Ramban town. The National Highway stands blocked and unfortunately there have

been three casualties and loss of property for a couple of families."

The MP said he was in "constant touch with Deputy Commissioner Baseer-ul-Haq Chaudhary".

The district administration deserves appreciation for timely and prompt action, which helped save several precious lives, he said, adding that every kind of relief, both financial and otherwise, is being provided. The DC has been told that whatever more is required can be provided from the MP's personal resources as well. "The request is not to panic. We shall all together overcome this natural calamity," Mr. Singh said.

#### Bad weather forecast

The India Meteorological Department's centre in Srinagar issued a fresh weather advisory regarding an active Western Disturbance expected to affect

J&K from April 20, with improvement expected from April 22. It warned of thunderstorms, lightning, hailstorm and gusty winds, especially across the Pir Panjal Range, Jammu Division, and the middle and higher reaches of Kashmir Division.

It urged the public to avoid visiting riverbanks, streams, and other water bodies. "Do not travel to higher reaches unless absolutely necessary. Secure loose items and avoid taking shelter under trees during thunderstorms. Farmers are advised to take necessary precautions to protect crops and livestock," it added.

In view of the inclement weather and heavy rain, causing flash floods, all government and private schools, colleges and technical education institutions in Ramban district will remain closed on April 21, officials said.

## Cloudburst Havoc in Jammu and Kashmir

जम्मू और कश्मीर में बादल फटने की तबाही



## Five feared dead in J&K in cloudburst havoc

### जम्मू-कश्मीर में बादल फटने की तबाही में पाँच लोगों की मौत की आशंका

- Jammu and Kashmir grappled with the trail of destruction left behind by **cloudbursts and flash floods** over the weekend.

जम्मू और कश्मीर ने सप्ताहांत में **बादल फटने और बाढ़** से हुई तबाही का सामना किया।

- At least **five people** are feared dead and **hundreds** more were left stranded and needed rescue.

कम से कम **पाँच लोगों** के मरने की आशंका है और **सैकड़ों** लोग फंसे हुए थे जिन्हें बचाव की आवश्यकता थी।

## Destruction in Ramban District

### रामबन जिले में तबाही

- **Scores of vehicles** were either pushed into **deep gorges** or buried under **landslips** in Ramban district.

रामबन जिले में **कई वाहन** या तो **गहरी खाइयों** में गिर गए या **भूस्खलन** में दब गए।

- Three people, including **two children**, were killed when a **house collapsed** in **Bagna**, Ramban.

रामबन के **बगना** में एक **मकान** गिरने से **तीन लोगों**, जिनमें **दो बच्चे** शामिल हैं, की मौत हो गई।

- The **J&K government** has not issued any **official death toll** or the number of **injured**. **जम्मू-कश्मीर सरकार** ने अब तक **आधिकारिक मृत्यु संख्या** या **घायलों** की संख्या जारी नहीं की है।

## Lightning Strikes in Reasi

### रियासी में आकाशीय बिजली का प्रकोप

- **Gujjar leader Talib Hussain** reported that **two people** were killed after **lightning struck** Jamedi village in **Arnas**, Reasi.

**गुज्जर नेता तालीब हुसैन** ने बताया कि रियासी के **अर्नास** के **जमेड़ी गांव** में **आकाशीय बिजली** गिरने से **दो लोगों** की मौत हुई।

- Around **40 cattle** were also killed in the lightning.

**लगभग 40 मवेशियों** की भी **आकाशीय बिजली** से मौत हुई।

## Rescue Operations

### बचाव कार्य

- **SSP Ramban, Kulbir Singh**, said that more than **100 people** were **rescued** in the district.

रामबन के **एसएसपी कुलबीर सिंह** ने बताया कि जिले में **100 से अधिक लोगों** को **बचाया** गया।



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- Chief Minister Omar Abdullah expressed grief over the **loss of life and property**.  
मुख्यमंत्री उमर अब्दुल्ला ने जन और धन की हानि पर गहरा दुख व्यक्त किया।

## Freaky Weather Conditions

### असामान्य मौसम की स्थिति

- Parts of the **Union Territory** witnessed **freak weather** over **48 hours**, including **lightning, gusty winds, hailstorms, and snowfall**.  
संघ राज्य क्षेत्र के हिस्सों में 48 घंटों तक आकाशीय बिजली, तेज हवाएं, ओलावृष्टि और बर्फबारी जैसे असामान्य मौसम की घटनाएं हुईं।

## Highway Blocked at Multiple Places

### कई स्थानों पर हाईवे अवरुद्ध

- **Five places** along the **Srinagar-Jammu National Highway** at **Ramban** were blocked due to landslides.  
रामबन में श्रीनगर-जम्मू राष्ट्रीय राजमार्ग के पाँच स्थानों पर भूस्खलन के कारण रास्ता अवरुद्ध हो गया।
- **Debris from the landslip** damaged **houses, shops, and parts of the highway**.  
भूस्खलन का मलबा कई घरों, दुकानों और हाईवे के हिस्सों को नुकसान पहुंचा गया।
- **Dozens of commuters** were **stranded** on the highway connecting **Kashmir Valley with Jammu Division**.  
कश्मीर घाटी और जम्मू डिवीजन को जोड़ने वाले हाईवे पर दर्जनों यात्री फंसे रहे।

## CM Omar Abdullah's Response

### मुख्यमंत्री उमर अब्दुल्ला की प्रतिक्रिया

- “We are in touch with local administration to ensure **immediate rescue efforts**,” said Omar Abdullah.  
उमर अब्दुल्ला ने कहा, “हम स्थानीय प्रशासन के संपर्क में हैं ताकि **तत्काल बचाव कार्य** सुनिश्चित किया जा सके।”
- He added that **restoration, relief, and repair plans** will be reviewed later, but the **current focus** is on **managing the situation on ground**.  
उन्होंने कहा कि बाद में **बहाली, राहत और मरम्मत की योजना** की समीक्षा की जाएगी, लेकिन फिलहाल **स्थानीय स्तर पर स्थिति को संभालना** प्राथमिकता है।
- Citizens are advised to follow **travel advisories** and **avoid non-essential movement** in vulnerable areas.  
नागरिकों को यात्रा परामर्श का पालन करने और **जोखिम वाले क्षेत्रों में अनावश्यक आवाजाही** से बचने की सलाह दी गई है।

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## Statement from Union Minister Jitendra Singh

### केंद्रीय मंत्री जितेंद्र सिंह का बयान

- He reported **heavy hailstorm, landslides, and fast winds** in Ramban region throughout the night.  
उन्होंने बताया कि रामबन क्षेत्र में रातभर तेज ओलावृष्टि, भूस्खलन और तेज हवाएं चलीं।
- The **National Highway** was **blocked** and there were **three casualties** along with **property loss**.  
राष्ट्रीय राजमार्ग अवरुद्ध हो गया और तीन लोगों की मौत के साथ संपत्ति का नुकसान भी हुआ।
- He praised the **district administration**, especially **Deputy Commissioner Baseer-ul-Haq Chaudhary**, for **timely action**.  
उन्होंने जिला प्रशासन, विशेष रूप से उपायुक्त बसीर-उल-हक चौधरी की समय पर कार्रवाई के लिए प्रशंसा की।
- He assured that **financial and other relief** is being provided and **more assistance** will be arranged if needed.  
उन्होंने आश्वासन दिया कि **वित्तीय और अन्य सहायता** दी जा रही है और **आवश्यकता पड़ने पर और सहायता** उपलब्ध कराई जाएगी।
- “We shall all together overcome this **natural calamity**,” he said.  
उन्होंने कहा, “हम सभी मिलकर इस **प्राकृतिक आपदा** को पार करेंगे।”

## Bad Weather Forecast

### खराब मौसम का पूर्वानुमान

- The **India Meteorological Department (IMD)** warned of an **active Western Disturbance** affecting J&K from **April 20**, with **improvement from April 22**.  
भारतीय मौसम विभाग (IMD) ने 20 अप्रैल से जम्मू-कश्मीर में पश्चिमी विक्षोभ के सक्रिय होने और 22 अप्रैल से सुधार की चेतावनी दी है।
- The IMD forecasted **thunderstorms, lightning, hailstorm, and gusty winds** across the **Pir Panjal Range, Jammu Division, and higher reaches of Kashmir**.  
IMD ने पीर पंजाल रेंज, जम्मू डिवीजन और कश्मीर के ऊंचाई वाले क्षेत्रों में गरज, आकाशीय बिजली, ओलावृष्टि और तेज हवाओं की भविष्यवाणी की है।
- People were urged to **avoid riverbanks, streams, and higher reaches** unless absolutely necessary.  
लोगों को नदियों, नालों और ऊंचाई वाले क्षेत्रों से दूरी बनाए रखने की सलाह दी गई है जब तक कि अत्यधिक जरूरी न हो।
- Citizens should **secure loose items, avoid sheltering under trees**, and **farmers** are advised to **protect crops and livestock**.  
नागरिकों को ढीली वस्तुओं को सुरक्षित करने, पेड़ों के नीचे शरण लेने से बचने, और किसानों को फसल और पशुधन की सुरक्षा की सलाह दी गई है।



## School Closures

### विद्यालय बंद

- Due to heavy rain and flash floods, all government and private schools, colleges, and technical institutions in Ramban district will remain closed on April 21.  
भारी बारिश और बाढ़ के कारण रामबन जिले के सभी सरकारी और निजी स्कूल, कॉलेज और तकनीकी संस्थान 21 अप्रैल को बंद रहेंगे।

## Cloudburst

### क्लाउडबर्स्ट

- A cloudburst is an extreme weather event characterized by intense rainfall over a localized area in a short duration.  
क्लाउडबर्स्ट एक तीव्र मौसमीय घटना है जिसमें कम समय में स्थानीय क्षेत्र में भारी वर्षा होती है।
- According to the India Meteorological Department (IMD), a cloudburst involves rainfall of 100 mm or more within an hour over an area of approximately 20 to 30 square kilometers.  
भारतीय मौसम विभाग (IMD) के अनुसार, क्लाउडबर्स्ट में एक घंटे में 100 मिमी या उससे अधिक वर्षा होती है जो लगभग 20 से 30 वर्ग किलोमीटर के क्षेत्र में होती है।
- Such events can lead to flash floods, landslides, and significant damage to infrastructure and life.  
इस तरह की घटनाएं फ्लैश फ्लड, भूस्खलन, और अवसंरचना और जीवन को गंभीर नुकसान पहुंचा सकती हैं।

### Mechanism Behind Cloudbursts

#### क्लाउडबर्स्ट के पीछे का तंत्र

- **Orographic Lift:** In mountainous regions, moist air is forced to ascend due to terrain elevation. As the air rises, it cools and condenses rapidly, leading to heavy precipitation.  
ओरोग्राफिक लिफ्ट: पर्वतीय क्षेत्रों में, आर्द्र वायु को पहाड़ी ढाल के कारण ऊपर उठने के लिए मजबूर किया जाता है। जैसे-जैसे यह हवा ऊपर उठती है, यह ठंडी होकर तेजी से संघनित होती है, जिससे भारी वर्षा होती है।
- **Convective Activity:** Strong convection currents can cause the formation of large cumulonimbus clouds. When the upward air currents weaken, accumulated moisture is released suddenly as intense rainfall.  
संवहन गतिविधि: मजबूत संवहन धाराएं बड़े क्यूमुलोनिंबस बादलों का निर्माण कर सकती हैं। जब ऊर्ध्व वायु प्रवाह कमजोर हो जाते हैं, तो संचित आर्द्रता अचानक तेज वर्षा के रूप में गिरती है।
- **Atmospheric Instability:** The interaction between warm, moist air and cooler air masses can result in rapid condensation and precipitation.  
वायुमंडलीय अस्थिरता: गर्म, आर्द्र वायु और ठंडी वायु धाराओं के बीच की परस्पर क्रिया से तेजी से संघनन और वर्षा हो सकती है।



GS Paper II: Government Policy

Delhi Chief Minister Rekha Gupta flagged off **1,111 location-enabled tankers** on Sunday. The tankers that can be tracked from the Jal Board have been deployed in view of the summer. SHIV KUMAR PUSHPAKAR (REPORT: PAGE 2)

## Quiz

### Elastic Rebound Theory

### इलास्टिक रिबाउंड सिद्धांत

- On **April 18, 1906**, at approximately **5:12 a.m. local time**, a powerful earthquake struck near **San Francisco, California**.  
18 अप्रैल 1906 को स्थानीय समयानुसार लगभग सुबह 5:12 बजे, सैन फ्रांसिस्को, कैलिफोर्निया के पास एक प्रबल भूकंप आया।
- The earthquake had an estimated **magnitude of 7.9** and was centered along the **San Andreas Fault**.  
इस भूकंप की अनुमानित तीव्रता 7.9 थी और इसका केंद्र सैन एंड्रियास फॉल्ट के साथ स्थित था।
- The disaster resulted in the destruction of over **28,000 buildings** and claimed more than **3,000 lives**, making it one of the most **devastating earthquakes** in **U.S. history**.



इस आपदा के कारण 28,000 से अधिक इमारतें नष्ट हो गईं और 3,000 से अधिक लोगों की जान चली गई, जिससे यह अमेरिकी इतिहास के सबसे विनाशकारी भूकंपों में से एक बन गया।

### Development of the Elastic Rebound Theory

#### इलास्टिक रिबाउंड सिद्धांत का विकास

- In the aftermath of the earthquake, **Harry Fielding Reid**, a geophysicist from **Johns Hopkins University**, conducted **extensive studies** on the **displacement of the Earth's surface** along the **San Andreas Fault**.  
भूकंप के बाद, **जॉन्स हॉपकिन्स विश्वविद्यालय** के भूभौतिक वैज्ञानिक **हैरी फील्डिंग रीड** ने **सेन एंड्रियास फॉल्ट** के साथ **पृथ्वी की सतह के विस्थापन पर विस्तृत अध्ययन** किया।
- Reid observed that the ground on either side of the fault had shifted by as much as **3.2 meters** (approximately **10.5 feet**), indicating a **significant release of accumulated strain**.  
रीड ने देखा कि फॉल्ट के दोनों ओर की भूमि में लगभग **3.2 मीटर** (लगभग **10.5 फीट**) का विस्थापन हुआ था, जो जमा हुए तनाव के **महत्वपूर्ण उत्सर्जन** को दर्शाता है।
- Based on these observations, Reid proposed the **Elastic Rebound Theory** in **1910**, which posits that:  
इन अवलोकनों के आधार पर, रीड ने **1910** में **इलास्टिक रिबाउंड सिद्धांत** प्रस्तावित किया, जो यह मानता है कि:
  - **Tectonic plates** are constantly moving, causing **stress to build up** in the **Earth's crust**.  
**टेक्टोनिक प्लेटें लगातार हिलती रहती हैं, जिससे पृथ्वी की सतह में तनाव धीरे-धीरे जमा होता है।**
  - When the **stress exceeds the strength of rocks** along a fault line, it results in a **sudden release of energy**, causing the rocks to "**snap back**" to their original shape, leading to an **earthquake**.  
**जब यह तनाव चट्टानों की सहनशक्ति से अधिक हो जाता है, तब ऊर्जा का अचानक उत्सर्जन होता है और चट्टानें अपनी मूल स्थिति में वापस लौट जाती हैं, जिससे भूकंप आता है।**

### Significance of the Elastic Rebound Theory

#### इलास्टिक रिबाउंड सिद्धांत का महत्व

- Reid's theory provided a **fundamental explanation** for the **mechanics of earthquakes**, emphasizing the role of **accumulated elastic strain** and **sudden release** along fault lines.  
रीड के सिद्धांत ने **भूकंप के यांत्रिकी** के लिए एक **मौलिक व्याख्या** प्रस्तुत की, जिसमें **जमे हुए इलास्टिक तनाव** और **फॉल्ट लाइनों के साथ उसके अचानक मुक्त होने** की भूमिका को प्रमुखता दी गई।
- The **Elastic Rebound Theory** remains a **cornerstone** in the field of **seismology** and has been instrumental in understanding **earthquake cycles** and predicting **seismic activity**.  
**इलास्टिक रिबाउंड सिद्धांत, भूकंप विज्ञान के क्षेत्र में आज भी एक मूल आधार है और यह भूकंप चक्रों को समझने और भूकंपीय गतिविधियों की भविष्यवाणी करने में महत्वपूर्ण रहा है।**



## Vance meets Pope on Easter Sunday after tangle over migration



GS Paper I: A&C

AP

U.S. Vice-President J.D. Vance met with Pope Francis on Sunday to exchange Easter greetings, after they got into a long-distance tangle over the Trump administration's migrant deportation plans. Later, the Pope, recovering from a bout of pneumonia, emerged from his convalescence to bless thousands of people in St. Peter's Square. AP

**Vance meets Pope on Easter Sunday after tangle over migration**

**प्रवासन पर विवाद के बाद वेंस ने ईस्टर संडे पर पोप से मुलाकात की**

**U.S. Vice-President J.D. Vance met with Pope Francis on Sunday to exchange Easter greetings.**

**अमेरिकी उपराष्ट्रपति जेडी वेंस ने रविवार को पोप फ्रांसिस से मुलाकात की और ईस्टर की शुभकामनाएं साझा कीं।**

- This meeting followed a **long-distance disagreement** over the **Trump administration's migrant deportation plans**.  
यह मुलाकात ट्रंप प्रशासन की प्रवासी निर्वासन योजनाओं को लेकर हुए लंबी दूरी के विवाद के बाद हुई।
- Later, the **Pope**, who is recovering from a **bout of pneumonia**, came out of **convalescence** to **bless thousands** gathered in **St. Peter's Square**.  
बाद में न्युमोनिया से उबर रहे पोप ने सेंट पीटर्स स्क्वायर में इकट्ठा हुए हजारों लोगों को आशीर्वाद देने के लिए आरामावस्था से बाहर आकर उपस्थित हुए।



## KINSHASA

# DR Congo authorities suspend party of former President Kabila



GS Paper I: Mapping

REUTERS

The Democratic Republic of Congo government said it suspended the political party of former President Joseph Kabila, days after his properties were raided by security services. "This decision follows the overt activism" of Kabila, who was President for 18 years up to 2019 and remains the head of his PPRD party. AFP

की।

- This came just days after his properties were raided by security services.  
यह कदम उनके संपत्तियों पर सुरक्षा एजेंसियों द्वारा छापेमारी के कुछ दिनों बाद उठाया गया।

Authorities stated the decision was due to the overt activism of Joseph Kabila, who served as President for 18 years until 2019 and remains the head of the PPRD party. प्रशासन के अनुसार यह निर्णय जोसेफ कबीला की खुले रूप में की जा रही सक्रियता के कारण लिया गया, जो 2019 तक 18 वर्षों तक राष्ट्रपति रहे और अब भी पीपीआरडी पार्टी के प्रमुख हैं।

**DR Congo authorities suspend party of former President Kabila**

**डीआर कांगो प्रशासन ने पूर्व राष्ट्रपति कबीला की पार्टी को निलंबित किया**

**The Democratic Republic of Congo government announced the suspension of the political party of former President Joseph Kabila.**

**कांगो लोकतांत्रिक गणराज्य की सरकार ने पूर्व राष्ट्रपति जोसेफ कबीला की राजनीतिक पार्टी को निलंबित करने की घोषणा**



# Rising military role and threats against journalists raise alarm in Indonesia

Under President Prabowo Subianto, parliament amended a law allowing military personnel to work in 14 state institutions – up from 10; rights groups fear this could weaken legal checks on military abuse; former military leader's past, allegations of human rights abuse are back in spotlight

GS Paper I: Mapping

**Agence France-Presse**  
JAKARTA

**G**reater military influence in government, reporters under threat and a stuttering economy – Indonesian President Prabowo Subianto's first six months in power have triggered alarm bells for activists worried about a return to the country's authoritarian roots.

Last month, Indonesia's parliament amended a law allowing active-duty military personnel to work in 14 state institutions – up from 10 – including the attorney general's office, which rights groups say could weaken legal checks on military abuse.

The decision has critics anxious that the world's third-largest democracy could hark back to the days of dictator Suharto, who ruled Indonesia with an iron fist for more than three decades.

"The government does not realise that Indonesia has a collective trauma over (Suharto's) authoritarian New Order government," said Hussein Ahmad, deputy director of rights group Imparsial.

#### Prabowo's image

Before Suharto was toppled by student-led protests in 1998, Mr. Subianto was serving as a commander for an elite force to suppress unrest.

He remains accused of human rights abuses, in-



**Consolidating power:** Indonesian President Prabowo Subianto (at the front) on an Army vehicle during a Cabinet retreat in Magelang, Central Java in October 2024. AFP

cluding allegations that he had ordered the abduction of activists at the end of Suharto's rule – which Mr. Subianto has denied and never been charged for.

He has since rehabilitated his image, and was elected last year on the hopes that he would continue the policies of popular predecessor Joko Widodo.

Yet in the six months since coming into power, Mr. Subianto's former life as a general has been thrust into the public eye. His administration's move to expand the military's role in government has raised eyebrows even within Indonesia's political elite.

After Mr. Subianto appointed government representatives to kickstart discussions of the law in parliament in February, former President Susilo Bambang Yudhoyono said it used to be "taboo" for military personnel to enter politics.

"It was one of the doctrines that we issued back then... If you want to do politics, resign," he told a meeting.

Presidential spokesman Hasan Nasbi denied that the new law would regress Indonesia back to Suharto's era.

"This law actually limits the role... to 14 sectors that truly need the skills and ex-

pertise relevant to (military) training," he said, adding that the critics were "inaccurate".

#### 'Silencing' journalists

After his October inauguration, Mr. Subianto paraded his Cabinet in military fatigues at a retreat.

In November, his Defence Minister – also a former general accused of abuses under Suharto – announced that 100 battalions would be set up to enforce the government's agenda.

Mr. Subianto has also faced backlash in recent months for slashing government budgets, as Indonesia's flailing economy

is further hit by a plummeting rupiah and seething markets in reaction to Washington's tariffs.

Adding to worries is a new regulation issued last month allowing police to monitor foreign journalists and researchers.

It gives the police the authority to provide a permission letter when reporting from "certain locations" – though a spokesperson later said the letter was "not mandatory".

But the regulation could still spook reporters working on sensitive topics, said Human Rights Watch's Andreas Harsono.

"Journalism always goes hand-in-hand with democracy," Mr. Harsono said.

"If journalism is suppressed, the freedom of speech is suppressed, democracy will be paralysed."

The country's press flourished after the fall of Suharto, but local reporters have in recent weeks raised fears of an environment of intimidation.

Last month, *Tempo* magazine – which publishes articles critical of the government – was sent a pig's head and six decapitated rats.

Mr. Subianto's spokesperson denied any government role in the incident, and said an investigation was ongoing.

*Tempo's* website also started seeing cyber attacks this month after it

published an investigation into some gambling companies in Cambodia and its links to Indonesian tycoons and politicians.

Journalist Francisca Christy Rosana, who was doxxed in recent weeks, said they got the message loud and clear.

"This terror was not just aimed at intimidating but silencing and stopping our work."

#### 'Fed up'

Thousands across Indonesia protested the new law last month, carrying posters that called for the military to "return to the barracks".

Dismissing the public's outrage over the military's potential dual role in government as "nonsense", Mr. Subianto said he respected the people's right to protest.

But if the demonstrations "create chaos and unrest, in my opinion this is against the national interest", he said in an interview earlier this month.

Andrie Yunus of KontraS, the commission for missing persons and victims of violence, said the demonstrations are "the tip of the iceberg". "Civilians are fed up with the entry of militarism into civilian affairs," he said, warning that the path to a military regime "is open".

"We consider the passing of the (military) law to be an attempt to open Pandora's box."

**Rising military role and threats against journalists raise alarm in Indonesia**

**इंडोनेशिया में बढ़ती सैन्य भूमिका और पत्रकारों को धमकियाँ चिंता का कारण बनीं**



**Under President Prabowo Subianto**, Indonesia's parliament amended a law allowing military personnel to work in 14 state institutions, increased from 10.

राष्ट्रपति प्रबवो सुबियांतो के नेतृत्व में इंडोनेशिया की संसद ने एक कानून में संशोधन किया, जिससे सैन्य कर्मियों को 14 सरकारी संस्थानों में काम करने की अनुमति दी गई, जो पहले 10 थे।

- **Rights groups fear this change could weaken legal checks on military abuse.**  
मानवाधिकार संगठनों को आशंका है कि यह बदलाव सैन्य दुरुपयोग पर कानूनी नियंत्रण को कमज़ोर कर सकता है।
- **Prabowo Subianto's first six months in power have raised alarms among activists** due to increased military presence, threats to **reporters**, and a **stuttering economy**.  
प्रबवो सुबियांतो के सत्ता में पहले छह महीने में सैन्य प्रभाव, पत्रकारों को धमकियाँ, और अस्थिर अर्थव्यवस्था के कारण कार्यकर्ताओं में चिंता बढ़ी है।
- Critics worry that **Indonesia, the world's third-largest democracy**, could return to the days of **dictator Suharto**, who ruled for over **three decades**.  
आलोचकों को चिंता है कि विश्व के तीसरे सबसे बड़े लोकतंत्र इंडोनेशिया में शासन तानाशाह सुहार्तो के दौर जैसा बन सकता है, जिन्होंने तीन दशकों से अधिक समय तक शासन किया।
- **Hussein Ahmad**, deputy director of **rights group Imparsial**, stated that Indonesia still carries a **collective trauma** from **Suharto's authoritarian New Order**.  
इम्पार्शियल नामक मानवाधिकार समूह के उप निदेशक हुसैन अहमद ने कहा कि इंडोनेशिया अभी भी सुहार्तो की अधिनायकवादी नई व्यवस्था की सामूहिक पीड़ा को झेल रहा है।
- Before **Suharto** was ousted in **1998**, **Mr. Subianto** was a **commander** in an **elite force** that suppressed **unrest**.  
1998 में सुहार्तो के पदच्युत होने से पहले, श्री सुबियांतो एक विशेष बल में कमांडर थे, जिन्होंने विरोधों को दबाया था।
- He is **accused** of **human rights abuses**, including the **abduction of activists**, but has **denied** the allegations and has never been **charged**.  
उन पर मानवाधिकार हनन और कार्यकर्ताओं के अपहरण के आरोप लगे हैं, लेकिन उन्होंने इन आरोपों से इनकार किया और उन पर कभी आरोप तय नहीं हुए।
- **Mr. Subianto** has since **rehabilitated his image** and was **elected last year**, promising to **continue the policies** of popular **Joko Widodo**.  
बाद में श्री सुबियांतो ने अपनी छवि सुधारी और पिछले वर्ष चुने गए, यह वादा करते हुए कि वह लोकप्रिय जोको विडोडो की नीतियों को जारी रखेंगे।
- Since coming to power, his **military past** has returned to the spotlight, especially after expanding **military roles in government**.



सत्ता में आने के बाद, उनकी सैन्य पृष्ठभूमि फिर से चर्चा में आई है, खासकर जब उन्होंने सरकार में सैन्य भूमिकाएं बढ़ाईं।

- Even Indonesia's political elite expressed concern over this expansion of military presence in civilian government.

यहां तक कि इंडोनेशिया की राजनीतिक अभिजात वर्ग ने भी नागरिक सरकार में सैन्य प्रभाव के विस्तार पर चिंता व्यक्त की।

- Former President Susilo Bambang Yudhoyono reminded that military entry into politics used to be taboo, saying "If you want to do politics, resign."

पूर्व राष्ट्रपति सुसीलो बंबांग युधोयोनो ने याद दिलाया कि राजनीति में सेना का प्रवेश वर्जित था और कहा, "अगर आप राजनीति करना चाहते हैं, तो इस्तीफा दीजिए।"

- Presidential spokesman Hasan Nasbi denied the concerns, stating the law limits military roles to 14 sectors requiring specific expertise.

राष्ट्रपति के प्रवक्ता हसन नस्बी ने इन चिंताओं से इनकार किया, यह कहते हुए कि नया कानून सैन्य भूमिका को 14 क्षेत्रों तक सीमित करता है, जहां विशेषज्ञता की आवश्यकता है।

- He also said critics were being inaccurate in their assessment of the law's impact. उन्होंने यह भी कहा कि आलोचक इस कानून के प्रभाव का गलत मूल्यांकन कर रहे हैं।

## Silencing Journalists

### पत्रकारों को चुप कराना

- After his October inauguration, Mr. Subianto displayed his Cabinet in military fatigues during a retreat.

अक्टूबर में शपथग्रहण के बाद, श्री सुबियांतो ने एक रिट्रीट के दौरान अपने कैबिनेट को सैन्य वर्दी में प्रस्तुत किया।

- In November, his Defence Minister, a former general accused of abuses under Suharto, announced the formation of 100 battalions to enforce the government's agenda.

नवंबर में, उनके रक्षा मंत्री, जो सुहार्तो शासन के दौरान दुर्व्यवहार के आरोपी रहे हैं, ने सरकार के एजेंडे को लागू करने के लिए 100 बटालियन गठित करने की घोषणा की।

- Mr. Subianto has been criticised recently for slashing government budgets amid a failing economy, a plummeting rupiah, and volatile markets influenced by U.S. tariffs.

श्री सुबियांतो को हाल ही में सरकारी बजट में कटौती के लिए आलोचना का सामना करना पड़ा है, जबकि देश की अर्थव्यवस्था चरमरा रही है, रुपया गिर रहा है, और बाजार अस्थिर हैं जो अमेरिकी टैरिफ के कारण प्रभावित हो रहे हैं।

- A new regulation issued last month allows police to monitor foreign journalists and researchers.

पिछले महीने जारी एक नए नियम से पुलिस को विदेशी पत्रकारों और शोधकर्ताओं की निगरानी करने की अनुमति मिलती है।



- The regulation authorizes police to provide a **permission letter** for reporting from “**certain locations**”, though later a spokesperson said it was “**not mandatory**”.  
यह नियम पुलिस को "कुछ स्थानों" से रिपोर्टिंग के लिए **अनुमति पत्र** जारी करने का अधिकार देता है, हालांकि बाद में एक प्रवक्ता ने कहा कि यह "अनिवार्य नहीं" है।
- However, the regulation may still **intimidate** journalists covering **sensitive topics**, according to **Human Rights Watch's Andreas Harsono**.  
हालांकि, **ह्यूमन राइट्स वॉच** के **आंद्रेयास हार्सोनो** के अनुसार, यह नियम **संवेदनशील विषयों** पर काम कर रहे पत्रकारों को **डरा सकता है**।
- “**Journalism** always goes hand-in-hand with **democracy**. If journalism is suppressed, **freedom of speech** is suppressed, and **democracy will be paralysed**,” Harsono stated.  
“**पत्रकारिता** हमेशा **लोकतंत्र** के साथ चलती है। यदि पत्रकारिता को दबाया गया, तो **अभिव्यक्ति की स्वतंत्रता** को दबाया जाएगा, और **लोकतंत्र पक्षाघातग्रस्त हो जाएगा**,” हार्सोनो ने कहा।
- The Indonesian **press** had **flourished** after **Suharto's fall**, but recently, **local reporters** have raised concerns of **intimidation**.  
**सुहार्तो के पतन** के बाद **इंडोनेशियाई प्रेस फली-फूली**, लेकिन हाल ही में **स्थानीय पत्रकारों ने डराने-धमकाने के माहौल** को लेकर चिंता जताई है।
- Last month, **Tempo magazine**, known for **critical reporting**, received a **pig's head** and **six decapitated rats** as a threat.  
पिछले महीने, सरकार की **आलोचना करने वाली टेम्पो पत्रिका** को **सूअर का सिर और छह कटे हुए चूहे** भेजे गए, जो धमकी माने गए।
- Mr. Subianto's spokesperson **denied government involvement** and said an **investigation** was ongoing.  
श्री सुबियांतो के प्रवक्ता ने **सरकार की संलिप्तता से इनकार** किया और कहा कि **जांच चल रही है**।
- This month, **Tempo's website** faced **cyberattacks** after publishing an investigation on **gambling companies in Cambodia** linked to **Indonesian tycoons and politicians**.  
इस महीने, **टेम्पो की वेबसाइट** को **साइबर हमलों** का सामना करना पड़ा, जब उसने **कंबोडिया में जुए की कंपनियों और इंडोनेशियाई व्यापारियों व नेताओं** के संबंधों पर रिपोर्ट प्रकाशित की।
- **Journalist Francisca Christy Rosana**, who was **doxxed**, said the intent was not just to **intimidate** but to **silence and stop** journalists.  
**पत्रकार फ्रांसिस्का क्रिस्टी रोसाना**, जिनका **डॉक्सिंग** हुआ, ने कहा कि यह सिर्फ **डराने** के लिए नहीं, बल्कि **चुप कराने और रोकने** के लिए था।

## ‘Fed up’

### ‘तंग आ चुके हैं’

- Thousands of people across **Indonesia** **protested the new law** last month, holding posters urging the **military to return to barracks**.



पिछले महीने पूरे इंडोनेशिया में हजारों लोगों ने नए कानून के खिलाफ प्रदर्शन किया और सेना को बैरकों में लौटने के पोस्टर उठाए।

- Mr. Subianto **dismissed public outrage** over the military's **dual role**, calling it “nonsense”, but said he **respected the right to protest**.

श्री सुबियांतो ने सेना की दोहरी भूमिका पर जनता के गुस्से को "बकवास" बताया, लेकिन यह कहा कि वह **विरोध के अधिकार का सम्मान** करते हैं।

- He added that if protests **create chaos and unrest**, they go **against the national interest**.

उन्होंने यह भी कहा कि यदि प्रदर्शन **अराजकता और अशांति** फैलाते हैं, तो वे **राष्ट्रीय हितों के खिलाफ** हैं।

- **Andrie Yunus** of **KontraS**, the commission for **missing persons and victims of violence**, called the protests “**the tip of the iceberg**”.

गायब लोगों और हिंसा के पीड़ितों के लिए आयोग 'कोंट्रास' के आंद्रे युनुस ने इन प्रदर्शनों को "हिमखंड की नोक" बताया।

- He said **civilians are fed up with militarism entering civilian affairs**, warning that the path to a **military regime is open**.

उन्होंने कहा कि **नागरिक सैन्यवाद के नागरिक मामलों में घुसपैठ से तंग आ चुके हैं**, और चेतावनी दी कि **सैन्य शासन का रास्ता खुल गया है**।

- He concluded that the passage of the **military law** is an attempt to “**open Pandora's box**”.

उन्होंने निष्कर्ष निकाला कि **सैन्य कानून का पारित होना "पैंडोरा बॉक्स खोलने" का प्रयास है**।



# Cut off from medical aid, neighbours save wounded in besieged Sudan city

GS Paper I: Mapping

## Agence France-Presse

PORT SUDAN

For a week, eight-year-old Mohamed has suffered the pain of shrapnel stuck in his arm. But he is one of the lucky ones in Sudan's western city El-Fasher, which is under paramilitary attack.

"One of our neighbours used to be a nurse. She helped us stop the bleeding," Mohamed's father, Issa Said, 27, said speaking via satellite connection under a total communications blackout. "But his arm is swollen and he cannot sleep at night from the pain."

Like an estimated one million more people trapped in the city under a year-long siege by the paramilitary Rapid Support Forces (RSF), Mr. Said cannot get to a hospital for emergency care.



Displaced people ride an animal-drawn cart, following attacks on Zamzam displacement camp, in Tawila in North Darfur. REUTERS

Humanitarian operations in El-Fasher have been severely disrupted due to "access constraints, a critical fuel shortage and a volatile security environment," with health services particularly affected, the United Nations' humanitarian agency OCHA said.

Mr. Mohamed, an aid coordinator who fled to El-Fasher after getting shot in the thigh during an RSF at-

tack days ago on the nearby Zamzam displacement camp, estimates hundreds of injured civilians are trapped in the city.

On the brink of mass starvation, the people of El-Fasher have still "opened their homes to the wounded," Mr. Mohamed said, requesting to be identified by his first name for safety.

"If you have the money,

you send someone to buy clean gauze or painkillers if they can find any, but you have to make do with what you have," Mr. Mohamed said.

In crowded living rooms and kitchens, civilians with barely any medical training cobble together emergency first aid, using household items and local medicinal plants to treat burns, gunshot wounds and shrapnel injuries.

Another victim, Mohamed Abakar, 29, said he was fetching water for his family when a bullet pierced his leg.

The limb immediately broke underneath him, and a neighbour dragged him into his home, fashioning him a splint out of a few pieces of wood and cloth. "Even if it heals my broken leg, the bullet is still inside," Mr. Abakar said, also by satellite link.

## Cut off from medical aid, neighbours save wounded in besieged Sudan city

चिकित्सीय सहायता से कटे सूडान के घिरे शहर में पड़ोसी बचा रहे हैं घायल

Eight-year-old Mohamed has endured the pain of shrapnel stuck in his arm for a week.

आठ वर्षीय मोहम्मद ने एक सप्ताह से अपने हाथ में फंसे शरपनेल (बम का टुकड़ा) की पीड़ा झेली है।



- He is considered **one of the lucky ones** in **El-Fasher**, a city in western **Sudan** under **paramilitary attack**.  
वह पश्चिमी सूडान के एल-फाशेर शहर में अर्धसैनिक हमले के बीच माने जा रहे भाग्यशाली लोगों में से एक हैं।
- Mohamed's father, **Issa Said (27)**, said a **neighbour who used to be a nurse** helped stop the bleeding.  
मोहम्मद के पिता ईसा सईद (27 वर्ष) ने बताया कि एक पड़ोसी जो कभी नर्स थीं, ने खून बहना रोका।
- He added that **Mohamed's arm is swollen** and he **cannot sleep** at night due to pain.  
उन्होंने बताया कि मोहम्मद का हाथ सूज गया है और वह रात को दर्द से सो नहीं पा रहा है।
- Like **around one million others** trapped in **El-Fasher** under a **year-long siege** by the **Rapid Support Forces (RSF)**, Mr. Said cannot reach a hospital for **emergency care**.  
रैपिड सपोर्ट फोर्स (RSF) द्वारा एक साल की घेराबंदी में फंसे लगभग दस लाख लोगों की तरह, श्री सईद भी आपातकालीन इलाज के लिए अस्पताल नहीं जा सकते।
- **Humanitarian operations** in El-Fasher have been severely affected due to **access constraints, fuel shortages, and a volatile security situation**, said the **UN humanitarian agency OCHA**.  
संयुक्त राष्ट्र की मानवीय एजेंसी ओसीएचए के अनुसार, एल-फाशेर में मानवीय कार्य पहुंच की बाधाओं, ईंधन की गंभीर कमी, और अस्थिर सुरक्षा स्थिति के कारण बुरी तरह प्रभावित हुए हैं।
- **Mr. Mohamed**, an **aid coordinator** who fled to El-Fasher after being **shot in the thigh** during an **RSF attack** on the nearby **Zamzam displacement camp**, estimates **hundreds of injured civilians** are trapped.  
श्री मोहम्मद, एक सहायता समन्वयक, जो पास के जमजम विस्थापन शिविर पर RSF के हमले में जांघ में गोली लगने के बाद एल-फाशेर भागे थे, का अनुमान है कि सैकड़ों घायल नागरिक शहर में फंसे हुए हैं।
- Despite being on the **brink of starvation**, the people of El-Fasher are **opening their homes** to the wounded.  
भूखमरी की कगार पर होने के बावजूद, एल-फाशेर के लोग घायलों के लिए अपने घर खोल रहे हैं।
- Mr. Mohamed requested to be identified only by his **first name** for **safety reasons**.  
श्री मोहम्मद ने सुरक्षा कारणों से अपना पूरा नाम उजागर न करने की अपील की।
- He said if people have **money**, they try to buy **clean gauze or painkillers**, but supplies are scarce.  
उन्होंने कहा कि यदि लोगों के पास पैसे हैं तो वे स्वच्छ पट्टी या दर्द निवारक दवाएं खरीदने की कोशिश करते हैं, लेकिन चीजें मुश्किल से मिलती हैं।
- People are forced to **make do with what they have**, using household items and **local medicinal plants** for **first aid**.  
लोगों को मजबूरी में घरेलू वस्तुएं और स्थानीय औषधीय पौधों से प्राथमिक उपचार करना पड़ रहा है।
- In **crowded living rooms and kitchens**, civilians with **minimal medical training** are trying to treat **burns, gunshot wounds, and shrapnel injuries**.  
भीड़भाड़ वाले कमरों और रसोइयों में, बिना पर्याप्त चिकित्सा प्रशिक्षण वाले नागरिक जलन, गोली लगने और बम के टुकड़ों से हुए घावों का इलाज कर रहे हैं।



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

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

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- **Mohamed Abakar (29) was shot in the leg while fetching water for his family.**  
29 वर्षीय मोहम्मद अबाकार को उस समय पैर में गोली लगी जब वे अपने परिवार के लिए पानी ला रहे थे।
- **His leg broke instantly, and a neighbour dragged him home and made a splint with wood and cloth.**  
उनका पैर तुरंत टूट गया, और एक पड़ोसी उन्हें घसीट कर घर लाया और लकड़ी और कपड़े से पट्टी बांधी।
- **Mr. Abakar said the bullet is still inside his leg even though the bone might heal.**  
श्री अबाकार ने कहा कि भले ही हड्डी ठीक हो जाए, लेकिन गोलियां अब भी उनके अंदर हैं।

### **PICS COVERED GS Paper II: Polity, Governance, and International Relations)**

#### **1. Enabling Legislation**

सक्षम बनाने वाला कानून

#### **2. Withdrawal Rules of NPS Corpus**

एनपीएस कॉर्पस की निकासी के नियम

#### **3. Aid cuts by the U.S. impact WHO's response to crises worldwide**

अमेरिका की सहायता में कटौती से WHO की वैश्विक संकटों पर प्रतिक्रिया प्रभावित

#### **4. Exfoliating dead skin**

मृत त्वचा को हटाना



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GS Paper II: Affirmative Actions

## Enabling legislation

Nomination of persons with disabilities to local bodies is a pioneering move

**A**ffirmative action remains one of the most effective ways of addressing historical wrongs and systemic deprivation. The most recent attempt to address deep-rooted discrimination against persons with disabilities in Tamil Nadu is likely to have a far-reaching impact for the community. Chief Minister M.K. Stalin tabled two Bills in the Assembly last week to increase the number of persons with disabilities in all local bodies in the State. While one Bill seeks to nominate persons with disabilities to all town panchayats, municipal councils and municipal corporations with amendments to the Tamil Nadu Urban Local Bodies Act, the second intends to bring into law the decision to nominate one person with disabilities to all village panchayats, panchayat union councils and district panchayats by amending the Tamil Nadu Panchayats Act. Mr. Stalin said once these Bills are enacted, there would be guaranteed posts for 650 persons with disabilities in urban local bodies, 12,913 in village panchayats, and 388 in panchayat unions, besides 37 persons with disabilities in district panchayats. At the moment, there are only 35 persons with disabilities in urban local bodies, he informed the House. Besides ensuring dignity for persons with disabilities, and eroding stigma and discrimination, this change would empower the community, involving their representatives in decision-making at the grassroots level.

It is the role of the government to take along its citizens, particularly those who may have an impediment that might come in the way of their harnessing equal opportunities as the rest of the population. After the 73rd and 74th amendments to the Constitution that allowed for one-third representation of all seats in panchayati raj institutions and urban local bodies to be reserved for women, some States, including Tamil Nadu, increased this to 50%. Since then, the very raucous and long-drawn-out battle was finally resolved in 2023, with the Women's Reservation Act being passed for 33% reservation for women in the Lok Sabha and State Legislative Assemblies. This will be effective after the publication of the Census conducted following the Act's commencement. Meanwhile, Tamil Nadu's effort to appoint persons with disability is the first such effort in the country at bringing a marginalised community not merely into the mainstream but as leaders of society, thus raising their profile and larger acceptance, besides bringing change that will benefit the rest of the society. Given the initial experience of implementing women's reservation in panchayati raj, where women panchayat leaders were de facto replaced by the husband in decision-making, it is important that the government ensures the benefit truly reaches the intended – in this case, persons with disabilities.

## Enabling Legislation

### सक्षम बनाने वाला कानून

Nomination of persons with disabilities to local bodies is a pioneering move

स्थानीय निकायों में दिव्यांग व्यक्तियों की नामांकन प्रक्रिया एक अग्रणी कदम है

- **Affirmative action** continues to be one of the most effective means to address **historical injustice** and **systemic deprivation**.

सकारात्मक कार्रवाई अब भी ऐतिहासिक अन्याय और व्यवस्थित वंचना को दूर करने के सबसे प्रभावी तरीकों में से एक है।

- Tamil Nadu's recent attempt to address **deep-rooted discrimination** against persons with disabilities is likely to have a **far-reaching impact**.

तमिलनाडु में दिव्यांग व्यक्तियों के प्रति गहराई से जमी भेदभाव को दूर करने का हालिया प्रयास दूरगामी प्रभाव डाल सकता है।

- Chief Minister **M.K. Stalin** introduced two Bills in the Assembly to increase the **representation** of persons with disabilities in **all local bodies**.

मुख्यमंत्री एम.के. स्टालिन ने विधानसभा में दो विधेयक पेश किए ताकि सभी स्थानीय निकायों में दिव्यांग व्यक्तियों का प्रतिनिधित्व बढ़ाया जा सके।

- **One Bill** seeks to nominate persons with disabilities in **town panchayats, municipal councils, and municipal corporations**, by amending the Tamil Nadu Urban Local Bodies Act.

एक विधेयक, तमिलनाडु शहरी स्थानीय निकाय अधिनियम में संशोधन कर, नगर पंचायतों, नगर परिषदों और नगर निगमों में दिव्यांग व्यक्तियों को नामित करने का प्रावधान करता है।

- The second Bill proposes to legally nominate one person with disability in **village panchayats, panchayat union councils, and district panchayats**, amending the Tamil Nadu Panchayats Act.

दूसरा विधेयक, तमिलनाडु पंचायत अधिनियम में संशोधन कर, ग्राम पंचायतों, पंचायत संघ परिषदों, और जिला पंचायतों में एक दिव्यांग व्यक्ति को कानूनी रूप से नामित करने का प्रस्ताव करता है।

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- Once enacted, there will be **guaranteed positions** for **650** persons with disabilities in **urban local bodies**, **12,913** in **village panchayats**, **388** in **panchayat unions**, and **37** in **district panchayats**.  
इन विधेयकों के लागू होने पर, शहरी स्थानीय निकायों में 650, ग्राम पंचायतों में 12,913, पंचायत संघों में 388, और जिला पंचायतों में 37 दिव्यांग व्यक्तियों के लिए गारंटीकृत पद होंगे।
- Currently, there are only **35** persons with disabilities in urban local bodies.  
वर्तमान में, शहरी स्थानीय निकायों में केवल 35 दिव्यांग व्यक्ति हैं।
- This step would ensure **dignity**, reduce **stigma and discrimination**, and **empower** the community by including their **representatives** in **grassroots decision-making**.  
यह कदम गरिमा सुनिश्चित करेगा, कलंक और भेदभाव को कम करेगा, और समुदाय को सशक्त बनाएगा क्योंकि उनके प्रतिनिधियों को नीतिगत निर्णयों में शामिल किया जाएगा।

## Ensuring Equal Participation

### समान भागीदारी सुनिश्चित करना

- Governments must include **all citizens**, especially those facing **barriers to equal opportunities**.  
सरकारों को सभी नागरिकों को शामिल करना चाहिए, खासकर उन लोगों को जो समान अवसरों तक पहुँच में बाधाओं का सामना करते हैं।
- After the **73rd and 74th Constitutional Amendments**, **one-third reservation was granted to women in local bodies**; Tamil Nadu increased this to **50%**.  
73वें और 74वें संविधान संशोधनों के बाद स्थानीय निकायों में महिलाओं को एक-तिहाई आरक्षण मिला; तमिलनाडु ने इसे बढ़ाकर 50% कर दिया।
- In **2023**, the **Women's Reservation Act** was passed, providing **33% reservation for women in the Lok Sabha and State Assemblies**, effective after the next **Census**.  
2023 में महिला आरक्षण अधिनियम पारित हुआ, जिससे लोकसभा और राज्य विधानसभाओं में महिलाओं को 33% आरक्षण मिला, जो अगले जनगणना के बाद प्रभावी होगा।

## Leadership and Mainstreaming

### नेतृत्व और मुख्यधारा में शामिल करना

- Tamil Nadu's effort to appoint persons with disabilities is the **first in the country**, aiming to bring this **marginalised community** into the **mainstream** as **leaders**.  
तमिलनाडु का यह प्रयास देश में पहला है, जो इस हाशिए पर पड़े समुदाय को मुख्यधारा में नेता के रूप में लाने की दिशा में है।
- It will raise **social acceptance** and contribute to **inclusive change** that benefits **society at large**.  
यह सामाजिक स्वीकृति बढ़ाएगा और समावेशी बदलाव में योगदान देगा जिससे समाज के सभी वर्गों को लाभ होगा।



- Learning from the earlier experience of **women's reservation**, where **male family members** often made decisions, the government must ensure that **persons with disabilities** are the **real beneficiaries** of this reservation.

महिला आरक्षण के पूर्व अनुभव से सीख लेते हुए, जहाँ अक्सर पुरुष परिजन निर्णय लेते थे, सरकार को यह सुनिश्चित करना चाहिए कि दिव्यांग व्यक्ति इस आरक्षण के वास्तविक लाभार्थी हों।



**Visual question:**

GS Paper II: Polity

Name this **Cabinet Secretary** who is the head of all civil services under the **Rules of Business** of the Government of India. ANI

Name this Cabinet Secretary who is the head of all civil services under the Rules of Business of the Government of India.

**Cabinet Secretary of India**

भारत के कैबिनेट सचिव

- T. V. Somanathan



- The **Cabinet Secretary** is the **top-most executive official** and the **senior-most civil servant** in the **Government of India**.  
कैबिनेट सचिव भारत सरकार में सबसे उच्च कार्यकारी अधिकारी और वरिष्ठतम सिविल सेवक होते हैं।
- This position serves as the **ex-officio head** of the **Civil Services Board**, the **Cabinet Secretariat**, and the **Indian Administrative Service (IAS)**.  
यह पद सिविल सेवा बोर्ड, कैबिनेट सचिवालय, और भारतीय प्रशासनिक सेवा (IAS) का पदेन प्रमुख होता है।
- All civil services in India operate under the **rules of business** established by the government, with the **Cabinet Secretary** playing a **pivotal role** in their administration.  
भारत में सभी सिविल सेवाएं सरकार द्वारा निर्धारित कार्य संचालन नियमों के तहत कार्य करती हैं, जिनके प्रशासन में कैबिनेट सचिव की मुख्य भूमिका होती है।

#### Position and Rank

##### पद और रैंक

- The Cabinet Secretary holds the **senior-most cadre post** within the **Indian Administrative Service (IAS)**.
- कैबिनेट सचिव भारतीय प्रशासनिक सेवा (IAS) में सबसे वरिष्ठ कैडर पद होता है।
- In the **Indian order of precedence**, the **Cabinet Secretary** ranks at **eleventh position**, reflecting the significance of the role within the governmental hierarchy.
- भारत के औपचारिक प्रोटोकॉल क्रम में कैबिनेट सचिव ग्यारहवें स्थान पर आते हैं, जो सरकारी पदानुक्रम में उनकी महत्वपूर्ण भूमिका को दर्शाता है।

#### Reporting Structure

##### रिपोर्टिंग संरचना

- The **Cabinet Secretary** operates under the **direct supervision of the Prime Minister**, ensuring alignment with the highest level of executive decision-making.
- कैबिनेट सचिव प्रधानमंत्री के प्रत्यक्ष अधीन कार्य करते हैं, जिससे उच्चतम कार्यकारी निर्णय स्तर के साथ सामंजस्य सुनिश्चित होता है।

#### Tenure and Extensions

##### कार्यकाल और विस्तार

- Since **2010**, the term length for the **Cabinet Secretary** was set to a **maximum of four years**.
- 2010 से, कैबिनेट सचिव का कार्यकाल अधिकतम चार वर्षों तक निर्धारित किया गया है।
- In **2019**, an amendment allowed for a **further extension of up to one year**, making the total possible tenure **up to five years**.
- 2019 में किए गए संशोधन से एक और वर्ष का विस्तार संभव हो सका, जिससे कुल कार्यकाल पांच वर्ष तक हो सकता है।

#### Roles and Responsibilities

##### भूमिकाएं और जिम्मेदारियां

- As the **administrative head** of the Cabinet Secretariat, the **Cabinet Secretary** is responsible for:  
कैबिनेट सचिव, कैबिनेट सचिवालय के प्रशासनिक प्रमुख के रूप में, निम्नलिखित कार्यों के लिए उत्तरदायी होते हैं:
- Providing **secretarial assistance** to the **Cabinet and its Committees**.
- कैबिनेट और इसकी समितियों को सचिवीय सहायता प्रदान करना।
- Administering the **Government of India (Transaction of Business) Rules, 1961**.
- भारत सरकार (कार्य संचालन) नियम, 1961 का प्रशासन करना।
- Overseeing the **Government of India (Allocation of Business) Rules, 1961**, facilitating smooth transactions across Ministries and Departments.



• भारत सरकार (कारोबार आवंटन) नियम, 1961 का निरीक्षण करना, जिससे मंत्रालयों और विभागों में सुव्यवस्थित कार्य संचालन हो सके।

#### Historical Context

#### ऐतिहासिक परिप्रेक्ष्य

• The position of **Cabinet Secretary** was established on **5th September 1946**, evolving from the **Secretariat of the Executive Council** to its current form **post-independence**.

• कैबिनेट सचिव का पद 5 सितंबर 1946 को स्थापित किया गया था, जो कार्यपालिका परिषद के सचिवालय से विकसित होकर स्वतंत्रता के बाद अपने वर्तमान स्वरूप में आया।



PATRIOTIC



## Withdrawal Rules of NPS Corpus

### एनपीएस कॉर्पस की निकासी के नियम

The New Tax Regime (NTR) now offers a no-tax limit of ₹12,75,000 (including Standard Deduction), reducing the need for National Pension Scheme (NPS) solely for tax benefits.

नई कर व्यवस्था (NTR) अब ₹12,75,000 की बिना टैक्स सीमा (जिसमें स्टैंडर्ड डिडक्शन शामिल है) प्रदान करती है, जिससे केवल कर लाभ के लिए एनपीएस में निवेश की आवश्यकता कम हो गई है।

## Is it possible to withdraw your NPS corpus?

Now that the no-tax limit under NTR has been increased to ₹12,75,000 (including Standard Deduction), is it possible to withdraw corpus from NPS? What are the rules for withdrawal?

CS Paper II: Government Scheme

### CASHING IN

Vaishali R. Venkat

It's time to wipe the slate of last financial year and the clock of investment must be reset based on your current goals. One of the advantages of the National Pension Scheme (NPS) is it offers both tax incentives and retirement corpus. Now that the no-tax limit under New Tax Regime (NTR) has been increased to ₹12,00,000, the need for investing in NPS just for the sake of availing tax benefit has reduced considerably. Against this backdrop, question arises if NPS corpus could be withdrawn, if so, what are the rules? Let's dive into details.

**Account type, exposure**  
NPS provides two types of accounts for all its citizens - Tier-1 (mandatory) and Tier-2 (optional). For opening a Tier-2 account, you must have a Tier-1 account. Both the accounts differ from each other in terms of tax benefits as well as withdrawal rules.

Tier-1 is the default individual Pension Account for building retirement corpus. After retirement, subscribers of NPS will get pension from the chosen Annuity Service Providers (ASPs) as per the agreed terms and conditions.

Tier-2 acts like a savings account. In both the accounts, you can gain exposure to four kinds of assets:

Tier-1 is the default individual Pension Account for building retirement corpus. Tier-2 acts like a savings account.

equity instruments, corporate bonds, Government Securities and Alternative Investment Funds (AIF). In Tier-1, maximum exposure to equity is 75% and AIF 5%. However, in Tier-2, 100% equity exposure and 5% AIF is possible.

**One-way switch**  
You cannot transfer funds from Tier-1 to Tier-2 but you can transfer from Tier-2 to Tier-1 account or to your bank account.

#### Tax benefits

In Tier-1, you can claim an additional tax deduction of ₹50,000 per year under 80CCD (1B) of the Income Tax Act under Old Tax Regime (OTR). Under NTR, self-contribution to NPS is not considered. But, if employer contributes to NPS, you can claim deduction under Sec. 80CCD(2) up to 14% of your basic salary.

#### Withdrawal

Normally, subscribers could withdraw only 60% of the corpus as lumpsum and 40% must be used to purchase an annuity plan for receiving pension. At the time of maturity, if the corpus is less than ₹5 lakh, annuity is optional and en-



Normally, subscribers can withdraw only 60% of corpus as lumpsum and 40% must be used to buy an annuity plan for receiving pension.

ire corpus would be paid as lumpsum. NPS offers three kinds of withdrawals - partial withdrawal, premature withdrawal and withdrawal owing to unfortunate death of the subscriber.

**Death:** If the subscriber (of a private sector) dies before or after 60 years of age, the entire corpus (100%) would be payable either to his/her nominee or legal heirs. The nominee or the legal heir can opt for annuity, but is not mandatory. If a subscriber is a government employee, then his/her dependent must purchase annuity.

**Partial withdrawal:** You can partially withdraw from Tier-1 only after completion of three years from the date of opening of NPS. Reasons can be disease or disability, higher education, marriage, property purchase or for starting a business venture.

Rakshita (20025628), executive, KFINTECH, one of the Central Record-keeping Agencies for NPS, said, "A subscriber can make only three partial withdrawals during the entire tenure. Each withdrawal is limited to 25% of his/her own contributions. Say

if Mangala contributed ₹50,000 every year since 2020, her contribution on December 31, 2024 would be ₹2,50,000. So, she could withdraw only ₹62,500 (25% of her contribution for the first time, though the investment amount would have grown to ₹4,00,000 in five years. Also, between each withdrawal, there must be a gap of five years. Let's assume Mangala wanted to withdraw again after seven years. In these seven years, if she had contributed just ₹2,000 per year, then, she could withdraw only 25% of ₹4,000 (7-year contribution) only but not 25% of her overall corpus."

**Premature drawal:** If you want to close NPS account before 60 years, you can do so but only after completion of five years from the date of opening of NPS account. In this case, you can withdraw only 20% of the corpus as lumpsum and 80% must be used for buying an annuity pension plan; but if the corpus is below ₹2.5 lakh, annuity is not mandatory.

**Deferment**  
If needed, subscribers can withdraw the 60% corpus in instalments instead of taking it in a single shot. They can defer withdrawal and continue to stay invested in NPS till 75 years of age. They have the choice to defer only the 60% corpus (lumpsum) or only the 40% annuity or defer both.

(The writer is a NISM & CRISIL-certified wealth manager)

- This change has raised questions about whether the NPS corpus can be withdrawn, and what rules govern this.

इस बदलाव से यह सवाल उठा है कि क्या एनपीएस कॉर्पस को निकाला जा सकता है, और इसके लिए क्या नियम हैं।

## NPS Account Types and Exposure एनपीएस खाता प्रकार और निवेश विकल्प

- NPS provides two types of accounts: Tier-1 (mandatory) and Tier-2 (optional). Tier-2 requires an existing Tier-1 account.

एनपीएस दो प्रकार के खाते प्रदान करता है: टियर-1 (अनिवार्य) और टियर-2 (वैकल्पिक)। टियर-2 खाता खोलने के लिए पहले से टियर-1 खाता होना अनिवार्य है।

- Tier-1 is the default individual pension account used to build a retirement corpus.

टियर-1 एक डिफॉल्ट व्यक्तिगत पेंशन खाता होता है जो सेवानिवृत्ति के लिए कोष बनाने हेतु होता है।

- After retirement, pension is provided by Annuity Service Providers (ASPs) as per agreed terms.

सेवानिवृत्ति के बाद, पेंशन एन्युइटी सेवा प्रदाताओं

(ASPs) द्वारा तय शर्तों के अनुसार दी जाती है।

- Tier-2 functions like a savings account, and allows greater flexibility. टियर-2 एक बचत खाते की तरह कार्य करता है और अधिक लचीलापन प्रदान करता है।



- Investment exposure includes **Equity, Corporate Bonds, Government Securities, and Alternative Investment Funds (AIFs)**.  
निवेश में इक्विटी, कॉर्पोरेट बॉन्ड, सरकारी प्रतिभूतियाँ और वैकल्पिक निवेश फंड (AIFs) शामिल होते हैं।
- **Tier-1 allows up to 75% equity and 5% AIF, while Tier-2 allows 100% equity and 5% AIF.**  
टियर-1 में अधिकतम 75% इक्विटी और 5% AIF की अनुमति है, जबकि टियर-2 में 100% इक्विटी और 5% AIF की अनुमति है।
- **One-way Switch Between Accounts**  
खातों के बीच एकतरफा ट्रांसफर
- **Funds cannot be transferred from Tier-1 to Tier-2, but can be transferred from Tier-2 to Tier-1 or to a bank account.**  
टियर-1 से टियर-2 में फंड ट्रांसफर नहीं किया जा सकता, लेकिन टियर-2 से टियर-1 या बैंक खाते में ट्रांसफर किया जा सकता है।

## Tax Benefits

### कर लाभ

- In **Tier-1, an additional tax deduction of ₹50,000 per year is allowed under Section 80CCD(1B) (Old Tax Regime).**  
टियर-1 में धारा 80CCD(1B) के तहत ₹50,000 की अतिरिक्त कर कटौती (पुरानी कर व्यवस्था में) प्रति वर्ष मिलती है।
- Under **New Tax Regime**, self-contribution to NPS is **not eligible for tax benefit.**  
नई कर व्यवस्था में, स्वयं द्वारा एनपीएस में किया गया योगदान कर लाभ के लिए पात्र नहीं होता।
- If employer contributes, deduction under **Section 80CCD(2)** is allowed up to **14% of basic salary.**  
यदि नियोजक योगदान करता है, तो धारा 80CCD(2) के तहत मूल वेतन का 14% तक कटौती की अनुमति होती है।

## Withdrawal Rules

### निकासी के नियम

- Normally, **60% of the corpus** can be withdrawn as **lump sum**, while **40% must be used** to purchase an annuity.  
सामान्यतः, 60% कोष को एकमुश्त निकाला जा सकता है और 40% का उपयोग एन्युइटी खरीदने के लिए करना होता है।
- If the total corpus is **less than ₹5 lakh**, annuity is **optional**, and entire corpus can be withdrawn.  
यदि कुल कोष ₹5 लाख से कम है, तो एन्युइटी वैकल्पिक होती है और पूरा कोष निकाला जा सकता है।



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**NPS allows three kinds of withdrawals:**

एनपीएस तीन प्रकार की निकासी की अनुमति देता है:

- **Partial withdrawal**  
आंशिक निकासी
- **Premature withdrawal**  
पूर्व-परिपक्व निकासी
- **Withdrawal due to death**  
मृत्यु के कारण निकासी

## Withdrawal on Death

### मृत्यु पर निकासी

- If a private sector subscriber dies **before or after 60 years**, the **entire corpus (100%)** is payable to **nominee or legal heirs**.  
यदि कोई निजी क्षेत्र का ग्राहक **60 वर्ष से पहले या बाद में मर जाता है**, तो पूरा कोष (100%) नामांकित व्यक्ति या कानूनी वारिसों को दिया जाता है।
- Nominee **may opt for annuity**, but it is **not mandatory**.  
नामांकित व्यक्ति **एन्युइटी चुन सकता है**, लेकिन यह अनिवार्य नहीं है।
- If the subscriber is a **government employee**, dependent **must buy an annuity**.  
यदि ग्राहक **सरकारी कर्मचारी है**, तो आश्रित को **एन्युइटी खरीदना अनिवार्य होता है**।

## Partial Withdrawal Conditions

### आंशिक निकासी की शर्तें

- Partial withdrawal is allowed from **Tier-1** only after **3 years** of account opening.  
टियर-1 से आंशिक निकासी केवल **खाता खोलने के 3 वर्ष बाद ही** की जा सकती है।
- Permissible reasons: **disease/disability, higher education, marriage, property purchase, or starting a business**.  
स्वीकृत कारण: **बीमारी/विकलांगता, उच्च शिक्षा, विवाह, संपत्ति खरीद, या व्यवसाय शुरू करना**।
- Only **3 partial withdrawals** are allowed during entire tenure.  
पूरे कार्यकाल में केवल **3 आंशिक निकासी** की अनुमति है।
- Each withdrawal is limited to **25% of subscriber's own contributions** (not total corpus).  
प्रत्येक निकासी केवल **स्वयं के योगदान का 25% तक** सीमित होती है (कुल कोष नहीं)।
- There must be a **5-year gap** between each withdrawal.  
हर निकासी के बीच **5 वर्ष का अंतराल** आवश्यक है।
- Example: If Mangala contributed ₹50,000 yearly since 2020, her total contribution by December 2024 would be ₹2,50,000.

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उदाहरण: यदि मंगला ने 2020 से हर साल ₹50,000 का योगदान दिया, तो दिसंबर 2024 तक उनका कुल योगदान ₹2,50,000 होगा।

- She can withdraw only **₹62,500 (25%)**, even if the investment has grown to ₹4,00,000. वह केवल **₹62,500 (25%)** निकाल सकती हैं, भले ही निवेश ₹4,00,000 तक बढ़ गया हो।
- Next withdrawal after **7 years** would be based only on the **new contributions** during that period.  
**7 वर्षों** के बाद अगली निकासी केवल उस अवधि में किए गए **नए योगदान** पर आधारित होगी।

## Premature Withdrawal

### पूर्व-परिपक्व निकासी

- To close NPS before 60 years, account must be **5 years old**.  
60 वर्ष से पहले एनपीएस बंद करने के लिए खाता **5 वर्ष पुराना** होना चाहिए।
- In this case, **only 20% of the corpus can be withdrawn, and 80% must go into an annuity**.  
इस स्थिति में केवल **20% कोष** निकाला जा सकता है और **80% एन्युइटी में निवेश** करना आवश्यक है।
- If corpus is **below ₹2.5 lakh**, annuity is **not mandatory**.  
यदि कोष **₹2.5 लाख से कम** है, तो एन्युइटी अनिवार्य नहीं होती।

## Deferment Options

### स्थगन विकल्प

- Subscribers can defer the **60% lump sum** and withdraw in **installments** instead of a single payment.  
ग्राहक **60% एकमुश्त राशि** को **किस्तों में** निकाल सकते हैं, एकमुश्त नहीं।
- Subscribers can remain invested in NPS till **75 years of age**.  
ग्राहक **75 वर्ष की आयु तक** एनपीएस में निवेशित रह सकते हैं।
- They can choose to defer **either the lump sum (60%), or annuity (40%), or both**.  
वे चाहें तो **60% एकमुश्त**, या **40% एन्युइटी**, या **दोनों को स्थगित** कर सकते हैं।



## RIYADH

### 'Aid cuts by the U.S. impact WHO's response to crises worldwide'



AFP

GS Paper II: International Organization

The slashing of foreign aid by the U.S. risks piling pressure on already acute humanitarian crises across the globe, said Hanan Balkhy, the WHO's regional director for the Eastern Mediterranean. Since taking office, U.S. President Donald Trump has frozen foreign aid funding and announced plans to leave the WHO. AFP

### Aid cuts by the U.S. impact WHO's response to crises worldwide

अमेरिका की सहायता में कटौती से WHO की वैश्विक संकटों पर प्रतिक्रिया प्रभावित

The slashing of foreign aid by the U.S. is putting additional pressure on humanitarian crises around the world.

अमेरिका द्वारा विदेशी सहायता में कटौती से दुनिया भर में पहले से मौजूद मानवीय संकटों पर अतिरिक्त दबाव पड़ रहा है।

This was stated by Hanan Balkhy, the WHO's Regional Director for the Eastern

Mediterranean.

यह बात पूर्वी भूमध्यसागरीय क्षेत्र के लिए WHO की क्षेत्रीय निदेशक हानन बल्खी ने कही।

Since taking office, U.S. President Donald Trump has frozen foreign aid funding.

अमेरिकी राष्ट्रपति डोनाल्ड ट्रंप ने पदभार संभालने के बाद से विदेशी सहायता फंडिंग को फ्रीज़ कर दिया है।

He has also announced plans to leave the WHO.

उन्होंने WHO से बाहर निकलने की योजना की भी घोषणा की है।



PATRIOTIC



# Exfoliating dead skin

The Centre intends to establish a **leather industry cluster** in **Ramaipur, Kanpur**, where British-era tanning trade once flourished along the banks of the river Ganga. **Mayank Kumar** reports on the hope and desperation of tannery owners and workers in the Uttar Pradesh district coping with the loss of business and increased costs due to a 2017 government order, and concerns over **pollution** raised by the **National Green Tribunal**

GS Paper III: Industry and Environment

**S**tanding at the entrance of his two-room, single-storey house that has a leaking roof, fissured walls, and damaged floors, Ram Nath Yadav, 54, laughs sardonically. His neighbour, Vakil Ahmed, in his late 50s, has just told him that the Central government is planning to establish a mega leather cluster where 175 tanneries will be established or relocated in Ramaipur, Kanpur.

Here, about 12 kilometres from Kanpur's city centre, spread across 2,000 acres, Uttar Pradesh will see a regeneration of an industry that flourished after the 1857 War of Independence.

It is March 8, and Ahmed, a teacher in a privately run school, had read a local Hindi daily report that quoted a letter from the Union Commerce and Industry Minister to Kanpur MP Ramesh Awasthi. The Centre had asked for a Detailed Project Report on the cluster, the report had stated. Ahmed is sympathetic to Yadav because his own father was a tannery worker.

Yadav, a second-generation tannery worker who lives in Afeem Kothi locality in Kanpur, says, "My job is increasingly becoming irregular. Things have got worse over the last eight years. I hope with this cluster, the cost of tannery waste treatment will decrease, and pollution curbs will ease." He wonders whether this will revive the industry and the livelihood that so many depend on.

Last year, he barely earned ₹60,000, one-third of what he earned a decade ago. "The salary plummeted when I needed it the most," he says, adding that he needs money to marry off both his daughters.

Now, the National Green Tribunal (NGT) is hearing a case that raises grave concerns about environmental pollution in the districts of Kanpur Nagar, Kanpur Dehat, and Fatehpur mainly due to leather tannery effluents flowing into the Ganga and the soil.

Heavy metals, such as chromium and mercury, have also led to a public health crisis.

## Kanpur's health and earth problems

Kanpur, known as the 'Leather City of India', has over 200 active tanneries spread across a 15-kilometre area. Tanning is the process in leather-making when the hide, already taken from an animal, is processed to remove hair and tissue, and built into a resilient material. Tanning derives its name from tannic, the acidic agent that helps cure the hide.

The tannery industry in Kanpur was fuelled by the demand for military leather goods from the British army, access to water from the Ganga, a plentiful labour force, raw materials, and extensive undeveloped land.

The NGT, the statutory body in India that deals with cases related to environmental protection, in November 2024, directed the U.P. government to conduct health camps in the most severely af-



My job is increasingly becoming irregular. Things have got worse over the last eight years... The salary plummeted when I needed it the most

**RAM NATH YADAV**  
Tannery worker, Kanpur

ected areas, including Rakhi Mandi and Afeem Kothi, in Kanpur Nagar district. The camps revealed high levels of mercury and chromium in the residents' blood samples. Similar health camps organised in Kanpur Dehat and Fatehpur districts led to the identification of widespread health issues, including respiratory ailments, neurological disorders, behavioural changes, and skin conditions, among residents.

The affidavit of the District Magistrate, Kanpur Nagar, submitted to the NGT states that in various camps conducted in Panki and Jainmat industrial areas, among others, people were found suffering from an array of problems, such as liver disease and respiratory issues. The *amicus curiae* (adviser to a court) submitted that during her interaction with the patients, she had also found a paucity of doctors in the area and a lack of testing infrastructure to check for the presence of heavy metals in the bloodstream.

Rajnish Mishra, 48, who lives in Kanpur and is a medical representative, says, "I have developed asthma over the years, and my wife has **chronic obstructive pulmonary disease (COPD)**. Something must be done to improve our situation. This area has become hell."

It's not just physical health, but also financial health that has deteriorated. "There was a time when Kanpur and adjoining parts had over 600

tanneries, employing more than 1 lakh workers. However, it declined since 2017 when the Uttar Pradesh Pollution Control Board (UPPCB) mandated that tanneries reduce their infrastructure by half, or face an environmental compensation penalty of ₹12,500 per day," says Shahid, in his 50s, who owns a tannery business in partnership. The year before, they had been hit overnight by demonetisation. Now, he says, they operate the factory for 15 days a month at half the capacity. From processing 100 hides daily, they have come down to 50.

After 2020, the cost of treating tannery waste surged from ₹2 per hide to more than ₹15 per hide, as tanneries were asked to bear the expenses associated with treating effluents sent to the common effluent treatment plant managed by the Water Department, say tannery owners.

Currently, the processing cost per hide has risen to approximately ₹100, and tanneries are operating at only 25% of their capacity, with the employees facing pay cuts. The prolonged shutdown of tanneries due to pollution-related issues and festivals like the Kumbh and *Magh Melas* have contributed to the crisis. In fact, over the past eight years, many tanneries have been temporarily closed at least nine times, with periods ranging from a few weeks to even over a year.

Kanpur processes hides mainly from U.P. and some from Rajasthan and Madhya Pradesh. However, with a ban on cow slaughter in these States, and the fear of cow vigilantes, cattle hides are few. Cattle, being large animals, are in highest demand in the international market.

Yadav says hides are taken off the animal as soon as it is killed. After that, they are carefully salted at slaughterhouses to prevent the growth of bacteria. Before being sold to tanneries, the hides are salted to remove 55% of their water content and then dried for three to six days.

Ahmed remembers the process from his childhood and youth in graphic detail, when he would go with his father to witness it: "Raw



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**SHAHID**  
Tannery owner, Kanpur

hides are first preserved and desalted in the tannery. During the first factory inspection, hair from the hide is pulled to check for bacterial damage. Non-usable portions are removed, and hides are soaked to remove blood, grime, and salt." He describes a machine called the salt shaker, through which hides were put to remove the salt.

Tannery owners and workers say that the increasing challenges in the industry are prompting many leather tanning business owners to leave Kanpur. "Small and medium-sized players are shifting to West Bengal, where they are renting or purchasing tanneries. Many have established collaborations with companies in Vietnam and Europe to import hide and produce finished leather," adds another owner.

## Response and hope

In November last year, the NGT issued detailed directions to the government to submit time-bound action plans by March 7, 2025, for several sectors, including health, drainage and effluent treatment, river rejuvenation, and soil and groundwater remediation. The government, however, did not submit a progress report.

Trade union activists hold factory owners responsible for environmental pollution and decline in employment avenues. They say employers benefit from taking on workers for short durations, so that management can avoid bearing responsibilities such as Provident Fund, gratuity, paid leave, and other benefits of the organised sector.

"Across tanneries and allied industries (like footwear and finished leather), there is no implementation of labour laws," says Chandershekhar, the All India Trade Union Congress general secretary (U.P.). He says tannery owners don't comply with pollution rules either, with the installed effluent processing units often being dysfunctional or lacking the required capacity to treat the waste.

In October 2019, for instance, the UPPCB ordered tanneries in Kanpur to shut after a report by the Ganga monitoring wing of the NGT found shortcomings in 126 tanneries permitted to run at 50% capacity. "The effluents from tanneries located in the Jainmat industrial area were being released into the river," the UPPCB had observed at the time.

Critics connect the industry's decline with the Hindutva ideology of the BJP that is in government at the Centre and the State.

"If you take a deep dive into the main stakeholders of the trade, the majority of the workers and tannery owners are Muslims. An affluent class emerged in the last century in Kanpur because of the tannery industry," says Shah Nawaz Alam, national secretary, Congress. In 2021-2022, he had initiated a campaign among owners and workers in Kanpur and Lucknow to revive tanneries. He adds that if the government wanted to check pollution, it should have made alternative arrangements instead of "systematically finishing the industry".

The U.P. government says it is drafting a new leather and footwear policy to boost exports. The policy aims to provide financial support, technological upgradation, and export subsidies to manufacturers and exporters, and is likely to focus on supporting design capacity, component manufacturing, and machinery required for leather footwear.

Awasthi, the Kanpur MP, who is at the forefront of pushing for a dedicated leather cluster, says the space will significantly lower pollution and help the industry flourish. "The mega leather cluster will be set up in an organised, systematic way," he says, hoping that the process will be kick-started this year.

Hope is what keeps Yadav in the profession. "I will wait for a year. If the situation doesn't get better, I will shift to working as an auto driver. Maybe I will buy a CNG vehicle," he says, adding that two of his former colleagues who changed trade in 2020 earn over ₹20,000 a month.

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A worker at a tannery in the Bantala area of Kolkata, West Bengal. BLOOMBERG

## Exfoliating dead skin

## मृत त्वचा को हटाना

- The Central government plans to establish a **leather industry cluster** in **Ramaipur, Kanpur**, where the **British-era tanning trade** once flourished near the **Ganga river**.  
केंद्र सरकार की योजना कानपुर के रामईपुर में चमड़ा उद्योग क्लस्टर स्थापित करने की है, जहां ब्रिटिश काल का टैनिंग व्यापार कभी गंगा नदी के किनारे फला-फूला था।
- **Mayank Kumar** reports on the **hopes and struggles** of **tannery owners and workers** in **Uttar Pradesh** dealing with **business losses** and **rising costs** due to a **2017**



government order and pollution concerns raised by the **National Green Tribunal (NGT)**.

मयंक कुमार ने उत्तर प्रदेश के चमड़ा फैक्ट्री मालिकों और श्रमिकों की आशाओं और संघर्षों की रिपोर्ट दी है, जो 2017 के सरकारी आदेश और राष्ट्रीय हरित अधिकरण (NGT) द्वारा उठाए गए प्रदूषण संबंधी मुद्दों के कारण व्यापार घाटे और बढ़ती लागत का सामना कर रहे हैं।

## Tannery worker's reality in Kanpur

### कानपुर में टैनरी श्रमिक की वास्तविकता

- **Ram Nath Yadav (54)**, standing outside his **damaged two-room house in Afeem Kothi**, reacts sarcastically to the news of the proposed cluster.

अफीम कोठी में अपने दो कमरों के क्षतिग्रस्त घर के बाहर खड़े रामनाथ यादव (54) ने प्रस्तावित क्लस्टर की खबर पर व्यंग्यात्मक प्रतिक्रिया दी।

- His neighbour, **Vakil Ahmed**, read in a **Hindi daily** on **March 8** that the Centre has asked for a **Detailed Project Report (DPR)** from the **Commerce and Industry Minister**.

उनके पड़ोसी वकील अहमद ने 8 मार्च को एक हिंदी दैनिक में पढ़ा कि केंद्र ने वाणिज्य एवं उद्योग मंत्री से विस्तृत परियोजना रिपोर्ट (DPR) मांगी है।

- The cluster will involve the **establishment or relocation of 175 tanneries over 2,000 acres, located 12 km from Kanpur city centre**.

यह क्लस्टर 2,000 एकड़ में फैलेगा और इसमें 175 टैनरियों की स्थापना या पुनःस्थापन शामिल होगा, जो कानपुर शहर केंद्र से 12 किमी दूर स्थित है।

- **Vakil Ahmed**, a school teacher, is sympathetic to Yadav, whose **father also worked in tanneries**.

स्कूल शिक्षक वकील अहमद, यादव के प्रति सहानुभूति रखते हैं, क्योंकि उनके पिता भी टैनरी में काम करते थे।

## Decline in income and livelihood

### आय और आजीविका में गिरावट

- **Yadav**, a **second-generation tannery worker**, says **his work has become irregular over the last eight years**.

दूसरी पीढ़ी के टैनरी श्रमिक यादव का कहना है कि पिछले आठ वर्षों में उनका काम अनियमित हो गया है।

- He hopes the cluster will **reduce tannery waste treatment costs** and **ease pollution restrictions**.

उन्हें उम्मीद है कि यह क्लस्टर टैनरी अपशिष्ट उपचार की लागत कम करेगा और प्रदूषण प्रतिबंधों को आसान बनाएगा।



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पिछले वर्ष उन्होंने केवल ₹60,000 कमाए, जो दस साल पहले की कमाई का एक-तिहाई है।
- He said the **income drop** came at a time when he needs to **marry off his two daughters**.  
उन्होंने कहा कि यह आय में गिरावट तब आई जब उन्हें अपनी दो बेटियों की शादी करनी है।

## Environmental and health concerns by NGT

### NGT द्वारा पर्यावरण और स्वास्थ्य संबंधी चिंताएं

- The **National Green Tribunal (NGT)** is hearing a case about **severe pollution** in **Kanpur Nagar, Kanpur Dehat, and Fatehpur** from **leather tannery effluents** flowing into the **Ganga and soil**.  
राष्ट्रीय हरित अधिकरण (NGT) कानपुर नगर, कानपुर देहात और फतेहपुर में चमड़ा टैनरी के अपशिष्ट से गंगा और मिट्टी में फैलते गंभीर प्रदूषण के मामले की सुनवाई कर रहा है।
- **Heavy metals** like **chromium and mercury** have caused a **public health crisis**.  
क्रोमियम और मरकरी जैसे भारी धातुओं ने एक सार्वजनिक स्वास्थ्य संकट पैदा किया है।
- **Kanpur's legacy and the tannery industry**  
कानपुर की विरासत और टैनरी उद्योग
- Kanpur, known as the '**Leather City of India**', has over **200 active tanneries** across a **15-km stretch**.  
कानपुर, जिसे 'भारत की लेदर सिटी' कहा जाता है, में 15 किलोमीटर क्षेत्र में फैली हुई 200 से अधिक सक्रिय टैनरियां हैं।
- **Tanning** is the process where **animal hide** is treated using **tannic acid** to make it **durable**.  
टैनिंग वह प्रक्रिया है जिसमें पशु की खाल को टैनिन एसिड से टिकाऊ सामग्री में बदला जाता है।
- This industry grew due to **British military demand, access to Ganga water, cheap labour, and undeveloped land**.  
यह उद्योग ब्रिटिश सेना की मांग, गंगा जल की उपलब्धता, सस्ती मजदूरी, और अविकसित ज़मीन के कारण विकसित हुआ।

## NGT interventions and findings

### NGT के हस्तक्षेप और निष्कर्ष

- In **November 2024**, the **NGT** directed the **U.P. government** to conduct **health camps** in worst-affected areas like **Rakhi Mandi and Afeem Kothi**.  
नवंबर 2024 में, NGT ने उत्तर प्रदेश सरकार को राखी मंडी और अफीम कोठी जैसे सबसे प्रभावित क्षेत्रों में स्वास्थ्य शिविर लगाने का निर्देश दिया।



- The camps found **high levels of mercury and chromium** in residents' **blood samples**.  
इन शिविरों में निवासियों के रक्त नमूनों में मरकरी और क्रोमियम की उच्च मात्रा पाई गई।
- Health camps in **Kanpur Dehat** and **Fatehpur** revealed issues like **respiratory ailments, neurological disorders, and skin diseases**.  
कानपुर देहात और फतेहपुर में लगे स्वास्थ्य शिविरों में श्वसन संबंधी रोग, तंत्रिका संबंधी विकार, और त्वचा रोगों की पहचान हुई।
- The **District Magistrate's affidavit** stated that in **Punki** and **Jajmau**, people suffered from **liver and respiratory problems**.  
जिलाधिकारी के हलफनामे में कहा गया कि पुंकी और जाजमऊ में लोग यकृत (लीवर) और श्वसन संबंधी समस्याओं से पीड़ित हैं।
- The **amicus curiae** noted a **shortage of doctors** and **lack of infrastructure** to test for **heavy metals** in the blood.  
अमीकस क्यूरी (न्यायालय सलाहकार) ने डॉक्टरों की कमी और रक्त में भारी धातुओं की जांच की सुविधाओं की अनुपस्थिति की बात कही।

## Local residents' struggles with health

### स्थानीय निवासियों की स्वास्थ्य संबंधी समस्याएं

- **Rajnish Mishra (48)**, a **medical representative**, said he has developed **asthma**, and his wife has **COPD (chronic obstructive pulmonary disease)**.  
राजनीश मिश्रा (48), एक मेडिकल प्रतिनिधि, ने बताया कि उन्हें अस्थमा हो गया है और उनकी पत्नी को सीओपीडी (क्रॉनिक ऑब्स्ट्रक्टिव पल्मोनरी डिजीज) है।
- He said the area has become **unlivable**, describing it as **hell**.  
उन्होंने कहा कि यह क्षेत्र नरक बन गया है और यहां रहना अब असंभव है।

## Exfoliating dead skin

### मृत त्वचा को हटाना

## Leather industry cluster plan in Ramaipur, Kanpur

### कानपुर के रामईपुर में चमड़ा उद्योग क्लस्टर की योजना

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## Tannery worker's reality in Kanpur कानपुर में टैनरी श्रमिक की वास्तविकता

- **Ram Nath Yadav (54)**, standing outside his **damaged two-room house** in **Afeem Kothi**, reacts sarcastically to the news of the proposed cluster.  
अफीम कोठी में अपने दो कमरों के क्षतिग्रस्त घर के बाहर खड़े रामनाथ यादव (54) ने प्रस्तावित क्लस्टर की खबर पर व्यंग्यात्मक प्रतिक्रिया दी।
- His neighbour, **Vakil Ahmed**, read in a **Hindi daily** on **March 8** that the Centre has asked for a **Detailed Project Report (DPR)** from the **Commerce and Industry Minister**.  
उनके पड़ोसी वकील अहमद ने 8 मार्च को एक हिंदी दैनिक में पढ़ा कि केंद्र ने वाणिज्य एवं उद्योग मंत्री से विस्तृत परियोजना रिपोर्ट (DPR) मांगी है।
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## Decline in income and livelihood आय और आजीविका में गिरावट

- **Yadav**, a **second-generation tannery worker**, says his **work has become irregular** over the last **eight years**.  
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टैनिंग वह प्रक्रिया है जिसमें पशु की खाल को टैनिक एसिड से टिकाऊ सामग्री में बदला जाता है।
- This industry grew due to **British military demand, access to Ganga water, cheap labour, and undeveloped land**.  
यह उद्योग ब्रिटिश सेना की मांग, गंगा जल की उपलब्धता, सस्ती मजदूरी, और अविकसित ज़मीन के कारण विकसित हुआ।

## NGT interventions and findings

### NGT के हस्तक्षेप और निष्कर्ष

- In **November 2024**, the **NGT** directed the **U.P. government** to conduct **health camps** in worst-affected areas like **Rakhi Mandi and Afeem Kothi**.  
नवंबर 2024 में, NGT ने उत्तर प्रदेश सरकार को राखी मंडी और अफीम कोठी जैसे सबसे प्रभावित क्षेत्रों में स्वास्थ्य शिविर लगाने का निर्देश दिया।

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- The camps found **high levels of mercury and chromium** in residents' blood samples.  
इन शिविरों में निवासियों के रक्त नमूनों में मरकरी और क्रोमियम की उच्च मात्रा पाई गई।
- Health camps in **Kanpur Dehat** and **Fatehpur** revealed issues like **respiratory ailments, neurological disorders, and skin diseases**.  
कानपुर देहात और फतेहपुर में लगे स्वास्थ्य शिविरों में श्वसन संबंधी रोग, तंत्रिका संबंधी विकार, और त्वचा रोगों की पहचान हुई।
- The **District Magistrate's affidavit** stated that in **Punki** and **Jajmau**, people suffered from **liver and respiratory problems**.  
जिलाधिकारी के हलफनामे में कहा गया कि पुंकी और जाजमऊ में लोग यकृत (लीवर) और श्वसन संबंधी समस्याओं से पीड़ित हैं।
- The **amicus curiae** noted a **shortage of doctors and lack of infrastructure** to test for **heavy metals** in the blood.  
अमीकस क्यूरी (न्यायालय सलाहकार) ने डॉक्टरों की कमी और रक्त में भारी धातुओं की जांच की सुविधाओं की अनुपस्थिति की बात कही।

## Local residents' struggles with health

### स्थानीय निवासियों की स्वास्थ्य संबंधी समस्याएं

- **Rajnish Mishra (48)**, a **medical representative**, said he has developed **asthma**, and his wife has **COPD (chronic obstructive pulmonary disease)**.  
राजनीश मिश्रा (48), एक मेडिकल प्रतिनिधि, ने बताया कि उन्हें अस्थमा हो गया है और उनकी पत्नी को सीओपीडी (क्रॉनिक ऑब्स्ट्रक्टिव पल्मोनरी डिजीज) है।
- He said the area has become **unlivable**, describing it as **hell**.  
उन्होंने कहा कि यह क्षेत्र नरक बन गया है और यहां रहना अब असंभव है।

## Crisis in Kanpur's Leather Industry

### कानपुर के चमड़ा उद्योग में संकट

- The crisis is not limited to physical health but has also affected **financial health**. यह संकट केवल शारीरिक स्वास्थ्य तक सीमित नहीं है, बल्कि **आर्थिक स्थिति** पर भी असर पड़ा है।
- Earlier, Kanpur and its nearby areas had over **600 tanneries**, employing more than **1 lakh workers**. पहले, कानपुर और इसके आसपास के क्षेत्रों में **600 से अधिक टैनिरियां** थीं, जिनमें **1 लाख से अधिक मजदूर** कार्यरत थे।
- The decline began in **2017**, when the **Uttar Pradesh Pollution Control Board (UPPCB)** mandated a **50% reduction in infrastructure**, or a fine of **₹12,500 per day**. **2017** में गिरावट शुरू हुई जब **उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड (UPPCB)** ने **50% इन्फ्रास्ट्रक्चर घटाने** या **₹12,500 प्रतिदिन** का जुर्माना लगाने का आदेश दिया।



- This came a year after the sudden impact of **demonetisation**. यह निर्णय नोटबंदी के अचानक असर के एक साल बाद आया।
- Currently, tanneries operate for only **15 days a month** and at **half the capacity**. वर्तमान में, टैनरियां केवल **15 दिन प्रति माह** और **आधी क्षमता** पर संचालित हो रही हैं।
- They have reduced processing from **100 hides daily** to **50 hides**. उन्होंने **100 खाल प्रतिदिन** से घटाकर **50 खाल** प्रति दिन प्रोसेस करना शुरू कर दिया है।
- Since **2020**, tannery waste treatment cost rose from **₹2 per hide** to over **₹15 per hide**. **2020** से, टैनरी अपशिष्ट उपचार की लागत **₹2 प्रति खाल** से बढ़कर **₹15 प्रति खाल** से अधिक हो गई है।
- Currently, the processing cost has surged to **₹100 per hide**, and tanneries operate at only **25% capacity**. वर्तमान में, प्रोसेसिंग लागत **₹100 प्रति खाल** तक पहुंच गई है और टैनरियां केवल **25% क्षमता** पर चल रही हैं।
- Employees are suffering from **pay cuts**, and **festivals like Kumbh and Magh Melas** cause further shutdowns. कर्मचारी वेतन कटौती झेल रहे हैं और कुंभ व माघ मेलों के कारण टैनरियां बंद हो जाती हैं।
- In the last **8 years**, many tanneries faced **temporary closures** at least **9 times**, lasting from a few weeks to more than a year. पिछले **8 वर्षों** में, कई टैनरियों को **कम से कम 9 बार अस्थायी रूप से बंद** किया गया, जिनकी अवधि कुछ हफ्तों से लेकर एक साल से अधिक रही।
- Hides come mainly from **U.P., Rajasthan, and Madhya Pradesh**, but due to **cow slaughter bans** and fear of **cow vigilantes**, availability has dropped. खाल मुख्य रूप से **उत्तर प्रदेश, राजस्थान और मध्य प्रदेश** से आती है, लेकिन **गौवध पर प्रतिबंध** और **गौ रक्षकों के डर** के कारण इसकी उपलब्धता घट गई है।
- Cattle hides, especially from **large animals**, are in **high international demand**. विशेष रूप से **बड़े जानवरों** की खालों की **अंतरराष्ट्रीय बाजार में अधिक मांग** है।
- After slaughter, hides are **salted** at slaughterhouses to prevent **bacterial growth**, and are **dried for 3-6 days** before being sold. हत्या के बाद, खालों को **बैक्टीरिया से बचाने** के लिए **नमक डाला जाता है**, और **3-6 दिनों तक सुखाया जाता है**।
- In tanneries, raw hides are **preserved, desalted, and cleaned** of blood and grime. टैनरियों में, कच्ची खाल को **संरक्षित, नमकमुक्त** किया जाता है और **खून व गंदगी से साफ** किया जाता है।
- Machines like the **salt shaker** help in removing salt from hides. **सॉल्ट शेकर** जैसी मशीनें खाल से **नमक हटाने** में मदद करती हैं।
- Many **small and medium leather businesses** are relocating to **West Bengal**, or collaborating with firms in **Vietnam and Europe**. कई **छोटे और मध्यम चमड़ा व्यवसायी** अब **पश्चिम बंगाल** जा रहे हैं, या **वियतनाम और यूरोप** की कंपनियों से साझेदारी कर रहे हैं।



## Government Response and Future Hopes

### सरकारी प्रतिक्रिया और भविष्य की उम्मीदें

- In **November 2024**, the **National Green Tribunal (NGT)** directed the government to submit **sector-wise action plans** by **March 7, 2025**. नवंबर 2024 में राष्ट्रीय हरित अधिकरण (NGT) ने सरकार को 7 मार्च 2025 तक विभिन्न क्षेत्रों के लिए कार्य योजना जमा करने का निर्देश दिया।
- The government has **not yet submitted** any progress report. सरकार ने अब तक कोई प्रगति रिपोर्ट प्रस्तुत नहीं की है।
- Trade union activists blame **factory owners** for **pollution** and **decline in employment**. ट्रेड यूनियन कार्यकर्ता कारखाना मालिकों को प्रदूषण और रोजगार में गिरावट के लिए दोषी मानते हैं।
- Owners prefer hiring **short-term workers** to avoid **PF, gratuity, and other benefits**. मालिक कम अवधि के श्रमिकों को रखना पसंद करते हैं ताकि पीएफ, ग्रेच्युटी और अन्य लाभ से बचा जा सके।
- **Labour laws** are not implemented in the **tanning and footwear sectors**. चमड़ा और जूता उद्योग में श्रम कानूनों को लागू नहीं किया जा रहा है।
- Effluent treatment plants are often **dysfunctional** or have **insufficient capacity**. अपशिष्ट उपचार संयंत्र अक्सर काम नहीं करते या उनकी क्षमता अपर्याप्त होती है।
- In **October 2019**, the **UPPCB** ordered closure of tanneries after a report found issues in **126 tanneries** allowed to run at **50% capacity**. अक्टूबर 2019 में, UPPCB ने 126 टैनरियों में 50% क्षमता पर चलने की अनुमति देने के बावजूद गड़बड़ी मिलने पर उन्हें बंद करने का आदेश दिया।
- The tanneries in the **Jajmau industrial area** were found **discharging effluents** directly into the **Ganga river**. जाजमऊ औद्योगिक क्षेत्र की टैनरियां गंगा नदी में सीधे अपशिष्ट छोड़ रही थीं।
- Critics link the industry's decline with **Hindutva ideology** of the ruling **BJP government**. आलोचक इस उद्योग के पतन को सत्तारूढ़ बीजेपी सरकार की हिंदुत्व विचारधारा से जोड़ते हैं।
- Most tannery owners and workers are **Muslims**, who once formed a **prosperous class** in Kanpur. ज्यादातर टैनरी मालिक और मजदूर मुसलमान हैं, जिन्होंने कभी कानपुर में एक समृद्ध वर्ग का निर्माण किया था।
- In **2021-2022**, **Shahnawaz Alam** of **Congress** initiated a campaign to **revive tanneries** in **Kanpur and Lucknow**. 2021-2022 में, कांग्रेस के शहनवाज़ आलम ने कानपुर और लखनऊ में टैनरियों को पुनर्जीवित करने के लिए अभियान शुरू किया।
- He argues that the government should have offered **alternatives** to tackle pollution rather than **destroying the industry**. उनका कहना है कि सरकार को प्रदूषण के समाधान के लिए विकल्प देने चाहिए थे, न कि उद्योग को खत्म करना चाहिए था।
- The **U.P. government** is drafting a **new leather and footwear policy** to promote **exports**. उत्तर प्रदेश सरकार निर्यात को बढ़ावा देने के लिए नई चमड़ा और जूता नीति तैयार कर रही है।



- This policy aims to offer **financial support, technology upgrades, and export subsidies**. इस नीति का उद्देश्य वित्तीय सहायता, तकनीकी उन्नयन, और निर्यात सब्सिडी प्रदान करना है।
- **Kanpur MP Ramesh Awasthi** is pushing for the **leather cluster**, hoping it will **reduce pollution** and help the **industry revive**. कानपुर के सांसद रमेश अवस्थी लेदर क्लस्टर को आगे बढ़ा रहे हैं, और उम्मीद कर रहे हैं कि यह **प्रदूषण को कम करेगा** और **उद्योग को पुनर्जीवित करेगा**।
- Yadav says he will **wait one more year**; if things don't improve, he plans to **become an auto driver** and possibly buy a **CNG vehicle**. यादव कहते हैं कि वह **एक साल और इंतजार करेंगे**; अगर स्थिति नहीं सुधरी, तो वह **ऑटो चालक बन जाएंगे** और शायद **CNG वाहन खरीदेंगे**।
- Two of his ex-colleagues who changed their profession in **2020** now earn over **₹20,000 per month**. उनके दो पूर्व सहयोगी जिन्होंने **2020** में काम बदला, अब **₹20,000 प्रति माह** से अधिक कमाते हैं।

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#### 2. Two Cheetahs Move to New Home in Madhya Pradesh

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# Vande Bharat trains have weak defences against even cattle, says new safety report

GS Paper III: Disaster Management

**S. Vijay Kumar**  
CHENNAI

The much-celebrated flagship train of the Indian Railways – the Vande Bharat Express – is prone to serious accidents even in cases of a cattle run-over, says a report on railway safety. The report, accessed by *The Hindu*, says the leading coach of the Vande Bharat trains was much lighter than the locomotive of regular trains and hitting any obstruction or even cattle run-over might lead to a serious accident at higher speeds.

The report generated by the Commissioner of Railway Safety, Ministry of Civil Aviation, explains the safety measures to be taken by the Railways for op-



The report by the Commissioner of Railway Safety explains safety measures to be taken for operation of high-speed trains. FILE PHOTO

eration of high-speed trains.

Asking the Ministry of Railways to ensure provision of sturdy fencing to prevent trespassing by humans and cattle, which posed a threat to the trains, the report said level crossing gates should be eliminated on routes

where trains were operated at 160 kmph.

**Engineer says train safe**  
Asked for his comments, Shubhranshu, former Principal Chief Mechanical Engineer, Integral Coach Factory, Chennai, said the front nose cone of these trains was designed to

crumple and absorb some of the impact energy. Also, the cattle guard at the front was made to scoop and deflect the obstruction.

He said the leading coaches of Vande Bharat trains were well within the average weight of the coaches. "It is light compared with a locomotive. But that is how train sets are designed. There is no locomotive at the front and the propulsion power is distributed along the train. Even the EMUs, MEMUs and all train sets anywhere in the world have similar arrangements. It doesn't make the train any less safe on this account," he said.

Mr. Shubhranshu led the Team-ICF that made the first Train18 rake in a

record 18 months' time in October 2018. The rake was named Vande Bharat Express and flagged off between Delhi and Varanasi by Prime Minister Narendra Modi in February 2019 and was considered as one of the most successful products of the 'Make in India' initiative.

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## Weak Safety Defences in Vande Bharat Trains

### वंदे भारत ट्रेनों में कमजोर सुरक्षा उपाय

The much-celebrated flagship train of Indian Railways — the Vande Bharat Express — is vulnerable to serious accidents, even due to **cattle run-overs**, as per a new railway safety report.

भारतीय रेलवे की बहुप्रशंसित प्रमुख ट्रेन वंदे भारत एक्सप्रेस भी पशु टकराव जैसी घटनाओं के कारण गंभीर दुर्घटनाओं की शिकार हो सकती है, जैसा कि एक नई रेलवे सुरक्षा रिपोर्ट में कहा गया है।



- The **leading coach** of the train is **much lighter** than the locomotive of regular trains, making it more prone to accidents at **high speeds**.  
इस ट्रेन का आगामी कोच सामान्य ट्रेनों के इंजन की तुलना में काफी हल्का होता है, जिससे यह तेज़ गति पर दुर्घटना की संभावना को बढ़ा देता है।
- The report has been prepared by the **Commissioner of Railway Safety, under the Ministry of Civil Aviation**.  
यह रिपोर्ट नागरिक उड्डयन मंत्रालय के तहत रेलवे सुरक्षा आयुक्त द्वारा तैयार की गई है।
- The report emphasizes the need for **sturdy fencing** along railway tracks to prevent **trespassing by cattle or humans**.  
रिपोर्ट में पटरियों के किनारे मजबूत बाड़बंदी की आवश्यकता पर ज़ोर दिया गया है ताकि पशुओं या लोगों की घुसपैठ को रोका जा सके।
- It also recommends **eliminating level crossing gates** on routes where trains run at **160 kmph** or more.  
यह उन मार्गों पर लेवल क्रॉसिंग गेट्स हटाने की सिफारिश करता है जहाँ ट्रेनों की गति 160 किलोमीटर प्रति घंटे या उससे अधिक है।

## Expert's Clarification on Train's Safety

### ट्रेन की सुरक्षा पर विशेषज्ञ की स्पष्टीकरण

- **Shubhranshu**, former Principal Chief Mechanical Engineer at **Integral Coach Factory (ICF), Chennai**, stated that the **nose cone** of the train is **designed to crumple** and absorb **impact energy**.  
शुभांशु, पूर्व प्रधान मुख्य यांत्रिक अभियंता, इंटीग्रल कोच फैक्ट्री, चेन्नई, ने बताया कि ट्रेन का सामने वाला हिस्सा इस तरह से डिज़ाइन किया गया है कि वह टक्कर की ऊर्जा को सोख सके।
- The **cattle guard** is also designed to **scoop and deflect** obstructions.  
पशु सुरक्षा गार्ड को भी अवरोधों को हटाने और मोड़ने के लिए डिज़ाइन किया गया है।
- He clarified that while the **leading coaches** are lighter than a locomotive, this is standard in **train set designs** globally and doesn't compromise safety.  
उन्होंने स्पष्ट किया कि यद्यपि आगे के कोच हल्के होते हैं, यह दुनिया भर की ट्रेन सेट डिज़ाइनों में सामान्य है और इससे सुरक्षा पर कोई प्रभाव नहीं पड़ता।
- He emphasized that even **EMUs, MEMUs**, and other **train sets** across Indian Railways follow the same configuration.  
उन्होंने ज़ोर देकर कहा कि भारतीय रेलवे में चलने वाली ईएमयू, एमईएमयू और अन्य ट्रेन सेट्स भी यही डिज़ाइन अपनाते हैं।
- Mr. Shubhranshu led the **Team-ICF** that manufactured the **first Train18 rake** in just **18 months** in **October 2018**.  
श्री शुभांशु ने टीम-आईसीएफ का नेतृत्व किया जिसने अक्टूबर 2018 में मात्र 18 महीनों में पहली ट्रेन18 रेक बनाई।



- This rake was later named **Vande Bharat Express** and **flagged off by PM Narendra Modi in February 2019** between **Delhi and Varanasi**.  
इस रक को बाद में वंदे भारत एक्सप्रेस नाम दिया गया और इसे प्रधानमंत्री नरेंद्र मोदी ने फरवरी 2019 में दिल्ली और वाराणसी के बीच रवाना किया।
- It was considered a major success under the '**Make in India**' initiative.  
इसे 'मेक इन इंडिया पहल' की एक बड़ी सफलता माना गया।

## Safety Recommendations from the Report

### रिपोर्ट से सुरक्षा संबंधी सिफारिशें

- Railways should **identify regular trespassing locations and cattle ingress points** and implement solutions like **Railway Protection Force (RPF) deployment, regular patrolling, and building subways** for safer crossings.  
रेलवे को नियमित घुसपैठ के स्थानों और पशुओं की प्रवेश स्थलों की पहचान करनी चाहिए और आरपीएफ तैनाती, नियमित गश्त और सबवे निर्माण जैसे उपाय लागू करने चाहिए।
- **As of December 26, 2024, there were 136 Vande Bharat train services** operating across the railway network.  
26 दिसंबर 2024 तक रेलवे नेटवर्क में कुल 136 वंदे भारत ट्रेन सेवाएं चल रही थीं।



**New territory:** Chief Minister **Mohan Yadav** releases a cheetah into the **Gandhi Sagar Wildlife Sanctuary** in Madhya Pradesh on Sunday. PTI

**GS Paper III: Environment**

## Two Cheetahs Move to New Home in Madhya Pradesh

मध्य प्रदेश में दो चीतों का नए घर में स्थानांतरण

On Sunday, Chief Minister Mohan Yadav released two cheetahs, Prabhas and Pawak, into the Gandhi Sagar Wildlife Sanctuary.

रविवार को मुख्यमंत्री मोहन यादव ने प्रभास और पवक नामक दो चीतों को गांधी सागर वन्यजीव अभयारण्य में छोड़ा।

- The cheetahs are **six-year-old males**, and they were brought from **South Africa** to **Kuno National Park** in **February 2023**.  
ये छह साल के नर चीते हैं, जिन्हें फरवरी 2023 में दक्षिण अफ्रीका से कूनो राष्ट्रीय उद्यान लाया गया था।



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- They will now roam in a **64-sq. km enclosure** at Gandhi Sagar, which lies between **Mandsaur** and **Neemuch** districts.  
अब वे 64 वर्ग किलोमीटर के घेरे में घूमेंगे, जो मंदसौर और नीमच जिलों के बीच फैला है।
- The **Chambal river** divides the sanctuary into nearly **two equal halves**.  
चंबल नदी अभयारण्य को लगभग दो बराबर हिस्सों में बांटती है।

## Cheetah Project and Expansion Plans

### चीता परियोजना और विस्तार की योजनाएं

- Mr. Yadav described the **Cheetah Project** as an **ambitious initiative to increase cheetah numbers and preserve the species** in India.  
श्री यादव ने चीता परियोजना को भारत में चीतों की संख्या बढ़ाने और प्रजाति के संरक्षण के लिए एक महत्वाकांक्षी पहल बताया।
- Cheetahs were **first introduced** at **Kuno National Park** in **September 2022**.  
कूनो राष्ट्रीय उद्यान में सितंबर 2022 में पहली बार चीतों को बसाया गया था।
- He said Gandhi Sagar has now become the **second site** in Madhya Pradesh after Kuno where **cheetahs are being reintroduced**.  
उन्होंने कहा कि गांधी सागर अब कूनो के बाद मध्य प्रदेश में दूसरा स्थान बन गया है जहाँ चीतों को पुनः बसाया जा रहा है।
- Efforts are ongoing to bring more cheetahs from **South Africa, Kenya, and Botswana**.  
दक्षिण अफ्रीका, केन्या, और बोत्सवाना से और भी चीतों को लाने के प्रयास जारी हैं।

## More Cheetahs to Arrive

### और चीते पहुंचने वाले हैं

- According to the State government's statement on **April 18**, **four cheetahs** will be brought from **Botswana** in **May**, followed by **four more** in a **second phase**.  
राज्य सरकार के 18 अप्रैल के बयान के अनुसार, मई में बोत्सवाना से चार चीते लाए जाएंगे, और दूसरे चरण में चार और चीते आएंगे।
- Mr. Yadav claimed that **Kuno** recorded the **highest number of cheetah births in the world** after the intercontinental translocation.  
श्री यादव ने दावा किया कि अंतरमहाद्वीपीय स्थानांतरण के बाद कूनो में विश्व में सबसे अधिक चीता जन्म दर्ज हुए हैं।

## Cheetah Transfer and Monitoring

### चीता स्थानांतरण और निगरानी

- Earlier in the day, a **20-member team** led by **Kuno's Chief Conservator of Forest (CCF) Uttam Kumar Sharma** transported the two cheetahs by road to Gandhi Sagar.



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इससे पहले दिन में कूनो के मुख्य वन संरक्षक (सीसीएफ) उत्तम कुमार शर्मा के नेतृत्व में 20-सदस्यीय टीम ने इन दो चीतों को सड़क मार्ग से गांधी सागर पहुंचाया।

**Gandhi Sagar is located over 250 km away from Kuno.**

**गांधी सागर, कूनो से 250 किलोमीटर से अधिक दूरी पर स्थित है।**

- The team will stay at the sanctuary for **seven days**, during which **Gandhi Sagar staff**, trained at Kuno, will get used to handling cheetahs.  
टीम सात दिनों तक अभयारण्य में रहेगी, इस दौरान कूनो में प्रशिक्षित गांधी सागर के कर्मचारी चीतों को संभालने का अभ्यास करेंगे।
- With the movement of these two cheetahs, **Kuno now has 24 cheetahs — 14 in the wild and 10 in enclosures.**  
इन दो चीतों के स्थानांतरण के बाद, कूनो में अब कुल 24 चीते हैं — 14 जंगल में और 10 बाड़ों में।
- In the past year, the **State wildlife authorities** have worked to **increase the prey base** of the sanctuary.  
पिछले एक वर्ष में, राज्य वन्यजीव अधिकारियों ने अभयारण्य का शिकार आधार बढ़ाने के लिए काम किया है।

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# ISRO satellites forecast wheat production, assess crop condition

GS Paper III: Agriculture

**The Hindu Bureau**  
BENGALURU

The Indian Space Research Organisation (ISRO) in a study using its satellites has estimated that the total wheat production from eight major wheat-growing States will be 122.724 million tonnes as on March 31, 2025.

According to the space agency, the Comprehensive Remote Sensing Observation on Crop Progress (CROP), a semi-automated and scalable framework, developed by the ISRO's National Remote Sensing Centre (NRSC), enables the near real-time monitoring of crop sowing and harvesting during the Rabi season across India.

**Systematic assessment**  
The ISRO said that using this approach, the progress of wheat sown areas and the overall crop condi-



A woman harvesting wheat in a field in Lucknow, Uttar Pradesh, one of the major wheat-growing States in India. SANDEEP SAXENA

tion across the States were systematically assessed, using Optical and Synthetic Aperture Radar (SAR) remote sensing datasets from EOS-04 (RISAT-1A), EOS-06 (Oceansat-3), and Resourcesat-2A, for the Rabi season, 2024-25.

The eight major wheat-growing States are Uttar Pradesh, Madhya Pradesh, Rajasthan, Punjab, Harya-

na, Bihar, Gujarat and Maharashtra.

It added that the spatial distribution of the wheat crop as of March 31 across the country is 330.8 lakh hectares.

"The wheat sown area derived from satellite data by March 31 stands at 330.8 lakh hectares, which is close to the statistics generated by the Ministry of

Agriculture and Farmers Welfare (324.38 lakh hectares) as on February 4, 2025," it added.

**Parameters**

The ISRO said that experimental assessment of wheat production, at the national scale, is done by assimilating satellite-derived parameters such as crop area, sowing date information, and in-season crop condition in a process-based crop growth simulation model at 5x5 km spatial resolution.

"The multi-source data integration is expected to enhance the accuracy of production estimation at a finer spatial level, supporting precise and scalable estimation of wheat production. The total wheat production from eight major wheat-growing states of India as on March 31 is estimated to be 122.724 million tonnes," the ISRO said.

## ISRO Satellites Forecast Wheat Production, Assess Crop Condition

इसरो के उपग्रहों ने गेहूं उत्पादन का पूर्वानुमान लगाया, फसल की स्थिति का आकलन किया

The Indian Space Research Organisation (ISRO) has estimated that the total wheat

production from eight major wheat-growing States will be 122.724 million tonnes as of March 31, 2025.

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने अनुमान लगाया है कि 31 मार्च 2025 तक आठ प्रमुख गेहूं उत्पादक राज्यों से कुल गेहूं उत्पादन 122.724 मिलियन टन होगा।

## CROP Monitoring Framework क्रॉप निगरानी प्रणाली

- The **Comprehensive Remote Sensing Observation on Crop Progress (CROP)** is a semi-automated and scalable framework developed by ISRO's National Remote Sensing Centre (NRSC).  
इसरो के राष्ट्रीय रिमोट सेंसिंग केंद्र (एनआरएससी) द्वारा विकसित क्रॉप (CROP) एक आधा-स्वचालित और स्केलेबल ढांचा है।
- It enables near real-time monitoring of crop sowing and harvesting during the Rabi season across India.



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यह भारत भर में रबी सीजन के दौरान फसल बोआई और कटाई की लगभग वास्तविक समय में निगरानी को संभव बनाता है।

## Systematic Assessment through Satellite Data

### उपग्रह डेटा के माध्यम से व्यवस्थित आकलन

- Using this approach, **wheat sown areas** and **overall crop condition** across the States were assessed with **Optical and Synthetic Aperture Radar (SAR)** data.  
इस पद्धति के माध्यम से राज्यों में बोई गई गेहूं की क्षेत्रफल और फसल की समग्र स्थिति का आकलन ऑप्टिकल और सिंथेटिक एपर्चर रडार (SAR) डेटा के उपयोग से किया गया।
- Remote sensing data came from **EOS-04 (RISAT-1A)**, **EOS-06 (Oceansat-3)**, and **Resourcesat-2A** for the **Rabi season 2024-25**.  
रबी सीजन 2024-25 के लिए **EOS-04 (RISAT-1A)**, **EOS-06 (Oceansat-3)** और **Resourcesat-2A** से रिमोट सेंसिंग डेटा प्राप्त किया गया।

## Major Wheat-growing States

### प्रमुख गेहूं उत्पादक राज्य

- The **eight major wheat-growing States** assessed were **Uttar Pradesh, Madhya Pradesh, Rajasthan, Punjab, Haryana, Bihar, Gujarat, and Maharashtra**.  
जिन आठ प्रमुख गेहूं उत्पादक राज्यों का आकलन किया गया, वे हैं — उत्तर प्रदेश, मध्य प्रदेश, राजस्थान, पंजाब, हरियाणा, बिहार, गुजरात और महाराष्ट्र।

## Area Under Wheat Cultivation

### गेहूं की खेती का क्षेत्रफल

- As of **March 31**, the **spatial distribution** of the wheat crop across the country was **330.8 lakh hectares**.  
31 मार्च तक देशभर में गेहूं की स्थानिक वितरण का क्षेत्रफल 330.8 लाख हेक्टेयर रहा।
- This estimate is close to the **Ministry of Agriculture and Farmers Welfare** data of **324.38 lakh hectares** as on **February 4, 2025**.  
यह आंकड़ा 4 फरवरी 2025 को कृषि और किसान कल्याण मंत्रालय द्वारा जारी 324.38 लाख हेक्टेयर के आंकड़े के करीब है।

## Parameters Used for Estimation

### अनुमान के लिए उपयोग किए गए पैरामीटर

- The experimental estimation used **satellite-derived parameters** such as **crop area, sowing date, and in-season crop condition**.

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इस अनुमान में उपग्रह आधारित पैरामीटर जैसे फसल क्षेत्रफल, बोआई की तिथि, और मौसम के दौरान फसल की स्थिति को शामिल किया गया।

- These were used in a **process-based crop growth simulation model** with a **5×5 km spatial resolution**.

इन्हें 5×5 किमी स्थानिक संकल्प वाले प्रक्रिया-आधारित फसल वृद्धि अनुकरण मॉडल में उपयोग किया गया।

## Data Integration and Accuracy

### डेटा एकीकरण और सटीकता

- **Multi-source data integration** is expected to improve **production estimation accuracy** at a **finer spatial level**.

बहु-स्रोत डेटा एकीकरण से उत्पादन अनुमान की सटीकता में अधिक सूक्ष्म स्तर पर सुधार होने की उम्मीद है।

- This supports **precise** and **scalable estimation** of **wheat production**.

यह गेहूं उत्पादन के सटीक और स्केलेबल अनुमान का समर्थन करता है।

- The final estimated **wheat production** from the **eight major States** as of **March 31** is **122.724 million tonnes**.

31 मार्च तक आठ प्रमुख राज्यों से अंतिम अनुमानित गेहूं उत्पादन 122.724 मिलियन टन है।



# Scientists find green way to recycle toxic perovskite solar cells

Scientists have developed a way to process perovskite solar cells – which are more efficient but have shorter lifespans – such that the efficiency is almost the same as using fresh materials, even after being recycled up to five times; they were also able to re-obtain about 99% of the cells' layers after multiple rounds

ES Paper III: S&T

Rohini Subrahmanyam  
BENGALURU

Using solar energy may be better for the environment than burning through fossil fuels, but the process still isn't exactly perfect. Making silicon-based solar panels is energetically expensive and we still don't know what to do with the silicon once the panels are done being used.

There is a cheaper way to make solar panels, also called photovoltaics (PVs), using crystal structures called perovskites. However, perovskite crystals contain toxic elements like lead, which needs to be processed carefully once these solar panels reach the end of their lifespan. And so far, researchers have had to use toxic organic solvents like dimethylformamide to recycle such solar panels.

### A yummy sandwich

Now, in a paper published in *Nature*, scientists have described another, potentially greener way of dealing with the problem. Using a water-based recycling solution, they have reported a way to degrade and recycle used perovskite. They were also able to get back high-quality perovskite crystals, which can potentially be used again for making new solar cells.

"It's kind of a complex chemistry to make the water solution usable and very stable for perovskite recycling, to fully remove the [the use of] organic solvents," Xun Xiao, a postdoctoral researcher at Linköping University in Sweden and lead author of the paper, said.

Perovskite solar cells are made up of multiple layers. The perovskite layer is sandwiched between materials that can conduct and transport charges, in this case metal electrodes and glass sheets.

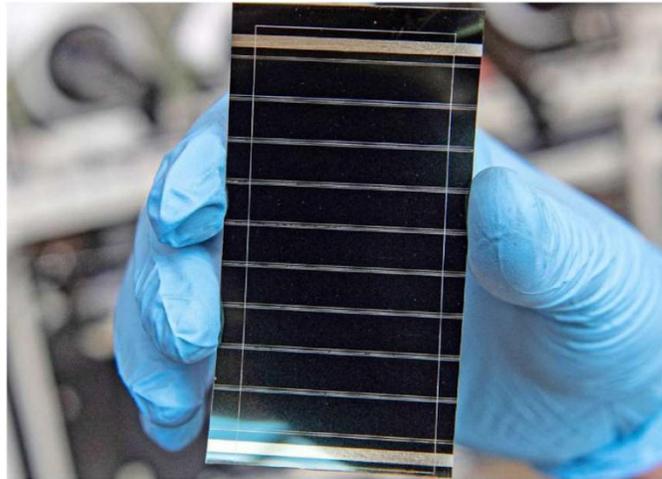
"People have been very excited about [perovskite PVs] for a decade or more now because very quickly they have been able to achieve very high power conversion efficiencies," Rhys Charles, a researcher in the chemical engineering department at Swansea University in the U.K. explained. "So you could deliver an extremely cheap solar energy technology, but there are some things that have been holding the field back."

Stability is one of them: perovskite solar cells have a shorter lifespan.

### Improving solar energy

"Early attempts to recycle these devices have all focused on capturing lead. Now, people are taking a little bit more of a holistic view of it," Charles continued. "From a circular economy point of view, recycling is also important because they want to capture the major impact materials [that] they use again."

For a circular economy, the aim is to keep the product – in this case the components of a perovskite solar cell – in use for as long as possible, to minimise



A researcher holds up a PET perovskite solar module. DENNIS SCHROEDER/NREL

waste. This way, if the cells are made again with recycled components, they would have a much lower environmental impact, which means lower emissions and lower cost associated with solar energy generation.

Thus far, the only way to recycle these important materials has been to use toxic organic solvents.

### Acids and salts

Dissolving and recycling the lead-containing perovskite layer in water was a major challenge to overcome. For this, the scientists added three key salts to help in the recycling process.

The first salt they added was sodium acetate. The acetate ions bound with the lead ions in the perovskite, making a highly soluble lead acetate that dissolved well in water.

They then added sodium iodide and hypophosphorous acid to help regenerate pure perovskite crystals in their water solution. Sodium iodide contains iodide ions that help repair and restore the degraded perovskite, such that when the solution is cooled, high-quality, pure perovskite crystals re-emerge from the solution.

The acid acts as a long-term stabiliser, ensuring the water solution can be reused and that the quality of the recycled crystals remains high.

"I'm pleased to see this focus on



Early attempts to recycle these devices have all focused on capturing lead. Now, people are taking a little bit more of a holistic view of it

**RHYS CHARLES**  
Researcher at chemical engineering department, Swansea University

recycling, remanufacturing, and green chemistry," said Matthew Davies, a professor of chemical engineering at Swansea University. "It lays the foundation for perovskite PVs to deliver on their promise as a low-cost, high-efficiency solar technology within a circular economy, avoiding the large-scale waste challenges faced by earlier PV technologies."

The scientists also developed solutions made of ethanol and ethyl acetate to dissolve other components of the perovskite solar cell, after which they were able to recycle each component to reuse along with the perovskite crystals. Then they reassembled the solar cell layer by layer and found that the efficiency was almost the same as using fresh materials, even after being recycled up to five times. They were also able to re-obtain about 99% of the different layers even after multiple rounds of recycling.

"These guys seem to have solved the problem; they seem to be able to use this aqueous system to recycle the cells and make them again with high efficiency," Charles said. "If it can be scaled [up] and if it works as well as the paper claims, it could potentially overcome some of the most significant barriers to commercialising perovskites and solve some of the key environmental concerns about the technologies as well."

Charles also stressed the need to underpin scientific and industrial progress, especially when it came to environmental technologies, with life cycle assessments. Life cycle assessment, he explained, is an approach to quantify all the impacts of a technology across its entire life cycle, from the start to when one has the final product. "But you can go further," he said. "Then you can look at the use phase of the technology and the end-of-life phase as well."

"I always enjoy it when I see these things underpinned by life cycle assessment, to make sure there aren't unintended consequences and to make sure the research really is targeting the key environmental problems for the technology," Charles added. "I'd like to see more of that as well, as just standard practice."

(Rohini Subrahmanyam is a freelance journalist in Bengaluru. roh.subb@gmail.com)

### THE GIST

Perovskite crystals used in making solar panels contain toxic elements like lead. And so far, researchers have had to use toxic organic solvents like dimethylformamide to recycle such solar panels

Dissolving and recycling the lead-containing perovskite layer in water was a major challenge to overcome. Now, using a water-based recycling solution, scientists have reported a way to degrade and recycle used perovskite. They were also able to get back high-quality perovskite crystals, which can potentially be used again for making new solar cells.

For this, the scientists added three key salts to help in the recycling process – sodium acetate, sodium iodide and hypophosphorous acid. Then they reassembled the solar cell layer by layer and found that the efficiency was almost the same as using fresh materials, even after being recycled up to five times

## Scientists Find Green Way to Recycle Toxic Perovskite Solar Cells

वैज्ञानिकों ने विषैले पेरोव्स्काइट सौर सेल्स को रीसायकल करने का पर्यावरण अनुकूल तरीका खोजा

Scientists have developed a method to recycle perovskite solar cells up to five times with nearly the same efficiency as using fresh materials.



वैज्ञानिकों ने पेरोव्स्काइट सौर सेल्स को पांच बार तक रीसायकल करने का तरीका विकसित किया है, जिसमें ताजे सामग्री के उपयोग जैसी ही कुशलता बनी रहती है।

- They were able to **recover about 99% of the cells' layers** after multiple recycling rounds.  
वे 99% सौर सेल की परतें कई बार रीसायकल करने के बाद फिर से प्राप्त करने में सफल रहे।

## Issues with Conventional Solar Panels

### परंपरागत सौर पैनलों से जुड़ी समस्याएं

- While solar energy is better for the environment compared to fossil fuels, **silicon-based solar panels are energetically expensive to produce**.  
हालांकि सौर ऊर्जा जीवाश्म ईंधनों की तुलना में पर्यावरण के लिए बेहतर है, लेकिन सिलिकॉन आधारित सौर पैनलों का उत्पादन ऊर्जा की दृष्टि से महंगा है।
- There is still no clear method for **disposing of silicon** after use.  
उपयोग के बाद सिलिकॉन के निपटान के लिए अभी भी कोई स्पष्ट तरीका नहीं है।

## Perovskite as an Alternative

### पेरोव्स्काइट एक वैकल्पिक विकल्प के रूप में

- Cheaper **perovskite crystals** can be used to make solar panels, but they contain **toxic elements like lead**, requiring careful disposal.  
सस्ते पेरोव्स्काइट क्रिस्टल्स से सौर पैनल बनाए जा सकते हैं, लेकिन इनमें सीसा जैसे विषैले तत्व होते हैं, जिनका सावधानी से निपटान करना आवश्यक होता है।
- So far, **toxic organic solvents such as dimethylformamide** were used to recycle these solar panels.  
अब तक इन सौर पैनलों को रीसायकल करने के लिए डाइमेथाइलफॉर्माइड जैसे विषैले जैविक सॉल्वेंट्स का उपयोग किया जाता था।

## Water-Based Recycling Breakthrough

### जल आधारित रीसायकल प्रणाली में सफलता

- In a recent study, scientists introduced a **water-based recycling solution** to degrade and recover perovskite.  
हाल ही में एक अध्ययन में वैज्ञानिकों ने पेरोव्स्काइट को नष्ट कर पुनः प्राप्त करने के लिए जल-आधारित रीसायकल समाधान प्रस्तुत किया।



- They recovered **high-quality perovskite crystals** that can be reused in new solar cells. उन्होंने उच्च गुणवत्ता वाले पेरोव्स्काइट क्रिस्टल्स प्राप्त किए जिन्हें नए सौर सेल्स में दोबारा उपयोग किया जा सकता है।

## Chemical Stability with Water

### जल के साथ रासायनिक स्थिरता

- Researchers had to create a **complex and stable water solution** for perovskite recycling to completely avoid **organic solvents**.  
शोधकर्ताओं को पेरोव्स्काइट रीसायकलिंग के लिए एक जटिल और स्थिर जल समाधान बनाना पड़ा ताकि जैविक सॉल्वेंट्स का पूरी तरह से उपयोग न हो।

## Structure of Perovskite Solar Cells

### पेरोव्स्काइट सौर सेल्स की संरचना

- These solar cells consist of **multiple layers**, with the **perovskite layer sandwiched** between **charge-conducting materials** like **metal electrodes** and **glass sheets**.  
ये सौर सेल्स कई परतों से बने होते हैं, जिनमें पेरोव्स्काइट परत को धातु इलेक्ट्रोड्स और कांच की शीट्स जैसे चार्ज संप्रेषण सामग्री के बीच रखा जाता है।

## Advantages and Challenges

### फायदे और चुनौतियाँ

- Perovskite PVs are exciting due to their **high power conversion efficiency** and **low cost**, but they suffer from **stability issues** and **shorter lifespan**.  
उच्च ऊर्जा रूपांतरण दक्षता और कम लागत के कारण पेरोव्स्काइट पीवी आकर्षक हैं, लेकिन इनकी स्थिरता की समस्या और कम जीवनकाल एक चुनौती है।

## Holistic Recycling Approach

### समग्र रीसायकल दृष्टिकोण

- New recycling methods now focus not just on **lead recovery**, but on **reusing all key materials** to support a **circular economy**.  
नई रीसायकल विधियाँ अब केवल सीसे की पुनःप्राप्ति पर नहीं, बल्कि सभी प्रमुख सामग्रियों के पुनः उपयोग पर ध्यान देती हैं जिससे परिपत्र अर्थव्यवस्था को बढ़ावा मिले।
- Reusing these materials reduces **waste**, **emissions**, and **production costs**.  
इन सामग्रियों के पुनः उपयोग से कचरा, उत्सर्जन, और उत्पादन लागत कम होती है।



## Chemical Innovation in Recycling

### रीसायकलिंग में रासायनिक नवाचार

- Scientists added **three key salts** to the water solution to help dissolve and recover **lead-containing perovskite**.  
वैज्ञानिकों ने सीसा युक्त पेरॉव्स्काइट को घोलने और पुनः प्राप्त करने के लिए जल समाधान में तीन प्रमुख नमक मिलाए।
- **Sodium acetate** was used to bind with **lead ions**, creating **soluble lead acetate**.  
सोडियम एसीटेट का उपयोग सीसा आयनों से जुड़ने के लिए किया गया, जिससे घुलनशील सीसा एसीटेट बना।
- **Sodium iodide** and **hypophosphorous acid** helped regenerate **pure perovskite crystals** when the solution was cooled.  
सोडियम आयोडाइड और हाइपोफॉस्फोरस एसिड ने समाधान को ठंडा करने पर शुद्ध पेरॉव्स्काइट क्रिस्टल्स को फिर से उत्पन्न करने में मदद की।
- The **acid** ensures **long-term stability** and **reusability** of the recycling solution.  
यह एसिड समाधान की दीर्घकालिक स्थिरता और पुनः उपयोग को सुनिश्चित करता है।

## Recycling, Remanufacturing, and Green Chemistry

### रीसायकलिंग, रीमैन्युफैक्चरिंग और हरित रसायन विज्ञान

- Matthew Davies, a professor at Swansea University, said the research supports **recycling, remanufacturing, and green chemistry**.  
स्वानसी विश्वविद्यालय के प्रोफेसर मैथ्यू डेविस ने कहा कि यह शोध रीसायकलिंग, रीमैन्युफैक्चरिंग और हरित रसायन विज्ञान को समर्थन देता है।
- He stated it lays the foundation for **perovskite PVs** to become **low-cost, high-efficiency solar technology** within a **circular economy**, avoiding **large-scale waste**.  
उन्होंने कहा कि यह परिपत्र अर्थव्यवस्था के भीतर कम लागत, उच्च दक्षता वाली सौर तकनीक के रूप में पेरॉव्स्काइट पीवी के लिए नींव रखता है, जिससे बड़े पैमाने पर अपशिष्ट की समस्या से बचा जा सकेगा।

## Use of Ethanol and Ethyl Acetate in Recycling

### रीसायकलिंग में एथेनॉल और एथिल एसीटेट का उपयोग

- The scientists developed **ethanol** and **ethyl acetate** solutions to dissolve other **components** of the perovskite solar cell.  
वैज्ञानिकों ने पेरॉव्स्काइट सौर सेल के अन्य घटक को घोलने के लिए एथेनॉल और एथिल एसीटेट से समाधान विकसित किया।
- Each component, along with the perovskite crystals, was **recycled and reused**.  
प्रत्येक घटक को पेरॉव्स्काइट क्रिस्टल्स के साथ रीसायकल और पुनः उपयोग किया गया।



## Solar Cell Reassembly and Efficiency

### सौर सेल का पुनः संयोजन और दक्षता

- The researchers **reassembled the solar cells layer by layer** and found that **efficiency remained almost the same** as fresh materials even after **five recycling cycles**.  
शोधकर्ताओं ने सौर सेल को परत दर परत दोबारा जोड़ा और पाया कि पाँच बार रीसायकल किए जाने के बाद भी उसकी दक्षता लगभग समान रही।
- They were able to recover around **99% of the different layers** after multiple recycling rounds.  
वे कई बार रीसायकल करने के बाद भी लगभग 99% विभिन्न परतों को पुनः प्राप्त करने में सफल रहे।

## Potential for Commercial Scaling

### व्यावसायिक स्तर पर विस्तार की संभावना

- Rhys Charles noted that the researchers have **solved the problem** and achieved **high efficiency** through **aqueous recycling systems**.  
राइस चार्ल्स ने कहा कि शोधकर्ताओं ने समस्या का समाधान कर लिया है और जल-आधारित रीसायकल प्रणाली के माध्यम से उच्च दक्षता प्राप्त की है।
- He said that if the system can be **scaled up**, it may **overcome significant barriers to commercializing perovskites** and resolve **key environmental concerns**.  
उन्होंने कहा कि यदि इस प्रणाली को बड़े पैमाने पर लागू किया जा सके, तो यह पेरॉव्सकाइट के व्यावसायीकरण में प्रमुख बाधाओं को दूर कर सकता है और प्रमुख पर्यावरणीय चिंताओं को हल कर सकता है।

## Need for Life Cycle Assessment

### लाइफ साइकिल असेसमेंट की आवश्यकता

- Charles emphasized that **scientific and industrial progress** in environmental technologies must be supported by **life cycle assessments**.  
चार्ल्स ने जोर दिया कि पर्यावरणीय तकनीकों में वैज्ञानिक और औद्योगिक प्रगति को लाइफ साइकिल असेसमेंट द्वारा समर्थन मिलना चाहिए।
- Life cycle assessment quantifies **impacts of a technology** from its **beginning to final product**, including **use phase** and **end-of-life phase**.  
लाइफ साइकिल असेसमेंट तकनीक के प्रारंभ से अंतिम उत्पाद तक के प्रभावों को मापता है, जिसमें उपयोग चरण और अंतिम चरण भी शामिल होते हैं।
- Charles appreciated the fact that this research included life cycle analysis, ensuring it addresses **key environmental problems** without **unintended consequences**.  
चार्ल्स ने इस बात की सराहना की कि इस शोध में लाइफ साइकिल विश्लेषण को शामिल किया गया,



जिससे यह सुनिश्चित किया गया कि यह प्रमुख पर्यावरणीय समस्याओं को अनचाहे परिणामों के बिना संबोधित करता है।

- He also expressed that this practice should become a **standard approach** in environmental technology research.

उन्होंने यह भी कहा कि यह अभ्यास पर्यावरणीय तकनीकी अनुसंधान में एक मानक प्रक्रिया बन जाना चाहिए।

## Rejosari Senik: rising above water

GS Paper III: S&T

Rejosari Senik is a hamlet in the Demak district of Indonesia's Central Java province. In the 1970s, the distance between the hamlet and the nearest shoreline, on the Java Sea, was about 7 km. Today, the land on which the hamlet lies is permanently underwater.

Even by the mid 2000s, Rejosari Senik had become disconnected from mainland Java by erosion. The few structures in the hamlet still occupied today stand on stilts.

Its people once used to grow rice and vegetables. As global warming caused the local sea level to rise slowly but steadily, they switched to fish ponds, but many of them also moved further inland in search of new homes and better jobs.

But even by 2020, reports emerged that Rejosari Senik wore the look of a ghost town: the only reason it actually wasn't one is that it still counted a few residents.

One of them, Pasijah, is a 55-year-old woman who told *Reuters* in February, "I do have every intention to stay here and my feelings for this house remain." Her family raises its stilts, sometimes up to thrice a year, to keep it above the rising water.

While Indonesia at large plans to build a 700-km-long sea wall to keep sea-level rise at bay, Pasijah and her



A drone view of the house belonging to Pasijah and other buildings, surrounded by mangrove planted by her, in Rejosari Senik. REUTERS

family have also been planting 15,000 mangrove trees a year for two decades to keep the tides from flooding her home.

**For feedback and suggestions** for 'Science', please write to [science@thehindu.co.in](mailto:science@thehindu.co.in) with the subject 'Daily page'

**permanently underwater.**

आज यह गांव जिस भूमि पर स्थित है, वह स्थायी रूप से पानी के नीचे आ चुकी है।

## Rejosari Senik: Rising Above Water

रेजोसारी सेनिक: पानी से ऊपर उठता गांव

Rejosari Senik is a hamlet in the Demak district of Central Java province, Indonesia.

रेजोसारी सेनिक, इंडोनेशिया के सेंट्रल जावा प्रांत के डेमाक ज़िले में स्थित एक छोटा गांव है।

- In the **1970s**, the distance between the hamlet and the **Java Sea** shoreline was about **7 km**.

**1970 के दशक** में यह गांव जावा सागर के किनारे से लगभग **7 किलोमीटर** दूर था।

- Today, the land on which the hamlet lies is



## Erosion and Disconnection from Mainland

### कटाव और मुख्यभूमि से अलगाव

- By the **mid-2000s**, Rejosari Senik had become **disconnected** from **mainland Java** due to **erosion**.  
2000 के दशक के मध्य तक कटाव के कारण रेजोसारी सेनिक, मुख्य जावा भूमि से कट चुका था।
- The few structures still occupied today are built on **stilts**.  
जो कुछ इमारतें आज भी उपयोग में हैं, वे खंभों (stilts) पर बनी हुई हैं।

## Impact on Livelihood and Migration

### जीविका पर प्रभाव और पलायन

- Earlier, people of the hamlet grew **rice and vegetables**.  
पहले इस गांव के लोग धान और सब्जियाँ उगाते थे।
- Due to **global warming** and **rising sea levels**, they switched to **fish ponds**.  
वैश्विक तापवृद्धि और समुद्र-स्तर में वृद्धि के कारण उन्होंने मछली पालन की ओर रुख किया।
- Many residents moved **inland** in search of **new homes and better jobs**.  
कई निवासियों ने नए घरों और बेहतर नौकरियों की तलाश में भीतर की ओर पलायन कर लिया।

## Rejosari Senik in 2020

### 2020 में रेजोसारी सेनिक

- By **2020**, reports described Rejosari Senik as resembling a **ghost town**.  
2020 तक रेजोसारी सेनिक को भूतिया गांव जैसा बताया गया था।
- It wasn't completely abandoned only because a **few residents** still lived there.  
यह पूरी तरह से वीरान नहीं था क्योंकि अभी भी कुछ निवासी वहां रहते थे।

## Pasijah: A Resident Who Stayed

### पसिजाह: एक निवासी जो रुकी रहीं

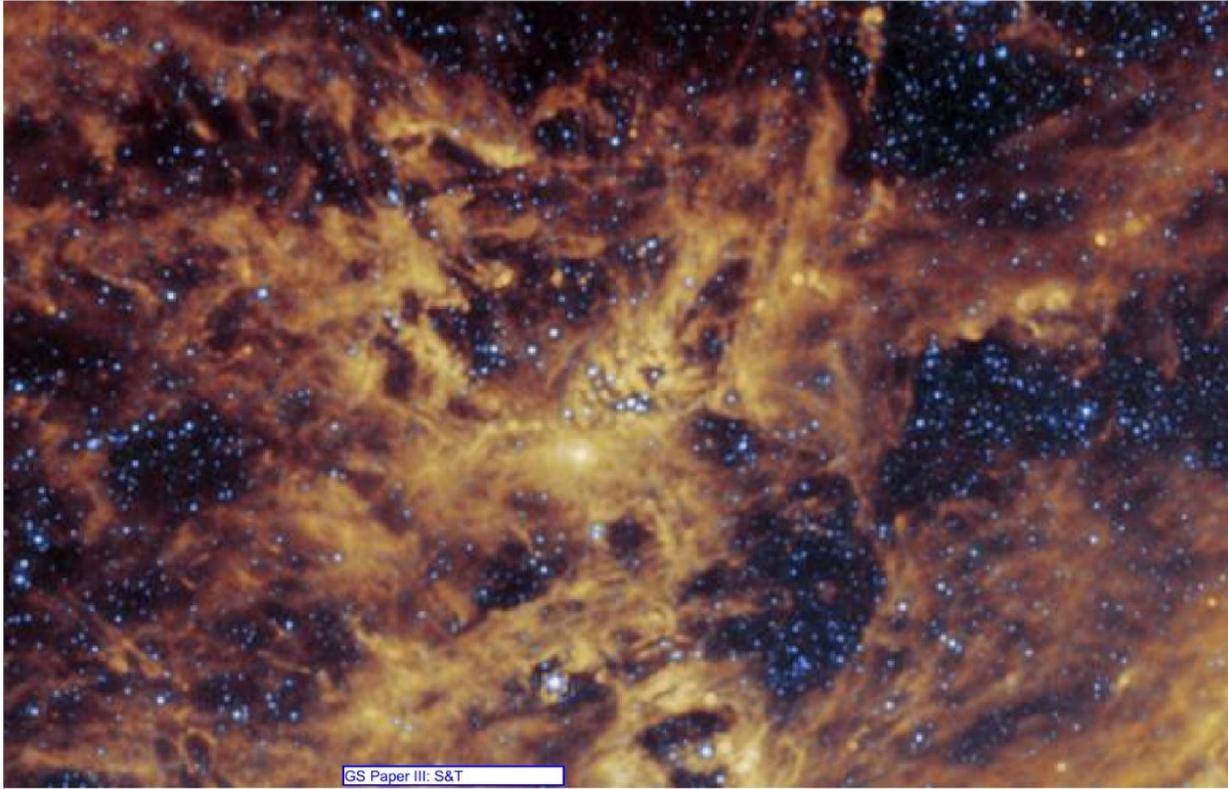
- One of the residents, **Pasijah**, is a **55-year-old woman** who told Reuters in **February** that she wishes to **stay in her home**.  
एक निवासी पसिजाह, जो 55 वर्ष की महिला हैं, ने फरवरी में रॉयटर्स को बताया कि वह अपने घर में ही रहना चाहती हैं।
- Her family **raises the stilts** of their house, sometimes **up to three times a year**, to keep it above rising water.  
उनका परिवार अपने घर के खंभों को एक साल में तीन बार तक ऊंचा करता है ताकि वह बढ़ते पानी से ऊपर रहे।



## Community and National Efforts

### सामुदायिक और राष्ट्रीय प्रयास

- Indonesia plans to build a **700-km-long sea wall** to fight **sea-level rise**.  
इंडोनेशिया ने समुद्र-स्तर में वृद्धि से निपटने के लिए **700 किलोमीटर लंबी समुद्री दीवार** बनाने की योजना बनाई है।
- Pasijah's family has been **planting 15,000 mangrove trees** every year for **two decades** to prevent **flooding**.  
पसिजाह का परिवार **पिछले दो दशकों** से हर साल **15,000 मैंग्रोव पेड़** लगा रहा है ताकि **बाढ़** से बचाव हो सके।



GS Paper III: S&T

The **James Webb Space Telescope (JWST)** has revealed strong signs of a previously unknown black hole in the **M83 galaxy**, pictured here. **Massive spiral galaxies** like this one often host a growing black hole but astronomers have struggled for decades to confirm one in M83. JWST revealed for the first time **highly ionised neon gas** that could be a telltale signature of its presence. NASA



# Tackle heatwaves with short- and long-term measures

GS Paper III: S&T

**I**n March 15, some States and cities in India experienced the first of severe heatwaves for the year 2025. This was 20 days earlier than the first severe heatwave in 2024. In the last decade, the number of severe heat days and the severity/intensity of heatwaves have been rising. The year 2024 was the warmest year on record at about 1.55°C above pre-industrial level, according to the World Meteorological Organization. In India, December 2022 was the hottest December since temperature monitoring in the country started in 1901. The frequency of heatwaves in India has increased in the last two decades, in comparison to the previous two decades.

The impact of rising external temperature and heatwaves along with humidity and wind speed, is reflected in the form of heat stress. When the outside temperature reaches close to our body temperature of 37° Celsius, the body fails to release the internal heat which is generated as a part of the basal metabolic rate. Thus, one starts to feel heat-stressed. Heat stress can affect multiple organs including the kidneys, the liver and the brain, and may cause sickness and even death.

## Socio-economic impact and equity issue

However, heatwaves have many non-health and socio-economic impacts. Climate change, specifically rising temperature, is one of the causes of farming sector stress in India. With rising temperatures, it becomes difficult for farmers to work in the field and harvest comes down. Livestock can die, further impacting the poor and farmers. Heat stress can reduce livestock production, food production, farm productivity and the ability of outdoor workers/workforce productivity. As India is a labour-intensive country, especially in the agriculture and construction sector, heatwaves result in an individual's reduced working ability. Thus, loss of work hours and loss of job reduce personal and family income. In India, up to 75% of the workforce, or 380 million people are dependent on heat-exposed labour. There are estimates that heat stress results in an economic loss of 3% to 5% of GDP in many countries including India. There are estimates that in 2023, nearly 6% of work hours in India were lost due to heat stress. As temperature rises, electricity demand and power cuts affect industrial production. Heatwaves and heat stress impact personal income and may slow down a nation's economic growth.

Heat-related data indicate that the impact of heat stress is worst on the poor, the marginalised, migrants, subsistence workers, women, and the elderly. Women are additionally impacted due to social norms such as working in the kitchen, the need to wear clothing due to cultural requirements, or space allocated for sleeping. From every angle, it is a matter of inequity.

As early as the middle of the 19th century, researchers and scientists made observations that urban areas have a higher temperature than rural areas, arriving at the inference that much of the rise in temperature is human made. Yet, it took



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As India might be heading into another warm year, there is a need for people-centric and multi-sectoral interventions, along with science-based innovations

another 150 years for the first heat and health action plans (HHAP) to be prepared in the European countries; ironically, the first such efforts were from the non-tropical regions, between 2003 to 2008.

In 2013, Ahmedabad, Gujarat, became the first municipal corporation in Asia to develop a heat action plan (HAP). Since then, and in the last decade, more than 23 Indian States and around 140 cities across India have State- and city-level HAPs. India's National Programme on Climate Change and Human Health (NPCCCH) also provides heat advisories and other health-related information through the National Disaster Management Authority (NDMA).

## Heat action plans need nuances

Most HAPs have four to five components, i.e., early prediction of heatwaves to raise alerts; increasing awareness among the communities/people on actions to be taken; and preparing and getting the health system ready to manage health conditions. The fourth component of such plans focuses on ensuring long-term measures to reduce heat, government initiatives to increase the number of trees and parks and keeping gardens open for public use. There is experience, from various cities, about painting rooftops white to reflect heat. The fifth component of HAP must be collecting, analysing and interpreting heat stress, and also morbidity and mortality data. Though many Indian States and cities have HAPs, their implementation demands more attention. These HAPs have shown partial success and only in some settings where city authorities work with the State government, engage local public health institutions, subject experts, non-governmental organisations and community-based organisations.

As India might be heading into another warm year, there are some learning and action points which should be considered.

First, every State should consider developing and/or updating its HAP, informed and guided by the learnings and best practices from the existing plans. The HAP should factor in humidity and not just temperature. The HAPs should be developed based on a local vulnerability assessment. Plans should ensure the clear accountability and the responsibility of various identified stakeholders. These should be activated from the beginning of March.

Second, a review article published in the medical journal, *Preventive Medicine: Research & Reviews*, noted that most Indian cities have excess mortality due to heat stress, which demands better heat stress-related data collection. Besides, when heat-stress related data is not comprehensive and an under-estimation, it is worthwhile interpreting available data to review who the people who suffer a heat stroke are and which part of the city they live in, which, in turn, would provide useful, actionable and potentially lifesaving information.

Third, a few countries such as the United Kingdom have started Heat Health Alert (HHA) systems which use both daytime and nighttime

maximum temperatures. The HAPs in India also need to factor in the day and nighttime temperature monitoring. There is also a need for more sophisticated and specific warning systems which can predict thermal comfort and the timings during the day when temperatures are likely to be low. This can ensure health as well as continuity of work such as school and office functioning.

Fourth, the long-term preventive measures of HAPs need to be strengthened. Better building and urban infrastructure and building material need to be promoted. Heatwaves impact the poor the most, and it is during these periods that governments should also consider financial support for informal sector workers who may suffer wage losses.

Fifth, a 2022 study from three Asian countries (India, Pakistan and Bangladesh) suggested that the universal 'stay indoors' advisory during specific hours may not be helpful for all families. People in a poor neighbourhood and in a confined space that is surrounded by high-rise buildings may experience higher temperatures in their homes and outside, in comparison to the rest of the city. Even within cities, there is a need for geography and social context-specific heat advisories.

## Need for a people-centric approach

Sixth, it is time that more Indian cities start 'summer or cold shelters' similar to winter shelters. There are already some States that are developing a 'cool roof policy' to promote the use of material in building roofs which will keep houses cool by reflecting sunlight. Prevention of heatwaves needs more practicable and science-based innovations.

Seventh, during heatwaves, local authorities carry out a lot of short-term measures such as advisories to drink a lot of water. However, to make that happen, municipalities and city authorities need to ensure the easy availability of drinking water points, and the availability of electrolyte solution/ORS powder. Offices and workplaces (both formal and informal) should allow staggered work times and also early morning and late evening work. Work can be closed during the day, especially for those who work in the informal sector and open spaces.

The evidence is that investments in heat-related actions and adaptation are highly cost effective. Therefore, every effort should be made to reduce the economic burden of heat stress in hospitals and emergency rooms and its indirect social and economic costs. With every passing year, in India and globally, the average temperature is rising. Therefore, the actions should be focused not just on short-term measures but also on long-term strategies to address the challenge of rising temperatures and steps such as enhanced coordination between multiple agencies, with *inter alia* initiatives such as provision of insurance coverage for lost work days. If policymakers and planners remember that a heatwave is an equity issue and that the approach has to be people-centric, half of the task will be done.

## Tackle Heatwaves with Short- and Long-Term Measures

हीटवेव से निपटना: तात्कालिक और दीर्घकालिक उपाय

On March 15, some States and cities in India experienced the first severe heatwaves of 2025, which was 20 days earlier than the first



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

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**severe heatwave of 2024.**

**15 मार्च को भारत के कुछ राज्यों और शहरों में 2025 की पहली तीव्र हीटवेव आई, जो 2024 की पहली हीटवेव से 20 दिन पहले थी।**

- In the last decade, the **number and intensity of severe heat days** has been increasing. पिछले दशक में गंभीर गर्मी के दिनों की संख्या और तीव्रता बढ़ी है।
- The year **2024** was the **warmest year on record**, with temperatures about **1.55°C above pre-industrial levels**, as per the **World Meteorological Organization**. 2024 अब तक का सबसे गर्म वर्ष था, जिसकी तापमान औद्योगीकरण से पहले के स्तर से लगभग **1.55°C अधिक** था, जैसा कि **विश्व मौसम विज्ञान संगठन** ने बताया।
- In India, **December 2022** was the **hottest December** since temperature monitoring began in **1901**. भारत में, **दिसंबर 2022** सबसे गर्म दिसंबर था जब से तापमान की निगरानी **1901** में शुरू हुई थी।
- In the last two decades, the **frequency of heatwaves** in India has increased compared to the **previous two decades**. पिछले बीस वर्षों में भारत में हीटवेव की आवृत्ति पहले के बीस वर्षों की तुलना में बढ़ी है।

## **Heat Stress and Health Impacts**

### **हीट स्ट्रेस और स्वास्थ्य पर प्रभाव**

- Rising **temperature, humidity, and wind speed** result in **heat stress**. बढ़ते तापमान, आर्द्रता और हवा की गति के कारण हीट स्ट्रेस होता है।
- When external temperature nears **37°C**, the body cannot release its internal heat, leading to **heat stress**. जब बाहरी तापमान **37°C** के करीब पहुँचता है, तो शरीर अपनी **आंतरिक गर्मी** छोड़ नहीं पाता, जिससे हीट स्ट्रेस होता है।
- Heat stress can affect **multiple organs** like the **kidneys, liver, and brain**, causing **illness or even death**. हीट स्ट्रेस **गुर्दे, यकृत और मस्तिष्क** जैसे कई अंगों को प्रभावित कर सकता है, जिससे **बीमारी या मृत्यु** भी हो सकती है।

## **Socio-Economic Impact and Equity Issue**

### **सामाजिक-आर्थिक प्रभाव और असमानता का मुद्दा**

- Heatwaves impact not just health, but also **farming and livelihoods**. हीटवेव केवल स्वास्थ्य ही नहीं बल्कि **खेती और आजीविका** को भी प्रभावित करती है।
- Rising temperature reduces the ability of **farmers** to work and results in **lower harvest**. बढ़ते तापमान के कारण **किसानों** की काम करने की क्षमता घटती है और **फसल कम** हो जाती है।

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- **Livestock deaths** worsen the situation for **poor farmers**.  
पशुओं की मृत्यु से गरीब किसानों की स्थिति और भी खराब हो जाती है।
- Heat stress lowers **livestock and food production**, reduces **farm productivity**, and affects **outdoor workers' capacity**.  
हीट स्ट्रेस से पशु और खाद्य उत्पादन घटता है, खेती की उत्पादकता कम होती है और बाहरी मजदूरों की क्षमता प्रभावित होती है।
- India's **agriculture and construction sectors** are **labour-intensive**, so heatwaves reduce **working ability**.  
भारत के कृषि और निर्माण क्षेत्र में मजदूरी पर निर्भरता अधिक है, इसलिए हीटवेव काम करने की क्षमता को कम करती है।
- Loss of work hours and jobs reduce **family incomes**.  
काम के घंटों और नौकरियों की हानि से पारिवारिक आय में गिरावट आती है।
- In India, around **75% of the workforce** (approx. **380 million people**) depend on **heat-exposed labour**.  
भारत में लगभग 75% श्रमबल (लगभग 38 करोड़ लोग) गर्मी के संपर्क में आने वाले कार्यों पर निर्भर हैं।
- In **2023**, about **6% of work hours** were **lost due to heat stress** in India.  
2023 में भारत में लगभग 6% कार्य घंटे हीट स्ट्रेस के कारण नष्ट हो गए थे।
- Heatwaves increase **electricity demand** and **power cuts**, reducing **industrial production**.  
हीटवेव से बिजली की मांग और बिजली कटौती बढ़ती है, जिससे औद्योगिक उत्पादन कम होता है।
- **Personal incomes** fall and **national economic growth** may slow down.  
व्यक्तिगत आय घटती है और राष्ट्र की आर्थिक वृद्धि धीमी हो सकती है।

## Heat Stress and Inequality

### हीट स्ट्रेस और असमानता

- **Poor people, migrants, subsistence workers, women, and the elderly** are most affected.  
गरीब, प्रवासी, जीविका श्रमिक, महिलाएं और बुजुर्ग सबसे अधिक प्रभावित होते हैं।
- Women face additional heat stress due to **social norms, kitchen work, cultural clothing, and sleeping arrangements**.  
महिलाओं को सामाजिक नियमों, रसोई के काम, संस्कृति आधारित वस्त्र, और सोने की व्यवस्था के कारण अतिरिक्त हीट स्ट्रेस झेलना पड़ता है।
- Heat stress is also a **matter of inequality** from every angle.  
हीट स्ट्रेस हर दृष्टिकोण से असमानता का मुद्दा भी है।



## Historical and Government Responses

### ऐतिहासिक और सरकारी प्रतिक्रियाएं

- As early as the **mid-19th century**, scientists observed that **urban areas** are **hotter than rural areas**, pointing to **human-made temperature rise**.  
19वीं सदी के मध्य से ही वैज्ञानिकों ने पाया कि शहरी क्षेत्र ग्रामीण क्षेत्रों से अधिक गर्म होते हैं, जिससे यह निष्कर्ष निकला कि मानवजनित तापमान वृद्धि हो रही है।
- Yet, it took **150 years** before **Europe** made its first **Heat and Health Action Plans (HHAP)** between **2003 to 2008**.  
फिर भी, 150 वर्षों के बाद 2003 से 2008 के बीच यूरोप में पहला हीट और स्वास्थ्य कार्यक्रम (HHAP) बनाया गया।
- In **2013**, **Ahmedabad, Gujarat**, became the **first municipal corporation in Asia** to develop a **Heat Action Plan (HAP)**.  
2013 में अहमदाबाद, गुजरात, एशिया का पहला नगर निगम बना जिसने हीट एक्शन प्लान (HAP) तैयार किया।
- In the last decade, over **23 Indian States** and around **140 cities** now have **State- and city-level HAPs**.  
पिछले दशक में, भारत के 23 से अधिक राज्य और लगभग 140 शहरों में अब राज्य और नगर स्तर के HAPs हैं।
- India's **National Programme on Climate Change and Human Health (NPCCHH)** provides **heat advisories** and **health information** via the **National Disaster Management Authority (NDMA)**.  
भारत का राष्ट्रीय जलवायु परिवर्तन एवं मानव स्वास्थ्य कार्यक्रम (NPCCHH), राष्ट्रीय आपदा प्रबंधन प्राधिकरण (NDMA) के माध्यम से हीट एडवायज़री और स्वास्थ्य संबंधी जानकारी प्रदान करता है।

## Heat Action Plans Need Nuances

### हीट एक्शन प्लान में बारीकियों की ज़रूरत

- Most Heat Action Plans (HAPs) include four to five components such as early prediction of heatwaves, community awareness, and preparing the health system for responses.  
अधिकांश हीट एक्शन प्लान (HAPs) में चार से पांच घटक होते हैं, जैसे हीटवेव की प्रारंभिक भविष्यवाणी, समुदाय में जागरूकता, और स्वास्थ्य प्रणाली को तैयार करना।
- The fourth component includes long-term steps like increasing greenery and keeping parks open to reduce heat.  
चौथा घटक लंबी अवधि के उपायों पर केंद्रित होता है जैसे हरियाली बढ़ाना और पार्कों को जनता के लिए खुला रखना।
- Some cities have used **white rooftop painting** to reflect heat and reduce internal temperatures.



कुछ शहरों ने सफेद रंग से छतों को रंगने का उपाय अपनाया है ताकि गर्मी को परावर्तित किया जा सके और अंदरूनी तापमान कम हो।

- The fifth component should focus on collecting, analyzing, and interpreting **heat stress, morbidity, and mortality data**.

पाँचवां घटक हीट स्ट्रेस, बीमारियों और मृत्यु दर से संबंधित आंकड़ों को एकत्र करने, विश्लेषण करने और व्याख्या करने पर होना चाहिए।

- Although many Indian cities have HAPs, **implementation** needs more attention.  
हालांकि कई भारतीय शहरों में HAPs हैं, लेकिन कार्यान्वयन पर और अधिक ध्यान देने की आवश्यकता है।
- Success has been **partial** and limited to cities where multiple agencies, experts, and communities work together.  
सफलता केवल उन शहरों तक सीमित रही है जहां सरकारी एजेंसियां, विशेषज्ञ और समुदाय मिलकर काम करते हैं।

## Learning and Action Points for 2025

### 2025 के लिए सीख और कार्य बिंदु

- Every State should develop or update its HAP using **best practices** and include **humidity**, not just temperature.  
हर राज्य को श्रेष्ठ अनुभवों के आधार पर अपना HAP बनाना या अपडेट करना चाहिए और इसमें केवल तापमान ही नहीं, आर्द्रता को भी शामिल करना चाहिए।
- Plans should be based on **local vulnerability assessments** and have clear **accountability** for stakeholders.  
योजनाएं स्थानीय संवेदनशीलता मूल्यांकन पर आधारित होनी चाहिए और हितधारकों की जवाबदेही स्पष्ट होनी चाहिए।
- Plans should be activated from the beginning of **March**.  
योजनाओं को मार्च की शुरुआत से सक्रिय किया जाना चाहिए।
- A medical review noted **excess mortality** in Indian cities due to heat, highlighting the need for **better data** collection.  
एक चिकित्सा समीक्षा में बताया गया कि भारतीय शहरों में अत्यधिक मृत्यु दर दर्ज की गई है, जिससे बेहतर डेटा संग्रहण की आवश्यकता सामने आती है।
- Existing data should be used to identify **who suffers heat strokes** and **which areas** are most vulnerable.  
उपलब्ध आंकड़ों का उपयोग यह पहचानने में किया जाना चाहिए कि कौन लोग हीट स्ट्रोक से पीड़ित होते हैं और शहर के कौन से क्षेत्र अधिक संवेदनशील हैं।
- Countries like the UK use **Heat Health Alert (HHA)** systems based on both **day and night** temperatures.



ब्रिटेन जैसे देश हीट हेल्थ अलर्ट (HHA) प्रणाली का उपयोग करते हैं जो दिन और रात के तापमान पर आधारित होती है।

- India's HAPs also need to include **nighttime temperature** monitoring and **thermal comfort predictions**.

भारत के HAPs में भी रात्रिकालीन तापमान की निगरानी और थर्मल कम्फर्ट की भविष्यवाणी शामिल की जानी चाहिए।

- This will help ensure **health safety** and continuity in **school and office work**.

यह स्वास्थ्य सुरक्षा और स्कूल एवं दफ्तर के कार्यों की निरंतरता सुनिश्चित करने में मदद करेगा।

## Strengthen Long-Term Preventive Measures

### दीर्घकालिक रोकथाम उपायों को सुदृढ़ बनाना

- Better **urban infrastructure** and building materials are needed to handle extreme heat. बेहतर शहरी बुनियादी ढांचा और निर्माण सामग्री की आवश्यकता है ताकि अत्यधिक गर्मी से निपटा जा सके।
- Governments should consider **financial support** for **informal sector workers** who lose wages during heatwaves. सरकार को उन असंगठित क्षेत्र के श्रमिकों के लिए वित्तीय सहायता पर विचार करना चाहिए जो हीटवेव के दौरान वेतन खो देते हैं।

## Rethink Heatwave Advisories

### हीटवेव सलाहों पर पुनर्विचार की आवश्यकता

- A 2022 study in India, Pakistan, and Bangladesh showed that the general **'stay indoors'** advice may not help all families. 2022 के एक अध्ययन ने दिखाया कि 'घर के अंदर रहें' वाली सलाह हर परिवार के लिए उपयोगी नहीं हो सकती।
- People in **poor, congested neighborhoods** may suffer more indoors due to heat trapped between buildings. गरीब और घनी आबादी वाले क्षेत्रों में लोग घर के अंदर भी अधिक गर्मी से प्रभावित हो सकते हैं।
- There is a need for **geography-specific and socially aware** heat advisories within cities. शहरों के भीतर भौगोलिक और सामाजिक संदर्भों के अनुसार हीट एडवाइज़री जारी की जानी चाहिए।

## Need for a People-Centric Approach

### लोग-केंद्रित दृष्टिकोण की आवश्यकता



1. Indian cities should set up **summer or cold shelters**, similar to winter shelters.  
भारतीय शहरों को गर्मी या ठंडी के लिए आश्रय स्थल विकसित करने चाहिए, जैसे सर्दियों के लिए किए जाते हैं।
2. Some States are working on **cool roof policies** to promote reflective roofing materials.  
कुछ राज्य कूल रूफ नीति बना रहे हैं ताकि परावर्तक छत सामग्री को बढ़ावा दिया जा सके।
3. There is a need for **science-based and practical innovations** to prevent heat impacts.  
गर्मी के प्रभावों को रोकने के लिए विज्ञान-आधारित और व्यावहारिक नवाचारों की आवश्यकता है।

## Short-Term Measures Need Support

### तत्काल उपायों के लिए सहारा आवश्यक

- Authorities must ensure **drinking water availability** and provide **ORS/electrolyte solutions**.  
प्रशासन को पेयजल उपलब्धता और ORS/इलेक्ट्रोलाइट समाधान प्रदान करना सुनिश्चित करना चाहिए।
- Offices and workplaces should allow **staggered working hours**, especially in the **informal sector**.  
दफ्तरों और कार्यस्थलों को विभाजित कार्य समय की अनुमति देनी चाहिए, विशेष रूप से असंगठित क्षेत्र में।
- Work during **midday** should be avoided and shifted to **morning or evening** hours.  
दोपहर के समय काम से बचना चाहिए और उसे सुबह या शाम में स्थानांतरित किया जाना चाहिए।

## Economic Efficiency of Adaptation

### अनुकूलन की आर्थिक दक्षता

- Investing in heat-related adaptation is **highly cost-effective** and reduces **hospital and emergency costs**.  
गर्मी से संबंधित अनुकूलन में निवेश बहुत ही किफायती है और यह अस्पताल और आपातकालीन लागतों को कम करता है।
- There should be **long-term strategies**, not just short-term fixes.  
केवल तात्कालिक उपाय नहीं, बल्कि दीर्घकालिक रणनीतियाँ बनानी चाहिए।
- Steps like **inter-agency coordination** and **insurance for lost workdays** can help.  
एजेंसियों के बीच समन्वय और खोए हुए कार्यदिवसों के लिए बीमा जैसे उपाय सहायक हो सकते हैं।
- If policymakers remember that heatwaves are an **equity issue**, and adopt a **people-centric approach**, half the task is done.  
यदि नीति-निर्माता यह याद रखें कि हीटवेव एक असमानता से जुड़ा मुद्दा है और लोगों को केंद्र में रखकर योजना बनाएं, तो आधा काम हो जाएगा।



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## Quiz

World Heritage Day theme for 2025 and number of Indian sites. Ans: Heritage under Threat from Disasters and Conflicts and 43

### TOPICS COVERED (GS Paper IV and Essay)

#### 1. How Public Personas of Founders Can Profoundly Impact Businesses

संस्थापकों की सार्वजनिक छवि व्यवसायों को गहराई से कैसे प्रभावित कर सकती है

PATRIOTIC IAS



# How public personas of founders can profoundly impact businesses

As more Indian founders leverage social media, mastering the personality-brand dynamic becomes essential; the challenge isn't in choosing between visibility and anonymity, but in strategically managing how personal brand amplifies – rather than undermines – the objectives of the business

GS Paper IV: Ethics

## OPINION

**Manoshij Banerjee**  
**Mohammed Shahid**  
**Abdulla**

Recently, Nikhil Kamath of Zerodha publicly offered to intern – without pay – at Aravind Srinivas's company Perplexity, to learn about the AI industry. Mr. Kamath had interviewed Mr. Srinivas on his YouTube channel, which has about 1.5 million subscribers. Several Indian start-up founders maintain active social media profiles. Bhavish Aggarwal of Ola, Aman Gupta of Boat, Ashneer Grover (formerly of BharatPe), Vineeta Singh of Sugar Cosmetics, and Namita Thapar of Emcure Pharmaceuticals have substantial social media following.

Platforms like business reality TV series Shark Tank India have made many founders household names – their personalities often overshadowing their companies or products in public discourse. Among other effects, building a personal brand helps founders cultivate a loyal following across ventures, product stages, and platforms – creating a ready base for future launches and initiatives.

The personality-brand interplay, however, begs a relook. Tesla's shares have plummeted in recent



**All pervasive:** Building a personal brand helps founders cultivate a loyal following across ventures and platform. GETTY IMAGES/ISTOCK

months owing to Elon Musk's politically loaded, provocative, and in-your-face mannerisms on X. In April 2024, the Bombay Shaving Company (and Shantanu Deshpande, its owner) suffered backlash due to the poor landing of an advertisement, prompting calls for "better brand advisors".

### Complex dynamic

The relationship between a founder's public persona and his or her company's brand is a complex dynamic with three distinct outcomes – mutual benefit, mutual harm, or negligible effect. They depend on how founder's personal communications, values, and actions align with, contradict, or remain inde-

pendent of his/ her business' core brand promise.

### Conflicting factors

When founders' views and/or behaviour contradict businesses' core values, market positioning, or customer expectations, the dissonance can significantly damage brand equity.

### Brand reinforcement

When founders authentically embody the values, mission, and ethos of businesses, personal brands can amplify their company's market position. The founder's visibility and the firm's brand equity mutually reinforce each other, creating a compounding effect that drives customer loyalty and sharpens market differentiation.

An example of this is the Swedish entrepreneur Matilda Djerf and her firm Djerf Avenue. Starting off as social media influencer known for her distinctive style and values of authenticity and sustainability, she leveraged her personal following to launch the fashion brand in 2019.

In less than five years, she turned it into a \$35-million brand with a marketing budget below 5% of revenue. But the brand suffered when, in December 2024, an investigation by Swedish news outlet *Aftonbladet* led to charges by 11 current and former staff of a "toxic work culture" at Djerf Avenue, including instances of belittlement and body-shaming.

### Brand independence

Sometimes a founder's public persona neither significantly enhances nor detracts from the company's brand equity, as typically happens in industries where product functionality substantially outweighs brand considerations or when founders deliberately maintain a low profile despite business success. This neutral equilibrium can provide stability in certain market contexts.

This dynamic is more common in business-to-business (B2B) firms, where the founder's persona often has limited public-facing impact. For instance, Narayana Murthy, co-found-

er of Infosys, suggested that young Indians should work 70 hours a week to boost the nation's productivity. While this remark sparked widespread debate and criticism, Infosys's brand remained largely unaffected. This resilience can be attributed to Infosys's focus on delivering consistent services to its corporate clients, where the emphasis is on functionality and reliability rather than the personal opinions of its leadership.

Understanding the personality-brand game offers valuable guidance for entrepreneurs navigating public visibility. Research indicates that U.K. unicorns with founders who have the largest number of LinkedIn followers raised 20% more funding – nearly £763 million – on average, compared with other unicorns in the country. Additionally, a *Forbes* article notes that 77% of consumers are more likely to buy from a company when its CEO uses social media, and 82% trust companies more when their senior executives are active online.

However, this advantage comes with significant responsibility. For Indian entrepreneurs building their social media presence, several principles emerge:

First, strategic alignment between personal and corporate messaging is crucial – inconsistencies are quickly spotted and pe-

nalised in today's transparent media environment.

Second, authenticity is paramount as audiences are increasingly sophisticated at detecting manufactured personas. Finally, recognising when to separate personal opinions from corporate messaging strategically can prevent unnecessary brand damage.

### Playing the game

As more Indian founders leverage social media, mastering personality-brand dynamic becomes essential. The challenge isn't in choosing between visibility and anonymity, but in strategically managing how personal brand amplifies – rather than undermines – business objectives.

Successful founders recognise while personality and brand are distinct, they exist in continuous dialogue. Regular brand alignment audits, establishing clear boundaries on public commentary, developing crisis management protocols, practising strategic authenticity in communications, and distributing visibility by elevating multiple team members as brand ambassadors are some of the ways to manage this.

(Manoshij Banerjee is an independent consultant on digital culture and behaviour; Mohammed Shahid Abdulla is a faculty member at IIM-Kozhikode)

## How Public Personas of Founders Can Profoundly Impact Businesses

संस्थापकों की सार्वजनिक छवि व्यवसायों को गहराई से कैसे प्रभावित कर सकती है

### The Growing Influence of Founder Visibility

संस्थापकों की दृश्यता का बढ़ता प्रभाव



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- As more **Indian founders** leverage **social media**, understanding the **personal brand-business brand dynamic** becomes crucial.  
जैसे-जैसे अधिक भारतीय संस्थापक सोशल मीडिया का उपयोग कर रहे हैं, व्यक्तिगत ब्रांड और व्यवसाय ब्रांड के संबंध को समझना आवश्यक होता जा रहा है।
- The challenge is not about choosing between **visibility** and **anonymity**, but about **strategically managing** the personal brand to **amplify business goals**.  
चुनौती यह नहीं है कि दृश्यता और गोपनीयता में से किसे चुना जाए, बल्कि यह है कि व्यक्तिगत ब्रांड को इस तरह रणनीतिक रूप से प्रबंधित किया जाए कि वह व्यवसायिक लक्ष्यों को मजबूत करे।

## Examples of Indian Founders Leveraging Public Persona

### भारतीय संस्थापकों द्वारा सार्वजनिक छवि के उपयोग के उदाहरण

- **Nikhil Kamath** of Zerodha recently offered to **intern without pay** at **Perplexity**, showing his eagerness to **learn about the AI industry**.  
ज़ेरोधा के निखिल कामत ने हाल ही में पकलेक्सिटी में बिना वेतन इंटरनशिप करने की पेशकश की, जिससे उन्होंने एआई उद्योग सीखने की उत्सुकता दिखाई।
- He had earlier interviewed **Aravind Srinivas** (founder of Perplexity) on his **YouTube channel** with **1.5 million subscribers**.  
उन्होंने पहले अरविंद श्रीनिवास (पकलेक्सिटी के संस्थापक) का अपने 1.5 मिलियन सब्सक्राइबर्स वाले यूट्यूब चैनल पर इंटरव्यू लिया था।
- Several founders like **Bhavish Aggarwal (Ola)**, **Aman Gupta (Boat)**, **Ashneer Grover (ex-BharatPe)**, **Vineeta Singh (Sugar Cosmetics)**, and **Namita Thapar (Emcure)** have strong **social media presence**.  
कई संस्थापक जैसे भाविश अग्रवाल (ओला), अमन गुप्ता (बोट), अशनीर ग्रोवर (पूर्व-भारतपे), विनीता सिंह (शुगर कॉस्मेटिक्स), और नमिता थापर (एमक्योर) की मजबूत सोशल मीडिया उपस्थिति है।
- **Reality TV shows** like **Shark Tank India** have turned many of these founders into **household names**.  
शार्क टैंक इंडिया जैसे रियलिटी टीवी शो ने इन संस्थापकों को घर-घर में पहचाना जाने वाला नाम बना दिया है।
- Sometimes their **personalities overshadow** the **companies or products** they represent.  
कई बार उनकी व्यक्तिगत छवि उनके ब्रांड या उत्पादों पर भारी पड़ जाती है।

## Benefits of Personal Branding

### व्यक्तिगत ब्रांडिंग के लाभ

- A strong personal brand helps founders build **loyal followers** across **ventures, platforms, and product stages**.



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एक मजबूत व्यक्तिगत ब्रांड संस्थापकों को उद्यमों, प्लेटफार्मों और उत्पाद चरणों में निष्ठावान अनुयायी बनाने में मदद करता है।

- This following forms a **ready customer base** for **future launches** and **new initiatives**. यह अनुयायी समूह भविष्य की लॉन्चिंग और नई पहलों के लिए एक तैयार ग्राहक आधार बनाता है।

## Risks of Misaligned Personalities

### असंगत व्यक्तिगत छवि के खतरे

- The **personal brand-business brand relationship** can have **three outcomes** — **mutual benefit, mutual harm, or negligible effect**.  
व्यक्तिगत ब्रांड और व्यवसाय ब्रांड के संबंध के तीन परिणाम हो सकते हैं — परस्पर लाभ, परस्पर नुकसान, या अत्यल्प प्रभाव।
- This depends on whether the founder's **values, communications, and actions** align with the **core brand promise** of the business.  
यह इस पर निर्भर करता है कि संस्थापक के मूल्य, संचार, और कर्म व्यवसाय के मूल ब्रांड वादे से मेल खाते हैं या नहीं।

## Examples of Misalignment

### असंगति के उदाहरण

- **Tesla's shares** dropped recently due to **Elon Musk's provocative and politically loaded** behavior on **X (formerly Twitter)**.  
टेस्ला के शेयरों में हाल ही में गिरावट आई क्योंकि एलन मस्क ने X (पूर्व ट्विटर) पर उकसाने वाला और राजनीतिक रूप से संवेदनशील व्यवहार किया।
- In **April 2024**, **Bombay Shaving Company** and founder **Shantanu Deshpande** faced **public backlash** due to a **poorly received ad**, prompting calls for **better brand advisors**.  
अप्रैल 2024 में, बॉम्बे शेविंग कंपनी और इसके संस्थापक शांतनु देशपांडे को विवादास्पद विज्ञापन के कारण सार्वजनिक विरोध झेलना पड़ा, और बेहतर ब्रांड सलाहकारों की मांग उठी।

## Brand Reinforcement Through Authenticity

### प्रामाणिकता से ब्रांड को मजबूत करना

- When founders **authentically represent** the **values and mission** of their company, their personal brand can **enhance** business reputation.  
जब संस्थापक प्रामाणिक रूप से कंपनी के मूल्यों और मिशन का प्रतिनिधित्व करते हैं, तो उनकी व्यक्तिगत छवि व्यवसाय की प्रतिष्ठा को बढ़ा सकती है।



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- This leads to **mutual reinforcement** between **founder visibility** and **brand equity**, improving **customer loyalty** and **market differentiation**.  
इससे संस्थापक की दृश्यता और ब्रांड की प्रतिष्ठा के बीच परस्पर समर्थन बनता है, जिससे ग्राहक निष्ठा और बाजार में अलग पहचान मजबूत होती है।

## Case Study: Matilda Djerf and Djerf Avenue

### मामला अध्ययन: मटिल्डा जेरफ और जेरफ एवेन्यू

- **Matilda Djerf**, a Swedish social media influencer, launched **Djerf Avenue** in **2019**, building on her brand of **authenticity and sustainability**.  
मटिल्डा जेरफ, एक स्वीडिश सोशल मीडिया प्रभावक, ने **2019** में **जेरफ एवेन्यू** लॉन्च किया, जो उनकी प्रामाणिकता और स्थिरता की छवि पर आधारित था।
- Within **five years**, the brand grew into a **\$35-million business**, with **marketing costs below 5% of revenue**.  
पांच वर्षों के भीतर, यह ब्रांड **\$35 मिलियन** के व्यवसाय में बदल गया, जिसकी विपणन लागत राजस्व का केवल **5%** से भी कम रही।
- However, in **December 2024**, the brand faced backlash after **11 current and former employees** accused the company of a **toxic work culture**, including **belittlement and body-shaming**.  
हालांकि, **दिसंबर 2024** में, **11 वर्तमान और पूर्व कर्मचारियों** द्वारा कंपनी पर **खराब कार्य संस्कृति**, **अपमानजनक व्यवहार** और **शारीरिक रूप से शर्मिंदा करने** के आरोप लगाने के बाद ब्रांड को आलोचना झेलनी पड़ी।

## Brand Independence

### ब्रांड की स्वतंत्रता

- Sometimes, a founder's public persona neither significantly enhances nor detracts from the company's brand equity.  
कभी-कभी, किसी संस्थापक की सार्वजनिक छवि कंपनी की **ब्रांड वैल्यू** को न तो विशेष रूप से बढ़ाती है और न ही कम करती है।
- This often happens in industries where **product functionality** outweighs brand considerations or when founders maintain a **low profile**.  
यह आमतौर पर उन क्षेत्रों में होता है जहां **उत्पाद की कार्यक्षमता** ब्रांड से अधिक महत्वपूर्ण होती है या जब संस्थापक **कम प्रोफाइल** बनाए रखते हैं।
- This **neutral equilibrium** can offer **stability** in specific market contexts.  
यह **तटस्थ संतुलन** कुछ बाजार स्थितियों में **स्थिरता** प्रदान कर सकता है।
- This dynamic is more common in **business-to-business (B2B)** firms, where the founder's persona has **limited public impact**.



यह स्थिति B2B कंपनियों में अधिक देखी जाती है, जहां संस्थापक की छवि का सार्वजनिक प्रभाव सीमित होता है।

- For instance, **Narayana Murthy**, co-founder of **Infosys**, once suggested young Indians work **70 hours a week** to boost productivity.

उदाहरण के लिए, **इन्फोसिस** के सह-संस्थापक **नारायण मूर्ति** ने सुझाव दिया था कि युवा भारतीयों को **हर हफ्ते 70 घंटे** काम करना चाहिए ताकि उत्पादकता बढ़े।

- While this sparked **widespread criticism**, Infosys's brand remained largely **unaffected**. हालाँकि इस बयान पर **काफी आलोचना** हुई, लेकिन **इन्फोसिस** की ब्रांड पर इसका **कोई बड़ा असर नहीं** पड़ा।

- This was due to Infosys' focus on **consistent services to corporate clients**, valuing **functionality and reliability** over personal views.

यह इसलिए संभव हुआ क्योंकि **इन्फोसिस कॉर्पोरेट ग्राहकों को स्थिर सेवाएं देने पर केंद्रित** रहा, जहां **विश्वसनीयता और कार्यक्षमता** को प्राथमिकता दी गई।

## Understanding the Personality-Brand Equation

### व्यक्तित्व और ब्रांड समीकरण को समझना

- This understanding offers valuable guidance to entrepreneurs managing **public visibility**.

यह समझ उद्यमियों को **सार्वजनिक दृश्यता** को प्रबंधित करने में **महत्वपूर्ण मार्गदर्शन** देती है।

- Research shows that **UK unicorns** with founders having **largest LinkedIn following** raised **20% more funding**, averaging **£763 million**.

शोध के अनुसार, **यूके की यूनिकॉर्न कंपनियों** ने जिनके संस्थापकों के पास **सबसे अधिक LinkedIn फॉलोअर्स** थे, उन्होंने **औसतन £763 मिलियन** और **20% अधिक** फंडिंग जुटाई।

- A **Forbes** article also states **77% of consumers** are more likely to buy from companies whose **CEO uses social media**.

**Forbes** के एक लेख के अनुसार, **77% उपभोक्ता** उन कंपनियों से खरीदना पसंद करते हैं जिनके **सीईओ सोशल मीडिया पर सक्रिय** होते हैं।

- Also, **82% of consumers** trust companies more when **senior executives** are active online.

इसके अलावा, **82% उपभोक्ता** उन कंपनियों पर ज्यादा भरोसा करते हैं जिनके **वरिष्ठ अधिकारी ऑनलाइन सक्रिय** होते हैं।

## Responsibilities with Visibility

### दृश्यता के साथ जिम्मेदारियाँ



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- This advantage brings **significant responsibility** for Indian entrepreneurs on social media.

यह लाभ भारतीय उद्यमियों पर सोशल मीडिया पर महत्वपूर्ण जिम्मेदारी भी डालता है।

Some key principles emerge:

कुछ मुख्य सिद्धांत सामने आते हैं:

- **Strategic alignment** between **personal and corporate messaging** is crucial, as inconsistencies are quickly noticed.  
व्यक्तिगत और कॉर्पोरेट संचार के बीच रणनीतिक तालमेल आवश्यक है, क्योंकि विसंगतियाँ तुरंत पकड़ में आ जाती हैं।
- **Authenticity** is vital, as audiences can detect **manufactured personas** easily.  
प्रामाणिकता अत्यंत आवश्यक है, क्योंकि दर्शक **बनावटी छवियों** को आसानी से पहचान लेते हैं।
- Knowing when to **separate personal opinions** from **corporate messaging** helps avoid brand damage.  
यह समझना कि व्यक्तिगत विचारों को कॉर्पोरेट संदेश से कब अलग करना है, ब्रांड को **नुकसान** से बचाता है।

## Playing the Game

### खेल को समझदारी से खेलना

- As more Indian founders use **social media**, understanding the **personality-brand** dynamic becomes essential.  
जैसे-जैसे अधिक भारतीय संस्थापक **सोशल मीडिया** का उपयोग कर रहे हैं, **व्यक्तित्व और ब्रांड** के समीकरण को समझना आवश्यक होता जा रहा है।
- The challenge is not between **visibility and anonymity**, but in **strategically managing** how the **personal brand supports** business goals.  
चुनौती **दृश्यता और गुमनामी** के बीच नहीं है, बल्कि यह है कि **व्यक्तिगत ब्रांड** कैसे **व्यवसाय के लक्ष्यों** को **रणनीतिक रूप से समर्थन** दे सकता है।
- Successful founders understand that **personality and brand** are distinct yet in constant **dialogue**.  
सफल संस्थापक समझते हैं कि **व्यक्तित्व और ब्रांड** अलग हैं, लेकिन दोनों के बीच निरंतर **संवाद** चलता रहता है।

They manage this by:

वे इसको निम्नलिखित तरीकों से प्रबंधित करते हैं:

- Conducting **regular brand alignment audits**  
**नियमित ब्रांड संरेखण ऑडिट** करना



- Setting **clear boundaries** on public commentary  
सार्वजनिक टिप्पणियों पर स्पष्ट सीमाएं तय करना
- Creating **crisis management protocols**  
संकट प्रबंधन प्रोटोकॉल तैयार करना
- Practising **strategic authenticity** in communications  
संवाद में रणनीतिक प्रामाणिकता अपनाना

**Distributing visibility** by highlighting other team members as **brand ambassadors**

अन्य टीम सदस्यों को ब्रांड एंबेसडर के रूप में सामने लाकर दृश्यता साझा करना

## TOPICS COVERED (PCS Special)

### 1. Famed climber to scale Mt. Everest for 31st time, break his own record

प्रसिद्ध पर्वतारोही 31वीं बार माउंट एवरेस्ट फतह करेंगे, अपना ही रिकॉर्ड तोड़ेंगे

#### KATHMANDU

Famed climber to scale **Mt. Everest** for 31st time, break his own record

Famed climber to scale **Mt. Everest** for 31st time, break his own record

प्रसिद्ध पर्वतारोही 31वीं बार माउंट एवरेस्ट फतह करेंगे, अपना ही रिकॉर्ड तोड़ेंगे



PCS

AFP

One of the greatest mountain guides will try to scale the world's highest peak for the **31st time** — and possibly the **32nd time** as well — and break his own record. **Kami Rita, 55**, flew to Mount Everest on Sunday from Kathmandu to lead a group that will try to reach the 8,849-metre summit during the spring climbing season. PTI

- **Kami Rita**, aged 55, is set to climb **Mount Everest** for the **31st time** and possibly the **32nd time**, breaking his **own record**.

**55 वर्षीय कामी रीता** माउंट एवरेस्ट की **31वीं बार** और संभवतः **32वीं बार** चढ़ाई कर अपना ही रिकॉर्ड तोड़ने वाले हैं।

- He flew to **Mount Everest** from **Kathmandu** on **Sunday** to lead a group of climbers.



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वह रविवार को काठमांडू से माउंट एवरेस्ट के लिए रवाना हुए ताकि पर्वतारोहियों के एक समूह का नेतृत्व कर सकें।

- The team aims to reach the **8,849-metre summit** during the **spring climbing season**.  
यह टीम वसंत पर्वतारोहण सीज़न में **8,849 मीटर ऊंची चोटी** तक पहुंचने का लक्ष्य रखती है।

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