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THE HINDU NEWSPAPER

19 DECEMBER 2025

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Sculptor Ram Sutar, who made Statue of Unity, passes away

PCS

Press Trust of India
MUMBAI

Ram V. Sutar, the legendary sculptor whose creations, including the Statue of Unity, defined the country's public art landscape. He was instrumental in giving Indian memorial sculpture global recognition.

Sutar passed away on Wednesday night at the age of 100.

Among his vast body of work are statues of Mahatma Gandhi at the Parliament complex, and Dr B.R. Ambedkar. Also known as the "statue man", he commanded immense respect for his unparalleled mastery over bronze and stone.

He was born on February 19, 1925, in Gondur village of Maharashtra's Dhule district.

He attained global prominence as the chief sculp-



Ram Sutar

tor of the Statue of Unity, the 182-metre statue of Sardar Vallabhbhai Patel in Gujarat's Kevadia. The project, which created the world's tallest statue, cemented his reputation as a master of monumental art.

For his contribution to art, Sutar received several prestigious honours, including the Padma Shri and Padma Bhushan, as well as the Maharashtra Bhushan, Maharashtra's highest civilian award.

statue of Sardar Vallabhbhai Patel in Gujarat's Kevadia.

उन्होंने गुजरात के केवड़िया में सरदार वल्लभभाई पटेल की 182 मीटर ऊँची प्रतिमा स्टेच्यू ऑफ यूनिटी के मुख्य मूर्तिकार के रूप में वैश्विक प्रसिद्धि प्राप्त की।

- The project, which created the world's tallest statue, cemented his reputation as a master of monumental art.

इस परियोजना ने, जिसने दुनिया की सबसे ऊँची प्रतिमा बनाई, उन्हें स्मारकीय कला के महान कलाकार के रूप में स्थापित कर दिया।

- For his contribution to art, Sutar received several prestigious honours, including the Padma Shri and Padma Bhushan, as well as the Maharashtra Bhushan, Maharashtra's highest civilian award.

कला में उनके योगदान के लिए सुतार को पद्म श्री और पद्म भूषण सहित कई प्रतिष्ठित सम्मान मिले, साथ ही महाराष्ट्र भूषण, जो महाराष्ट्र का सर्वोच्च नागरिक सम्मान है।

Sculptor Ram Sutar, who made Statue of Unity, passes away
स्टैच्यू ऑफ यूनिटी बनाने वाले मूर्तिकार राम सुतार का निधन

- Ram V. Sutar, the legendary sculptor whose creations, including the Statue of Unity, defined the country's public art landscape.

राम वी. सुतार, वह महान मूर्तिकार जिनकी कृतियों ने, जिनमें स्टेच्यू ऑफ यूनिटी भी शामिल है, देश की सार्वजनिक कला की पहचान तय की।

- He was instrumental in giving Indian memorial sculpture global recognition. भारतीय स्मारक मूर्तिकला को वैश्विक पहचान दिलाने में उनकी अहम भूमिका रही।

- Sutar passed away on Wednesday night at the age of 100.

सुतार का बुधवार रात 100 वर्ष की आयु में निधन हो गया।

- Among his vast body of work are statues of Mahatma Gandhi at the Parliament complex, and Dr B.R. Ambedkar.

उनकी विशाल कृतियों में संसद परिसर में महात्मा गांधी और डॉ. बी.आर. आंबेडकर की प्रतिमाएँ शामिल हैं।

- Also known as the "statue man", he commanded immense respect for his unparalleled mastery over bronze and stone.

"स्टैच्यू मैन" के नाम से भी प्रसिद्ध, उन्हें कांसे और पत्थर पर अपनी अद्वितीय दक्षता के लिए अपार सम्मान प्राप्त था।

- He was born on February 19, 1925, in Gondur village of Maharashtra's Dhule district.

उनका जन्म 19 फरवरी 1925 को महाराष्ट्र के धुले ज़िले के गोंदुर गाँव में हुआ था।

- He attained global prominence as the chief sculptor of the Statue of Unity, the 182-metre



Assange files complaint against Nobel Foundation over Machado's prize win

FCS

Agence France-Presse
STOCKHOLM

WikiLeaks founder Julian Assange has filed a criminal complaint in Sweden against the Nobel Foundation after Venezuelan Opposition leader Maria Corina Machado won the Peace Prize.

This year's prize represented a "gross misappropriation" of funds and the "facilitation of war crimes" under Swedish law, according to the complaint posted by WikiLeaks on social media.

The Nobel Committee awarded Ms. Machado the prize for promoting democratic rights and for her struggle to achieve a just and peaceful transition



Speaking out: Julian Assange said Machado's win violated the 1895 will of Alfred Nobel, the award's founder. AP

from dictatorship to democracy.

Mr. Assange cited Ms. Machado's backing of U.S. President Donald Trump's months-long campaign against Venezuela's leftist President Nicolas Maduro. He said Ms. Machado's

win violated the 1895 will of Alfred Nobel — the award's founder — which stated the prize must go to the person who has done the "most or the best work for fraternity between nations, for the abolition or reduction of standing ar-

mies and for the holding and promotion of peace congresses".

The U.S.-Venezuela spat has seen the massive deployment of U.S. naval and air forces in waters off Latin America, and dozens of small boats allegedly running drugs have been bombed in Caribbean Sea and Pacific Ocean, killing almost 100 people so far.

Mr. Assange has also called for the freezing of the \$1.18 million in prize money promised to Ms. Machado. According to WikiLeaks, there is "real risk" that the funds have been or will be "diverted from their charitable purpose to facilitate aggression, crimes against humanity, and war crimes".

Assange files complaint against Nobel Foundation over Machado's prize win माचाडो को नोबेल पुरस्कार मिलने पर असांजे ने नोबेल फ़ाउंडेशन के खिलाफ शिकायत दर्ज की

- **WikiLeaks founder Julian Assange** has filed a **criminal complaint in Sweden** against the **Nobel Foundation** after **Venezuelan Opposition leader Maria Corina Machado** won the **Peace Prize**.
विकीलीक्स के संस्थापक जूलियन असांजे ने वेनेजुएला की विपक्षी नेता मारिया कोरिना माचाडो को शांति पुरस्कार दिए जाने के बाद नोबेल फ़ाउंडेशन के खिलाफ स्वीडन में आपराधिक शिकायत दर्ज की है।
- This year's prize represented a "**gross misappropriation**" of funds and the "**facilitation of war crimes**" under **Swedish law**, according to the complaint posted by **WikiLeaks** on social media.
विकीलीक्स द्वारा सोशल मीडिया पर पोस्ट की गई शिकायत के अनुसार, इस वर्ष का पुरस्कार धन के "गंभीर दुरुपयोग" और स्वीडिश क़ानून के तहत "युद्ध अपराधों को बढ़ावा देने" का प्रतिनिधित्व करता है।
- The **Nobel Committee** awarded **Ms. Machado** the prize for promoting **democratic rights** and for her struggle to achieve a **just and peaceful transition from dictatorship to democracy**.
नोबेल समिति ने सुश्री माचाडो को लोकतांत्रिक अधिकारों को बढ़ावा देने और तानाशाही से लोकतंत्र की ओर न्यायपूर्ण और शांतिपूर्ण संक्रमण के लिए उनके संघर्ष के लिए यह पुरस्कार दिया।
- **Mr. Assange** cited **Ms. Machado's** backing of **U.S. President Donald Trump's** months-long campaign against **Venezuela's leftist President Nicolas Maduro**.
श्री असांजे ने सुश्री माचाडो द्वारा अमेरिकी राष्ट्रपति डोनाल्ड ट्रंप के वेनेजुएला के वामपंथी राष्ट्रपति निकोलस माद्रो के खिलाफ महीनों लंबे अभियान का समर्थन करने का हवाला दिया।
- He said **Ms. Machado's** win violated the **1895 will of Alfred Nobel** — the award's founder — which stated the prize must go to the person who has done the "**most or the best work for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses**".
उन्होंने कहा कि सुश्री माचाडो की जीत अल्फ्रेड नोबेल — पुरस्कार के संस्थापक — की 1895 की वसीयत



का उल्लंघन है, जिसमें कहा गया था कि पुरस्कार उस व्यक्ति को दिया जाना चाहिए जिसने “राष्ट्रों के बीच भाईचारे, स्थायी सेनाओं के उन्मूलन या कमी, और शांति सम्मेलनों के आयोजन व प्रचार” के लिए “सबसे अधिक या सर्वोत्तम कार्य” किया हो।

- The **U.S.-Venezuela spat** has seen the massive deployment of **U.S. naval and air forces** in waters off **Latin America**, and dozens of small boats allegedly running drugs have been bombed in the **Caribbean Sea** and **Pacific Ocean**, killing **almost 100 people** so far.
अमेरिका-वेनेजुएला विवाद में लैटिन अमेरिका के तटों के पास अमेरिकी नौसैनिक और वायु सेनाओं की बड़े पैमाने पर तैनाती देखी गई है, और कथित रूप से नशीले पदार्थ ले जा रही दर्जनों छोटी नौकाओं को कैरेबियन सागर और प्रशांत महासागर में बमबारी कर नष्ट किया गया है, जिससे अब तक लगभग 100 लोगों की मौत हुई है।
- Mr. **Assange** has also called for the freezing of the **\$1.18 million** in prize money promised to **Ms. Machado**.
श्री असांजे ने सुश्री माचाडो को वादा की गई 1.18 मिलियन डॉलर की पुरस्कार राशि को फ्रीज करने की भी मांग की है।
- According to **WikiLeaks**, there is “**real risk**” that the funds have been or will be “**diverted from their charitable purpose to facilitate aggression, crimes against humanity, and war crimes**”.

LOS ANGELES

Pulitzer Prize-winning war reporter Peter Arnett dies aged 91



RCS

AFP

Peter Arnett, the Pulitzer Prize-winning reporter who spent decades dodging bullets and bombs to bring the world eyewitness accounts of war from the rice paddies of Vietnam to the deserts of Iraq, has died on Wednesday, said his son Andrew Arnett. He was 91. He had been suffering from prostate cancer. AP

विकीलीक्स के अनुसार, इस बात का “वास्तविक जोखिम” है कि ये धनराशि पहले ही या भविष्य में “अपने परोपकारी उद्देश्य से हटाकर आक्रामकता, मानवता के खिलाफ अपराधों और युद्ध अपराधों को बढ़ावा देने” में इस्तेमाल की जा सकती है।

Pulitzer Prize-winning war reporter Peter Arnett dies aged 91

पुलित्जर पुरस्कार विजेता युद्ध संवाददाता पीटर आर्नेट का 91 वर्ष की आयु में निधन

- Peter Arnett, the **Pulitzer Prize-winning reporter** who spent decades dodging **bullets and bombs** to bring the world eyewitness accounts of **war** from the rice paddies of **Vietnam** to the deserts of **Iraq**, died on **Wednesday**

GS Paper 1: History,

TOPICS COVERED		19 December 2025
1.	Kerala cine tourism to reunite Bombay crew at Bekal Fort for anniversary bash केरल सिने पर्यटन बॉम्बे फ़िल्म की टीम को वर्षगांठ समारोह के लिए बेकल किले में फिर से एकजुट करेगा	
2.	Sahitya Akademi cancels awards announcement साहित्य अकादमी ने पुरस्कार घोषणा रद्द की	



Kerala cine tourism to reunite *Bombay* crew at Bekal Fort for anniversary bash

GS I: History

Dhinesh Kallungal

THIRUVANANTHAPURAM

It is not solely the exceptional performances, compelling narratives, and striking cinematography that elevate a film to brilliance. Often, a perfect location, carefully chosen by the crew, plays a crucial role in transforming it into something truly memorable.

This view is echoed by the crew of the iconic movie *Bombay*, shot by Mani Ratnam and starring Arvind Swami and Manisha Koirala, as they come together at Bekal Fort in Kasaragod on December 20 on the occasion of the 30th anniversary of the 1995-released film.

For instance, it's hard



Scenic setting: The Bekal Fort in Kasaragod, Kerala. K.K. MUSTAFAH

for movie buffs to forget the sight of the lead character in the movie leaping across cliffs beside a turbulent sea beneath a brooding sky at Bekal Fort.

If the song 'Uyire' from the movie still echoes in one's memory, credit belongs not only to composer A.R. Rahman and his soundtrack – a score of conscience that stirred a

nation, but also to its stunning setting that elevated the emotional impact of the movie.

The crew, including Manisha Koirala, Mani Ratnam and cinematographer Rajiv Menon, gets ready for an anniversary bash on Bekal Beach and the fort on Saturday. They were invited by the Kerala Tourism Department as part of pro-

moting cinema tourism in Kerala, a project that envisages promoting the tourist places which have become popular due to their appearance in films.

Through this initiative, Kerala Tourism also plans to draw the attention of filmmakers in India and abroad to the picturesque locations in Kerala, along with popularising such destinations among the tourists visiting the State, said the officer.

As part of the cine tourism promotion programme, the crew will take a stroll through the beach. A visit to Bekal Fort is also scheduled on the same day, said Shijin P., managing director (MD) of the Bekal Resorts Development Corporation (BRDC).

Kerala cine tourism to reunite *Bombay* crew at Bekal Fort for anniversary bash केरल सिने पर्यटन बॉम्बे फ़िल्म की टीम को वर्षगांठ समारोह के लिए बेकल किले में फिर से एकजुट करेगा

- It is not solely the exceptional performances, compelling narratives, and striking cinematography that elevate a film to brilliance.
किसी फ़िल्म को उत्कृष्टता तक पहुँचाने में केवल असाधारण अभिनय, प्रभावशाली कथानक और प्रभावी सिनेमैटोग्राफी ही भूमिका नहीं निभाते।
- Often, a perfect location, carefully chosen by the crew, plays a crucial role in transforming it into something truly memorable.
अक्सर, टीम द्वारा सावधानीपूर्वक चुना गया एक उपयुक्त लोकेशन इसे वास्तव में यादगार बनाने में महत्वपूर्ण भूमिका निभाता है।
- This view is echoed by the crew of the iconic movie **Bombay**, shot by **Mani Ratnam** and starring **Arvind Swami** and **Manisha Koirala**, as they come together at **Bekal Fort in Kasaragod** on **December 20** on the occasion of the **30th anniversary** of the **1995-released** film.

Bekal Fort – Kasaragod (Kerala)

- Bekal Fort is one of the **largest and best-preserved forts in Kerala**, located in **Kasaragod district** on the Malabar Coast.



- It is famous for its dramatic seaside location, massive laterite walls, and historical significance.

Location

- Situated in **Bekal village**, Kasaragod district, **Kerala**
- Lies along the **Arabian Sea coast**
- About **16 km south of Kasaragod town**

Historical Background

- The fort was originally built by **Shivappa Nayaka** of the **Keladi Nayakas** (Ikkeri Kingdom) in the **17th century**.
- It later came under:
 - The **Mysore rulers** (Hyder Ali and Tipu Sultan)
 - The **British East India Company** after the Anglo-Mysore Wars
- Served as an important **military station** for controlling the Malabar Coast.

Architectural Features

- Bekal Fort is known for its **defensive and strategic coastal design**, not for palaces or living quarters.
- **Key features:**
 - **Circular observation tower** overlooking the sea
 - **Giant laterite walls** rising almost directly from the sea
 - **Moats, trenches, and strategic openings** for firing at invaders
 - **Underground passages** (now partially closed)
 - **Wide ramparts** offering panoramic views of the coastline
- The design suggests it was built purely for **defense**, not residence.



Sahitya Akademi cancels awards announcement

GS I: History

Sreeparna Chakrabarty
NEW DELHI

Confusion prevailed on Thursday when the **Sahitya Akademi** was forced to cancel a press conference called by it to announce its annual literary awards following a directive from the Union Ministry of Culture.

The press conference was scheduled to be held at 3 p.m. in Delhi after a meeting of the Executive Board of the literary body, which cleared the awardees. But minutes before it began, it was announced that the press meet had been cancelled and the awards process put on hold.

The Culture Ministry had sent a note to the Akademi, reminding it of a Memorandum of Understanding (MoU) signed with all four autonomous institutions under it, namely, the **National School of Drama, the Sangeet Natak Akademi, the Lalit Kala Akademi, and the Sahitya Akademi**, that an exercise of restructuring of awards needed to be taken in consultation with the Ministry. The MoU was signed in July.

“This is to invite your attention to the Memorandum of Understanding signed between the Akade-

mies and the Ministry for the year 2025-26, wherein it has been stipulated that the exercise of restructuring of awards is required to be undertaken in consultation with the Ministry. In this regard, you are requested to inform this Ministry of the measures taken so far,” the note, a copy of which is with *The Hindu*, said.

The Ministry further directed that “till such time the restructuring process is duly approved by the Ministry, no process for declaration of awards shall be undertaken without the prior approval of the Ministry”. The note was sent to **all four autonomous culture bodies** on Thursday.

The note was necessitated as the press conference had been called without the Ministry’s knowledge, and without the approval of the due process for the selection of awardees, sources in the Ministry of Culture told *The Hindu*.

The MoUs for restructuring had been signed in line with the restructuring of awards across the board being undertaken under the aegis of the Union Ministry of Home Affairs, the sources said.

Sahitya Akademi gives awards each year to books in 24 languages.

Sahitya Akademi cancels awards announcement

साहित्य अकादमी ने पुरस्कार घोषणा रद्द की

• Confusion prevailed on **Thursday** when the **Sahitya Akademi** was forced to cancel a **press conference** called by it to announce its **annual literary awards** following a directive from the **Union Ministry of Culture**.

गुरुवार को उस समय भ्रम की स्थिति पैदा हो गई जब **साहित्य अकादमी** को **केंद्रीय संस्कृति मंत्रालय** के निर्देश के बाद अपने **वार्षिक साहित्यिक पुरस्कारों** की घोषणा के लिए बुलाई गई **प्रेस कॉन्फ्रेंस** रद्द करनी पड़ी।

• The press conference was scheduled to be held at **3 p.m. in Delhi** after a meeting of the **Executive Board** of the literary body, which cleared the awardees.

यह प्रेस कॉन्फ्रेंस साहित्यिक संस्था की **कार्यकारिणी बोर्ड** की बैठक के बाद **दिल्ली में शाम 3 बजे** आयोजित होने वाली थी, जिसमें पुरस्कार विजेताओं को मंजूरी दी गई थी।

• But minutes before it began, it was announced that the press meet had been cancelled and the awards process put on hold. लेकिन शुरू होने से कुछ मिनट पहले ही यह घोषणा कर दी गई कि प्रेस बैठक रद्द कर दी गई है और पुरस्कार प्रक्रिया को रोक दिया गया है।

• The **Culture Ministry** had sent a note to the Akademi, reminding it of a **Memorandum of Understanding (MoU)** signed with all four autonomous institutions under it, namely, the **National School of Drama, the Sangeet Natak Akademi, the Lalit Kala Akademi, and the Sahitya Akademi**, that an exercise of restructuring of awards needed to be taken in consultation with the Ministry.

संस्कृति मंत्रालय ने अकादमी को एक नोट भेजकर उसके अधीन चारों स्वायत्त संस्थानों — **राष्ट्रीय नाट्य विद्यालय, संगीत नाटक अकादमी, ललित कला अकादमी, और साहित्य अकादमी** — के साथ हस्ताक्षरित **समझौता ज्ञापन (MoU)** की याद दिलाई, जिसमें पुरस्कारों के पुनर्गठन की प्रक्रिया मंत्रालय से परामर्श के साथ करने की बात कही गई थी।

• The **MoU** was signed in **July**.

यह **समझौता ज्ञापन (MoU)** **जुलाई** में हस्ताक्षरित किया गया था।

• “This is to invite your attention to the **Memorandum of Understanding** signed between the Akademies and the Ministry for the year **2025-26**, wherein it has been stipulated that the exercise of restructuring of awards is required to be undertaken in consultation with the Ministry.

“यह आपका ध्यान **2025-26** के लिए अकादमियों और मंत्रालय के बीच हस्ताक्षरित **समझौता ज्ञापन** की ओर

आकर्षित करने के लिए है, जिसमें यह प्रावधान किया गया है कि पुरस्कारों के पुनर्गठन की प्रक्रिया मंत्रालय से परामर्श के साथ की जानी है।



- In this regard, you are requested to inform this Ministry of the measures taken so far," the note, a copy of which is with **The Hindu**, said.
इस संदर्भ में, आपसे अब तक उठाए गए कदमों की जानकारी इस मंत्रालय को देने का अनुरोध किया जाता है," नोट में कहा गया है, जिसकी एक प्रति **द हिंदू** के पास है।
- The Ministry further directed that "till such time the restructuring process is duly approved by the Ministry, no process for declaration of awards shall be undertaken without the prior approval of the Ministry".
मंत्रालय ने आगे निर्देश दिया कि "जब तक पुनर्गठन प्रक्रिया को मंत्रालय द्वारा विधिवत मंजूरी नहीं दी जाती, तब तक मंत्रालय की पूर्व अनुमति के बिना पुरस्कारों की घोषणा की कोई प्रक्रिया नहीं अपनाई जाएगी।"
- The note was sent to all four autonomous culture bodies on **Thursday**.
यह नोट **गुरुवार** को सभी चार स्वायत्त सांस्कृतिक संस्थानों को भेजा गया था।
- The note was necessitated as the press conference had been called without the Ministry's knowledge, and without the approval of the due process for the selection of awardees, sources in the **Ministry of Culture** told **The Hindu**.
संस्कृति मंत्रालय के सूत्रों ने **द हिंदू** को बताया कि यह नोट इसलिए आवश्यक हुआ क्योंकि प्रेस कॉन्फ्रेंस मंत्रालय की जानकारी के बिना और पुरस्कार विजेताओं के चयन की विधिवत प्रक्रिया की मंजूरी के बिना बुलाई गई थी।
- The **MoUs for restructuring** had been signed in line with the restructuring of awards across the board being undertaken under the aegis of the **Union Ministry of Home Affairs**, the sources said.
सूत्रों ने बताया कि **पुनर्गठन के लिए MoU** केंद्रीय गृह मंत्रालय के तत्वावधान में देशभर में पुरस्कारों के पुनर्गठन की प्रक्रिया के अनुरूप हस्ताक्षरित किए गए थे।
- **Sahitya Akademi gives awards each year to books in 24 languages**.
साहित्य अकादमी हर वर्ष **24 भाषाओं** की पुस्तकों को पुरस्कार प्रदान करती है।

Sahitya Akademi Award

- The Sahitya Akademi Award is a prestigious literary honour in India.
- It is annually conferred by the Sahitya Akademi, India's National Academy of Letters.
- The award is given to writers of the most outstanding books of literary merit.
- Books published in any of the **22 languages of the 8th Schedule** to the Indian Constitution, as well as in **English and Rajasthani**, are eligible.

Establishment and Prize Details

- The Sahitya Akademi Award was established in 1954.
- The award comprises **a plaque and a cash prize of ₹ 1,00,000**.
- The primary objective of the award is to recognise and promote excellence in Indian writing and acknowledge new literary trends.

Selection and Design

- The **awardees are selected through an annual process covering books published in the preceding twelve months**.
- The plaque awarded by the Sahitya Akademi was designed by Indian filmmaker Satyajit Ray.
- Earlier, the plaque was sometimes made of marble, but this was discontinued due to its excessive weight.
- During the Indo-Pakistan War of 1965, the plaque was substituted with national savings bonds.

National School of Drama (NSD)



Category: Autonomous institution

Ministry: Ministry of Culture

Founded: 1959 (as a constituent unit of Sangeet Natak Akademi), became autonomous in 1975

Location: New Delhi

Purpose & Role

The National School of Drama is **India's premier theatre training institute**. It offers intensive, residential, professional training in:

- Acting
- Direction
- Stagecraft
- Scene design
- Lighting, makeup, costumes
- Theatre history & criticism

It is one of the **finest drama schools in the world**.

Key Contributions

- Produces highly skilled actors, playwrights, and directors
- Has repertory companies that perform across India
- Organizes Bharat Rang Mahotsav — Asia's largest theatre festival
- Alumni include **Naseeruddin Shah, Om Puri, Anupam Kher, Piyush Mishra, Irrfan Khan, Seema Biswas**, etc.

Sangeet Natak Akademi (SNA)

Category: National Academy

Established: 1952

Ministry: Ministry of Culture

Headquarters: New Delhi

Status: India's apex body for **performing arts**

Purpose & Function

Sangeet Natak Akademi is India's **national academy for music, dance, and drama**. It works to:

- Preserve & promote **classical, folk, and tribal performing arts**
- Recognize artists and gurus
- Document and archive traditional art forms
- Provide grants to institutions & support training

Major Activities



- Confers **Sangeet Natak Akademi Awards** — among India's highest honours for performing arts
- Conducts festivals, seminars, and workshops
- Maintains a large **audio-visual archive** of traditional art forms

Lalit Kala Akademi

Category: National Academy

Established: 1954

Ministry: Ministry of Culture

Domain: Visual arts (painting, sculpture, graphic arts, photography, ceramics)

Purpose

Lalit Kala Akademi promotes and preserves India's **visual arts heritage**, including modern and contemporary art.

Key Functions

- Organizes national and international exhibitions
- Maintains galleries and studios
- Offers workshops and artist residencies
- Awards scholarships to young artists
- Publishes art journals and catalogues

GS Paper 1: Society

TOPICS COVERED

19 December 2025

1. **Why intimate partner violence is an under-recognised public health crisis**
घनिष्ठ साथी हिंसा एक कम-मान्यता प्राप्त सार्वजनिक स्वास्थ्य संकट क्यों है



Why intimate partner violence is an under-recognised public health crisis

For women in South Asia, intimate partner violence is a greater risk factor for poor health than obesity, smoking, or alcohol use — placing violence among the leading drivers of disability and chronic illness; this situation demands a paradigm shift to view domestic violence as a risk factor that impacts health

GS I: Society

Christianez Ratna Kiruba

When Meera (name changed on request) first sought medical help, she was 34, a mother of two, and visibly exhausted. She went to a doctor at a private clinic, complaining of tightness in her chest, a rapidly-beating heart, and episodes of intense panic that left her gasping for air. “The doctor ran some tests. Everything came back normal,” Meera recalled. “She just gave me multivitamin tablets and told me it would get better.”

It did not. Over the next three years, Meera shuttled between multiple departments at a government hospital in Assam — general medicine, cardiology, psychiatry. Doctors continued to investigate. Her ECGs were normal. Blood tests showed mild anaemia. She was prescribed iron supplements, antacids for gastric discomfort, and eventually, sleeping pills to manage what was described as stress. It was only after a particularly severe episode, when Meera collapsed following an intense panic attack that someone noticed what was really happening. A junior doctor noticed her flinch when her husband answered questions on her behalf and asked to speak to her alone. What emerged was a long history of physical violence, marital rape, economic control, and threats.

Meera was not suffering from an inexplicable collection of symptoms. She was living with untreated post-traumatic stress disorder, and it had taken years for the health system to recognise it.

The burden of violence

Meera’s trajectory through India’s health system mirrors what a recent Lancet analysis now describes as a global, yet under-recognised, public health failure. Drawing on data from the Global Burden of Disease Study 2023, the paper identifies intimate partner violence as a significant and measurable contributor to a wide range of health outcomes, including post-traumatic stress disorder, depression and anxiety, suicide, chronic pain, cardiovascular disease, gastrointestinal disorders, substance use, sexually transmitted infections, and adverse reproductive outcomes.

For women of reproductive age in South Asia, the analysis finds that intimate partner violence is a greater risk factor for poor health than high fasting plasma glucose, obesity, smoking, or alcohol use — placing violence among the leading drivers of disability and chronic illness.

This enables a crucial paradigm shift. Domestic violence is no longer a social issue but a risk factor that impacts health.

Intimate partner violence is an insidious exposure that accumulates over years, shaping mental illness, non-communicable disease, and long-term disability rather than presenting as a single, identifiable event.

MOE



Call to action: A silent protest calling for an end to violence against women in Mumbai. Intimate partner violence has been identified as a significant and measurable contributor to a wide range of health issues. EMMANUAL YOGINI

This reframing also helps explain why violence so often remains invisible within the health system — even to the women living through it.

A.K. Jayashree, head, department of community medicine at the Government Medical College in Kannur, Kerala, began her career volunteering with organisations, interacting with a large number of women subjected to intimate partner violence. But when she entered formal medical education as a teacher in 2009, she was struck by how little of this knowledge had translated into training. What was being taught to medical students neither reflected the realities she had seen on the ground, nor did it take into account evidence generated by decades of research.

Studies show that women come to outpatient departments repeatedly with non-specific complaints that do not resolve — chronic pain, tiredness, inability to sleep etc. — but medical students are not taught to look for everyday violence. As a result doctors are often unprepared for what they encounter in real-world settings: women may arrive at emergency departments after being beaten, accompanied by husbands or in-laws who answer questions on their behalf. Junior doctors may sense something is wrong but lack the training to ask safely, document accurately, or refer appropriately.

What information does reach medical students is fragmented. “Most of it is confined to forensic medicine, as a legal and evidentiary exercise,” Dr. Jayashree says. “It is not taught in clinical subjects that actually shape how doctors practise.”

Nancy Angeline Gnanaseelvam, assistant

professor of community medicine at St. John’s Medical College, Bengaluru, says the women most visible to the system are not representative of those living with intimate partner violence. “What we see in crisis centres or one-stop facilities are usually women in extreme distress, often brought in by the police after calling helplines or when neighbours report the violence,” she says.

Invisible group

The much larger, invisible group, she explains, are women who continue to file complaints or leave home. “They come with diabetes, hypertension, anxiety, and chronic pain. And we don’t recognise what we are seeing.” Intimate partner violence remains poorly understood within medicine because it sits at the uneasy intersection of healthcare, social services, and law enforcement, Dr. Nancy adds.

Even when violence is suspected however, care pathways frequently collapse.

Referrals to psychiatry or other mental health services are often resisted by families or blocked altogether. The physicians, who are the only people the women have safe access to, receive little training in even basic mental healthcare, let alone trauma-informed care. “So the woman remains treated symptom by symptom, while the cause remains untouched,” says Dr. Nancy.

For Dr. Nancy, this is why reframing intimate partner violence as a public health and chronic disease issue matters. It shifts the focus away from isolated incidents and moral judgment, toward

recognising the long-term disability and preventable illnesses it causes. Without that shift, she argues, the health system will continue to manage diabetes, heart disease, anxiety, and depression — while remaining blind to the violence that fuels them.

At this point, says Dr. Nancy, the official training to deal with issues faced by women in the National Medical Council curriculum is a one-hour lecture. According to her, gender must be an ongoing conversation brought up again and again in various health contexts. “This needs to make it into the curriculum of nurses, psychologists and other healthcare workers as well,” adds Dr. Jayashree.

Beginning conversations

Last month, at the Sree Uthradom Thirunal Academy of Medical Sciences in Thiruvananthapuram, a panel discussion brought doctors together to talk about intimate partner violence.

The discussion did not frame violence in the language of chronic disease or disability. But its significance lay elsewhere: in the acknowledgement that domestic violence is not external to healthcare.

The conversation was a nod toward to shift that is now happening: moving intimate partner violence out of the margins of emergency care and social work, and into the core of how medicine understands illness, risk, and long-term health.

(Dr. Christianez Ratna Kiruba is an internal medicine doctor, with a passion for patient rights advocacy. christianezdennis@gmail.com)

THE GIST

Intimate partner violence is an insidious exposure that accumulates over years, shaping mental illness, non-communicable diseases, and long-term disability rather than presenting as a single, identifiable event. Domestic violence is no longer a social issue but a risk factor that impacts health

Studies show that women come to outpatient departments repeatedly with non-specific complaints that do not resolve — chronic pain, tiredness, inability to sleep etc. — but medical students are not taught to look for everyday violence

Reframing intimate partner violence as a public health and chronic disease issue matters. It shifts the focus away from isolated incidents and moral judgment, toward it being seen for the long-term disability and preventable illnesses it causes. Without that shift, the health system will continue to manage diabetes, heart disease, anxiety, and depression — while remaining blind to the violence that fuels them

Why intimate partner violence is an under-recognised public health crisis घनिष्ठ साथी हिंसा एक कम-मान्यता प्राप्त सार्वजनिक स्वास्थ्य संकट क्यों है

- When Meera (name changed on request) first sought medical help, she was 34, a mother of two, and visibly exhausted.



जब मीरा (अनुरोध पर नाम बदला गया) ने पहली बार चिकित्सकीय सहायता ली, तब वह 34 वर्ष की थीं, दो बच्चों की माँ थीं, और स्पष्ट रूप से थकी हुई थीं।

- She went to a doctor at a **private clinic**, complaining of **tightness in her chest, a rapidly-beating heart**, and episodes of **intense panic** that left her **gasping for air**.
वह एक निजी क्लिनिक में डॉक्टर के पास गईं, जहाँ उन्होंने सीने में जकड़न, तेज़ धड़कता हुआ दिल, और तीव्र घबराहट के दौरों की शिकायत की, जिनमें उन्हें साँस लेने में तकलीफ़ होती थी।
- “The doctor ran some tests. **Everything came back normal**,” Meera recalled.
“डॉक्टर ने कुछ जाँचें कीं। सब कुछ सामान्य निकला,” मीरा ने याद किया।
- “She just gave me **multivitamin tablets** and told me it would get better.”
- She was prescribed **iron supplements**, **antacids for gastric discomfort**, and eventually, **sleeping pills** to manage what was described as **stress**.
- What emerged was a **long history of physical violence, marital rape, economic control, and threats**.
इसके बाद शारीरिक हिंसा, वैवाहिक बलात्कार, आर्थिक नियंत्रण, और धमकियों का एक लंबा इतिहास सामने आया।
- Meera was not suffering from an inexplicable collection of symptoms.
मीरा किसी रहस्यमय लक्षणों के समूह से पीड़ित नहीं थीं।
- She was living with **untreated post-traumatic stress disorder**, and it had taken years for the **health system** to recognise it.
- Including **post-traumatic stress disorder, depression and anxiety, suicide, chronic pain, cardiovascular disease, gastrointestinal disorders, substance use, sexually transmitted infections, and adverse reproductive outcomes**.
जिनमें पोस्ट-ट्रॉमैटिक स्ट्रेस डिसऑर्डर, अवसाद और चिंता, आत्महत्या, दीर्घकालिक दर्द, हृदय रोग, जठरांत्र विकार, नशीले पदार्थों का उपयोग, यौन संचारित संक्रमण, और प्रतिकूल प्रजनन परिणाम शामिल हैं।
- **For women of reproductive age in South Asia**, the analysis finds that **intimate partner violence is a greater risk factor for poor health than high fasting plasma glucose, obesity, smoking, or alcohol use**.
दक्षिण एशिया में प्रजनन आयु की महिलाओं के लिए, यह विश्लेषण पाता है कि घनिष्ठ साथी हिंसा उच्च फास्टिंग प्लाज़्मा ग्लूकोज़, मोटापा, धूम्रपान, या शराब सेवन से भी खराब स्वास्थ्य का बड़ा जोखिम कारक है।
- **Placing violence among the leading drivers of disability and chronic illness**.
इससे हिंसा विकलांगता और दीर्घकालिक बीमारी के प्रमुख कारकों में शामिल हो जाती है।
- This enables a crucial **paradigm shift**.
यह एक महत्वपूर्ण पैराडाइम शिफ्ट को संभव बनाता है।
- **Domestic violence is no longer a social issue but a risk factor that impacts health**.
घरेलू हिंसा अब केवल एक सामाजिक मुद्दा नहीं है, बल्कि स्वास्थ्य को प्रभावित करने वाला जोखिम कारक है।
- Intimate partner violence is an **insidious exposure that accumulates over years**, shaping **mental illness, non-communicable disease, and long-term disability** rather than presenting as a single, **identifiable event**.
- Studies show that women come to outpatient departments repeatedly with **non-specific complaints** that do not resolve — **chronic pain, tiredness, inability to sleep** etc. — but medical students are not taught to look for **everyday violence**.
अध्ययन दिखाते हैं कि महिलाएँ बार-बार बाह्य रोगी विभागों में अस्पष्ट शिकायतों के साथ आती हैं जो ठीक नहीं होतीं — जैसे दीर्घकालिक दर्द, थकान, नींद न आना आदि — लेकिन चिकित्सा छात्रों को दैनिक हिंसा को पहचानना नहीं सिखाया जाता।
- As a result doctors are often unprepared for what they encounter in real-world settings.
परिणामस्वरूप डॉक्टर वास्तविक परिस्थितियों में जो देखते हैं, उसके लिए अक्सर तैयार नहीं होते।
- Women may arrive at **emergency departments** after being beaten, accompanied by **husbands or in-laws** who answer questions on their behalf.



महिलाएँ आपातकालीन विभागों में पिटने के बाद आ सकती हैं, उनके साथ पति या ससुराल वाले होते हैं जो उनकी ओर से सवालों के जवाब देते हैं।

- Junior doctors may sense something is wrong but lack the training to ask **safely**, document **accurately**, or refer **appropriately**.
The much larger, **invisible group**, she explains, are **women who continue to live with their partners and do not want to file complaints or leave home**.
वह बताती हैं कि इससे कहीं बड़ा **अदृश्य समूह** उन महिलाओं का है जो अपने साथियों के साथ रहती रहती हैं और **शिकायत दर्ज** नहीं करना या **घर छोड़ना** नहीं चाहतीं।
- “They come with **diabetes, hypertension, anxiety, and chronic pain**. And we don’t recognise what we are seeing.”
“वे **मधुमेह, उच्च रक्तचाप, चिंता, और दीर्घकालिक दर्द** के साथ आती हैं। और हम यह नहीं पहचान पाते कि हम वास्तव में क्या देख रहे हैं।”
- **Intimate partner violence remains poorly understood within medicine because it sits at the uneasy intersection of healthcare, social services, and law enforcement**, Dr. Nancy adds.
डॉ. नैन्सी जोड़ती हैं कि **घनिष्ठ साथी हिंसा** को चिकित्सा में अब भी **ठीक से नहीं समझा गया** है क्योंकि यह **स्वास्थ्य सेवा, सामाजिक सेवाओं, और कानून प्रवर्तन** के असहज संगम पर स्थित है।
- Even when violence is **suspected**, however, care pathways frequently **collapse**.
हालाँकि, जब हिंसा का **संदेह** भी होता है, तब भी उपचार की प्रक्रियाएँ अक्सर **टूट जाती हैं**।
- **Referrals to psychiatry or other mental health services are often resisted by families or blocked altogether**.
मनोरोग या अन्य **मानसिक स्वास्थ्य सेवाओं** के लिए रेफरल का अक्सर परिवारों द्वारा विरोध किया जाता है या उन्हें पूरी तरह रोक दिया जाता है।
- **The physicians, who are the only people the women have safe access to, receive little training in even basic mental healthcare, let alone trauma-informed care**.
चिकित्सक, जिन तक महिलाओं की **सुरक्षित पहुँच** होती है, उन्हें **बुनियादी मानसिक स्वास्थ्य देखभाल** का भी बहुत कम प्रशिक्षण मिलता है, **ट्रॉमा-इन्फॉर्मड केयर** की तो बात ही छोड़िए।
- “So the woman remains treated **symptom by symptom**, while the **cause remains untouched**,” says Dr. Nancy.
डॉ. नैन्सी कहती हैं, “इस तरह महिला का इलाज **लक्षण दर लक्षण** होता रहता है, जबकि **मूल कारण अछूता** रह जाता है।”
- For Dr. Nancy, this is why **reframing intimate partner violence as a public health and chronic disease issue matters**.

GS Paper 1: Society	
TOPICS COVERED	19 December 2025
1.	U.S. announces \$10 billion in arms sales to Taiwan; China slams move यू.एस. ने ताइवान को \$10 बिलियन के हथियारों की बिक्री की घोषणा की; चीन ने प्रतिक्रिया व्यक्त की
2.	Don't make 'fatal mistakes' in Venezuela: Russia to U.S. वेनेजुएला में 'घातक गलती' न करें: रूस का अमेरिका को संदेश
3.	Israel hits Lebanon as deadline looms to disarm Hezbollah इज़राइल ने लेबनान पर हमला किया क्योंकि हिज़बुल्लाह को निरस्त्र करने की समयसीमा नज़दीक है



Severe enforcement



GS I: Geography: Mapping

Stern measures: Liberian police officers detain a protester during the 'Lead or Leave' demonstration, aimed at pressuring President Joseph Boakai's administration to address corruption, economic hardship and human rights concerns in Monrovia on Wednesday. AFP

Stern measures: Liberian police officers detain a protester during the 'Lead or Leave' demonstration, aimed at pressuring President Joseph Boakai's administration to address corruptio

GS Paper II: Polity,	
TOPICS COVERED	19 December
1.	Retired judges don't want to sit as junior ad hoc judges: CJI सेवानिवृत्त न्यायाधीश कनिष्ठ तदर्थ न्यायाधीश के रूप में बैठना नहीं चाहते: CJI
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Retired judges don't want to sit as junior ad hoc judges: CJ

GS II: Polity, Judiciary

Krishnadas Rajagopal
NEW DELHI

Chief Justice of India Surya Kant revealed on Thursday that retired High Court judges are reluctant to return to the Bench as ad hoc judges to clear the massive pendency of criminal cases for a simple reason: they are "embarrassed" to sit as junior judges alongside younger colleagues.

The High Courts across the country are burdened by mounting arrears, particularly in criminal cases. Data from the National Judicial Data Grid shows that 18,98,833 criminal cases are pending in the 25 High Courts. Of these, 68.27% or 12,96,374 cases have been pending for over a year. Against a sanctioned strength of 1,122 judges, there are 298 vacancies in the High Courts as of December 15.

Based on SC verdict

Alarmed by the backlog, the Supreme Court in a judgment in January activated Article 224A of the Constitution, allowing the Chief Justices of the High Courts to appoint retired former judges as ad hoc judges to clear criminal appeals.

However, the response from the High Courts has been lukewarm, with several courts not sending names to the Supreme Court for appointment as ad hoc judges.

"In my travels to the various High Courts, I spoke to the Chief Justices. They said there were many former judges who were keen and willing to return to the Bench and work... But they feel very embarrassed to sit as a junior judge with a serving judge on Division Benches," Chief Justice Kant told Attorney-General R. Venkataramani during a special hearing. He pointed out that most criminal appeals were pending before Division Benches or two-judge Benches in the High Courts. The Chief Justice, accompanied by Justices Joymalya Bagchi and Vipul



Serving judges ask why they should sit with a retired person on the Bench, adds CJ Kant.

M. Pancholi, noted that a large number of cases were pending in the Allahabad, Punjab and Haryana, and Patna High Courts.

The Chief Justice said the problem existed from the other end as well. "The serving judges would ask why they should sit with a retired person heading the Bench... Can we persuade a sitting judge to be a Bench partner with a retired judge heading the Bench?" he said.

Amicus curiae and senior advocate K. Parameshwar referred to an April 2021 judgment on the appointment of ad hoc judges. He said the ruling had directed that if two ad hoc judges were appointed to a High Court, they should sit together as a Division Bench. He noted that the January 2025 judgment had modified this by directing that an ad hoc judge must necessarily sit with a serving judge.

Mr. Venkataramani suggested that Chief Justices of High Courts should internally discuss the issue with their colleagues and obtain concurrence. He said the quandary could be resolved through an "internal understanding" among serving judges. Chief Justice Kant agreed that Chief Justices should be given "space and discretion" to handle the issue.

Justice Bagchi observed that the recruitment process and tenure of ad hoc judges required to be "fine-tuned".

The A-G said the Memorandum of Procedure covered the process, but he would take another look.

Retired judges don't want to sit as junior ad hoc judges: CJ

सेवानिवृत्त न्यायाधीश कनिष्ठ तदर्थ न्यायाधीश के रूप में बैठना नहीं चाहते: CJ

• Chief Justice of India **Surya Kant** revealed on Thursday that retired **High Court judges** are reluctant to return to the Bench as **ad hoc judges** to clear the massive pendency of **criminal cases** for a simple reason: they are "**embarrassed**" to sit as **junior judges** alongside **younger colleagues**.

भारत के **मुख्य न्यायाधीश सूर्य कांत** ने गुरुवार को बताया कि सेवानिवृत्त **उच्च न्यायालय के न्यायाधीश** भारी संख्या में लंबित **आपराधिक मामलों** को निपटाने के लिए **तदर्थ न्यायाधीश** के रूप में पीठ पर लौटने से हिचक रहे हैं, क्योंकि वे **कम उम्र के सहकर्मियों** के साथ **कनिष्ठ न्यायाधीश** के रूप में बैठने में "**असहज**" महसूस करते हैं।

• The **High Courts** across the country are burdened by mounting arrears, particularly in **criminal cases**.

देश भर के **उच्च न्यायालय** बढ़ते लंबित मामलों के बोझ से दबे हैं, विशेष रूप से **आपराधिक मामलों** में।

• Data from the **National Judicial Data Grid** shows that **18,98,833 criminal cases** are pending in the **25 High Courts**.

नेशनल जूडिशियल डेटा ग्रीड के आंकड़ों के अनुसार **25 उच्च न्यायालयों** में **18,98,833 आपराधिक मामले** लंबित हैं।

• Of these, **68.27% or 12,96,374 cases** have been pending for **over a year**.

इनमें से **68.27%** या **12,96,374 मामले एक वर्ष** से अधिक समय से लंबित हैं।

• Against a sanctioned strength of **1,122 judges**, there are **298 vacancies** in the High Courts as of **December 15**.

1,122 न्यायाधीशों की स्वीकृत संख्या के मुकाबले **15 दिसंबर तक उच्च न्यायालयों में 298 रिक्तियाँ** हैं।

Based on SC verdict

सुप्रीम कोर्ट के फैसले के आधार पर

• Alarmed by the backlog, the **Supreme Court** in a judgment in **January** activated **Article 224A of the Constitution**, allowing the **Chief Justices of the High Courts** to appoint retired former judges as **ad hoc judges** to clear **criminal appeals**.

लंबित मामलों से चिंतित होकर **सुप्रीम कोर्ट** ने **जनवरी** में दिए गए एक फैसले में **संविधान के अनुच्छेद 224A** को सक्रिय किया, जिससे **उच्च न्यायालयों के मुख्य न्यायाधीशों** को **आपराधिक अपीलों** के निपटारे के लिए सेवानिवृत्त पूर्व न्यायाधीशों को **तदर्थ न्यायाधीश** नियुक्त करने की अनुमति मिली।

• However, the response from the **High Courts** has been lukewarm, with several courts not sending names to the **Supreme Court** for appointment as **ad hoc judges**.

• The Chief Justice said the problem existed from the other end as well. "The serving judges would ask why they should sit with a retired person heading the Bench... Can we persuade a sitting judge to be a Bench partner with a retired judge heading the Bench?" he said.

मुख्य न्यायाधीश ने कहा कि समस्या दूसरे छोर से भी है। "कार्यरत न्यायाधीश पूछते हैं कि उन्हें सेवानिवृत्त व्यक्ति की अध्यक्षता वाली बेंच पर क्यों बैठना चाहिए... क्या हम किसी कार्यरत न्यायाधीश को सेवानिवृत्त न्यायाधीश की अध्यक्षता वाली बेंच का साझेदार बनने के लिए मना सकते हैं?" उन्होंने कहा।

• **Amicus curiae** and senior advocate **K. Parameshwar** referred to an **April 2021 judgment** on the appointment of **ad hoc judges**.



Dismantling MGNREGA will be a historic error: leading global academics

GS II: Polity

The Hindu Bureau
NEW DELHI

A group of leading international economists and social scientists have called upon the government to reverse the imminent repeal of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), warning that dismantling the scheme will be a "historic error".

The signatories have written an open letter addressed to the Centre. They include Nobel laureate Joseph E. Stiglitz; Pavlina R. Tcherneva, President, The Levy Economics Institute (U.S.); Thomas Piketty, Professor, Paris School of Economics (France); Isabelle Ferreras, Professor, University of Louvain (Belgium); Darrick Hamilton, Professor, New School for Social Research (U.S.); Randall Wray, Senior Scholar, The Levy Economics Institute (U.S.); and James Galbraith, Professor, The University of Texas at Austin (U.S.).

Describing the MGNREGA as "the world's most significant policy opera-

The Act reaffirms economic dignity as a fundamental right, they say in an open letter to the Centre

tioning a demand-driven, legal right to employment", the academics said that it reaffirmed "economic dignity as a fundamental right". And there is empirical evidence to underscore its impact. "The early years of the Act coincided with unprecedented rural wage growth and studies confirmed the programme's positive effects on economic output and efficiency, dispelling myths of unproductivity."

The signatories said that "chronic underfunding and payment delays" had long hampered the scheme. But with the new Bill bringing in a shift to devolve the scheme to States and without commensurate fiscal support, it threatened its existence. Under the new funding pattern, the States could bear up to 100% of material costs, compared with 25% ear-

lier. "This creates a catastrophic Catch-22: States are legally liable to provide employment, while central financing is withdrawn," the letter warned, arguing that poorer States will be forced to curb project approvals, stifling work demand.

They flagged provisions allowing discretionary suspension of the scheme, citing the unexplained defunding of West Bengal over the past three years as an example of political misuse. Such measures, they said, render the employment guarantee "meaningless". The MGNREGA's design not only provides wages but also creates rural assets such as wells, roads, and ponds, stimulating local economies. "To dismantle it now would abandon a proven instrument for poverty alleviation, social justice, and environmental care," the scholars wrote, calling for assured Central funding, timely wage payments, and restoration of the Act's foundational guarantee.

(For full text of the letter visit: newsth.live/openletter)

एमिकस क्यूरी और वरिष्ठ अधिवक्ता के. परमेश्वर ने तदर्थ न्यायाधीशों की नियुक्ति पर अप्रैल 2021 के एक फैसले का उल्लेख किया।

• He said the ruling had directed that if **two ad hoc judges** were appointed to a High Court, they should sit together as a **Division Bench**.

उन्होंने कहा कि फैसले में निर्देश दिया गया था कि यदि किसी उच्च न्यायालय में दो तदर्थ न्यायाधीश नियुक्त किए जाएँ, तो वे डिवीजन बेंच के रूप में साथ बैठें।

• He noted that the **January 2025 judgment** had modified this by directing that an **ad hoc judge** must necessarily sit with a **serving judge**.

Dismantling MGNREGA will be a historic error: leading global academics मनरेगा को खत्म करना एक ऐतिहासिक भूल होगी: प्रमुख वैश्विक शिक्षाविद

- Describing the **MGNREGA** as "the world's most significant policy operationalising a **demand-driven, legal right to employment**", the academics said that it reaffirmed "**economic dignity as a fundamental right**".
- Under the new funding pattern, the **States** could bear up to **100% of material costs**, compared with **25% earlier**.
नई वित्तपोषण व्यवस्था के तहत राज्यों को सामग्री लागत का 100% तक वहन करना पड़ सकता है, जबकि पहले यह 25% था।
- "This creates a catastrophic **Catch-22**: States are legally liable to provide employment, while **central financing is withdrawn**," the letter warned, arguing that poorer States will be forced



to curb project approvals, **stifling work demand**.

- The **MGNREGA's design** not only provides wages but also creates **rural assets** such as **wells, roads, and ponds**, stimulating **local economies**.
मनरेगा की रूपरेखा न केवल मजदूरी प्रदान करती है बल्कि कुएँ, सड़कें और तालाब जैसे ग्रामीण परिसंपत्तियों का निर्माण भी करती है, जिससे स्थानीय अर्थव्यवस्थाएँ सशक्त होती हैं।
- “To dismantle it now would abandon a proven instrument for **poverty alleviation, social justice, and environmental care**,” the scholars wrote, calling for **assured Central funding, timely wage payments**, and restoration of the Act's **foundational guarantee**.

Allahabad HC orders grant of protection to 12 live-in couples

GS II: Polity

‘Living together without marriage cannot be termed an offence, **no one can object to**, and cause a hindrance to, peaceful existence of the couples’

Ishita Mishra
NEW DELHI

Stating that the concept of a live-in relationship may not be acceptable to all, but such relationships are not illegal, the Allahabad High Court on Wednesday ordered the Uttar Pradesh police to provide protection to 12 live-in couples allegedly threatened by their families.

The Bench of Justice Vivek Kumar Singh, who was hearing the petitions filed by 12 women from different parts of the State, stated that it cannot be said that living together without the sanctity of marriage constitutes an offence.

The court cited the example of the Protection of Women from Domestic Violence Act, 2005, which says that a woman who is in a domestic relationship has been provided protection, maintenance, etc. But the act has not used the word “wife”.

“Once an individual, who is a major, has chosen his/her partner, it is not for any other person, be it a fa-

Once an individual, who is a major, has chosen his/her partner, it is not for any other person, be it a family member, to object and cause a hindrance to their peaceful existence

ALLAHABAD HC



It is the duty of the State to protect the life and liberty of every citizen, the High Court says

mily member, to object and cause a hindrance to their peaceful existence. It is the bounden duty of the State, as per the Constitutional obligations cast upon it, to protect the life and liberty of every citizen,” the court said.

It added that the right to human life is to be treated on a much higher pedestal, regardless of a citizen being minor or major, mar-

ried or unmarried, and due to the mere fact that the petitioners have not solemnised marriage, would not deprive them of their fundamental rights.

The court also cited Section 114 of the Indian Evidence Act/Section 119(1) of Bhartiya Sakshya Adhinyam, 2023, which states that if couples live together for a significant amount of time, they will be presumed to be married.

“The courts shall apply this presumption to protect the rights of the parties in a live-in relationship, i.e. women and the children born as a result thereof,” it added.



Allahabad HC orders grant of protection to 12 live-in couples इलाहाबाद उच्च न्यायालय ने 12 लिव-इन जोड़ों को सुरक्षा देने का आदेश दिया

‘Living together without marriage cannot be termed an offence, no one can object to, and cause a hindrance to, peaceful existence of the couples’

‘बिना विवाह साथ रहना अपराध नहीं कहा जा सकता, कोई भी उनके शांतिपूर्ण अस्तित्व पर आपत्ति या बाधा नहीं डाल सकता’

- Stating that the concept of a **live-in relationship** may not be acceptable to all, but such relationships are **not illegal**, the **Allahabad High Court** on **Wednesday** ordered the **Uttar Pradesh police** to provide protection to **12 live-in couples** allegedly threatened by their families.
यह कहते हुए कि **लिव-इन संबंध** की अवधारणा सभी को स्वीकार्य न हो सकती है, लेकिन ऐसे संबंध **अवैध नहीं हैं**, इलाहाबाद उच्च न्यायालय ने बुधवार को उत्तर प्रदेश पुलिस को परिवारों से कथित रूप से धमकी झेल रहे **12 लिव-इन जोड़ों** को सुरक्षा प्रदान करने का आदेश दिया।
- The Bench of **Justice Vivek Kumar Singh**, who was hearing the petitions filed by **12 women** from different parts of the State, stated that it cannot be said that living together without the sanctity of marriage constitutes an **offence**.
राज्य के विभिन्न हिस्सों से **12 महिलाओं** द्वारा दायर याचिकाओं की सुनवाई कर रही **न्यायमूर्ति विवेक कुमार सिंह** की पीठ ने कहा कि विवाह की पवित्रता के बिना साथ रहना **अपराध नहीं कहा जा सकता**।
- The court cited the example of the **Protection of Women from Domestic Violence Act, 2005**, which says that a woman who is in a **domestic relationship** has been provided protection, maintenance, etc. But the Act has not used the word **“wife”**.
अदालत ने **घरेलू हिंसा से महिलाओं का संरक्षण अधिनियम, 2005** का उदाहरण दिया, जिसमें कहा गया है कि **घरेलू संबंध** में रहने वाली महिला को संरक्षण, भरण-पोषण आदि प्रदान किया गया है, लेकिन अधिनियम में **“पत्नी”** शब्द का प्रयोग नहीं किया गया है।
- “Once an individual, who is a **major**, has chosen his/her partner, it is not for any other person, be it a family member, to object and cause a hindrance to their **peaceful existence**. It is the bounden duty of the **State**, as per the **Constitutional obligations** cast upon it, to protect the **life and liberty** of every citizen,” the court said.
“एक बार कोई व्यक्ति, जो **वयस्क** है, अपने साथी को चुन लेता है, तो किसी अन्य व्यक्ति, चाहे वह परिवार का सदस्य ही क्यों न हो, को उनके **शांतिपूर्ण अस्तित्व** पर आपत्ति करने या बाधा डालने का अधिकार नहीं है। **संविधानिक दायित्वों** के अनुसार **राज्य** का यह कर्तव्य है कि वह प्रत्येक नागरिक के **जीवन और स्वतंत्रता** की रक्षा करे,” अदालत ने कहा।
- It added that the right to **human life** is to be treated on a much higher pedestal, regardless of a citizen being **minor or major, married or unmarried**, and due to the mere fact that the petitioners have not solemnised marriage, would not deprive them of their **fundamental rights**.
अदालत ने जोड़ा कि **मानव जीवन** के अधिकार को बहुत ऊँचे स्तर पर रखा जाना चाहिए, चाहे नागरिक **नाबालिग हो या वयस्क, विवाहित हो या अविवाहित**, और केवल इस तथ्य के कारण कि याचिकाकर्ताओं ने विवाह नहीं किया है, उनसे उनके **मौलिक अधिकार** छीने नहीं जा सकते।
- The court also cited **Section 114 of the Indian Evidence Act/Section 119(1) of Bhartiya Sakshya Adhiniyam, 2023**, which states that if couples live together for a **significant amount of time**, they will be **presumed to be married**.
अदालत ने **भारतीय साक्ष्य अधिनियम की धारा 114/भारतीय साक्ष्य अधिनियम, 2023 की धारा 119(1)** का भी उल्लेख किया, जिसमें कहा गया है कि यदि कोई जोड़ा **पर्याप्त समय तक साथ रहता है**, तो उन्हें **विवाहित माना जाएगा**।
- “The courts shall apply this **presumption** to protect the rights of the parties in a **live-in relationship**, i.e. **women and the children** born as a result thereof,” it added.
“अदालतें इस **अनुमान** को **लिव-इन संबंध** में पक्षकारों, अर्थात् **महिलाओं और उनसे जन्मे बच्चों**, के अधिकारों की रक्षा के लिए लागू करेगी,” इसमें जोड़ा गया।



Cutting off a rural lifeline and the Directive Principles

GS II: Polity

MOB

The central government has, using its majority in the Lok Sabha, pushed through a Bill to replace the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA). The proposed draft – an outright “*adhikar chori* (rights theft)” Bill – seeks to change the very nature of MGNREGA, the present Act. While the Bill is a direct assault on the rights of the rural working poor, it should be seen in the framework of an attack on the Constitution of India. This is why it must go to the Standing Committee of Parliament.

Article 41 of the Constitution states: “The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work...” In the Constituent Assembly, there was a strong difference of opinion between those who were influenced by socialist ideals who wanted the right to work included as a fundamental right, and the strong capitalist lobby who opposed it. Ultimately, it was included in the Directive Principles of the Constitution. Dr. B.R. Ambedkar had described this as a “novel feature”, asserting that though these Directive Principles were not justiciable, they were to be considered as “instruments of instruction” for lawmakers and as “essential for economic democracy”. Pro-socialist member K.T. Shah had then described this as “pious wishes”. Shah’s words resonate through these years of capitalist “development” in the lived experience of the unemployed and the denial of work opportunities.

The critical role of the Left

It took a five-and-a-half decade struggle by working people and dramatic political developments to ensure a policy shift that was somewhat closer to the Directive Principles, and more specifically, the right to work. In the 2004 general election, the Bharatiya Janata Party was defeated by the Congress-led United Progressive Alliance but without a majority, leading to a situation where, for the first time, the central government was dependent on the support of Left parties. Importantly, the Left parties led by the CPI(M) had fought the elections independently on their own programme and strength. MGNREGA was possible because of this political configuration. The Left parties played a critical role in the shaping of the final law adopted unanimously by Parliament in 2005.

The law is a partial recognition of the right to work and the acceptance of the responsibility of the state to ensure an increased share of national resources for the provision of work at a minimum



Brinda Karat

is a senior leader of the CPI(M)

wage. The law guarantees a minimum of 100 days of work throughout the year to a rural household and is universal, open to all adults (men and women) who volunteer for manual labour. Most importantly, the law is based on fulfilling the demand for work, which is not static and can increase or decrease according to the requirement of rural households. There is a deep democratic content in this. If a household has better choices for employment, it has the right to exercise that choice while retaining the fallback provided by MGNREGA. The law guarantees equal wages for men and women, with the entire wage bill to be paid by the central government.

The State governments, under the law, bear some financial responsibility of around 10% and have a say in the design of schemes and their implementation in tune with the needs of the State. Panchayats have both a right and a responsibility to identify and design projects required in the areas under their jurisdiction. This demand-driven universally applicable law was probably the first of its kind in the capitalist world.

An erasure of fundamental features

The Narendra Modi government, with its partners, the Telugu Desam Party and the Janata Dal (United) as drum beaters, scraps all these fundamental features in its draft Bill. It will no longer be demand driven, but determined by “normative financial allocations” decided by the central government. The Centre will legally have no obligation now if expenditure exceeds this allocation. The States, already in financial crisis because of the unjust denial of their share in central tax revenues, are being saddled with 40% of the cost. The Bill is highly centralised and everything – from the design of projects to digitalised audits – will be controlled by the central government. These features are a direct assault on the federal character of the Constitution.

The class bias in favour of the rural rich is blatantly displayed in the clause in the Bill which prohibits any work under the proposed law during the peak agricultural season. With increased mechanisation in agriculture, workdays have drastically reduced. The work pattern of MGNREGA shows that it is only when agricultural work is not available and when wages paid are below MGNREGA standards that workers opt for MGNREGA in the peak season.

The prohibition will reduce the bargaining capacity of rural workers, who, in the absence of MGNREGA, will be forced to accept terms and

conditions set by big landowners. This will affect women who get lower wages than men in agriculture. The law legalises Aadhaar card linkage, online digitally recorded attendance as a condition for eligibility and wage payment. This is despite ample evidence that such conditions including poor connectivity have victimised workers.

Using the acronym G Ram G, as the name of the law (Viksit Bharat-G RAM G Bill 2025), is a low-level manoeuvre to appeal to believers. But when crores of people will shout ‘G-Ram-G *murdabad*’ against the law, it may hurt sentiments and backfire on the government.

A reflection of distress

Those of us who have worked closely with MGNREGA workers know the difficult conditions in which people work. In some cases women have to lift up to 3,000 kilograms of mud a day to fulfil the productivity norm. Yet, if they make up well over 50% of MGNREGA workers in most States, it is surely a reflection of deep agrarian distress and the lack of a better alternative.

Adivasis constitute around 8.6% of the population. But among MGNREGA workers, according to last year’s figures, they are as high as 18% and Scheduled Castes make up 19%. Therefore, over two-thirds of workers belong to social categories protected by the Constitution. Any reversal of their rights is an attack on the Constitution. But even their representation in the redress/advisory councils has been eliminated in the draft law.

Since 2014, the Narendra Modi government has diluted and starved MGNREGA of funds even as it has greatly increased tax concessions and write-offs to corporates. While the number of workers increased from around two crores in the early days to over 7.7 crore workers now, the expenditures have stagnated or declined – never over 0.2% of GDP. In 2024-25, 8.9 crore workers demanded work but only 7.9 crore workers got work – 99 lakh workers were turned away. Wage arrears have mounted – sometimes up to ₹8,000 crore. On an average, households have got less than 50 days of work instead of 100 days. The farce of promising 125 days in the proposed draft rubs salt into the wound. But if people keep coming to MGNREGA sites it is because they have no alternative – such is the desperation and instability in the lives of India’s rural poor.

That lifeline, instead of being strengthened, is now being cut. The Directive Principles of the Constitution are being bulldozed. Shame on this government.

The Viksit Bharat-G RAM G Bill 2025 is a direct assault on the rights of India’s rural working poor

Cutting of a rural lifeline and the Directive Principles

ग्रामीण जीवनरेखा को काटना और निदेशक सिद्धांत

- The central government has, using its majority in the Lok Sabha, pushed through a Bill to replace the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA)
केंद्र सरकार ने लोकसभा में अपने बहुमत का उपयोग करते हुए महात्मा गांधी राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम (मनरेगा) को बदलने के लिए एक विधेयक पारित कराया है
- The central government has, using its majority in the Lok Sabha, pushed through a Bill to replace the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA).
केंद्र सरकार ने लोकसभा में अपने बहुमत का उपयोग करते हुए मनरेगा को बदलने के लिए एक विधेयक पारित कराया है।
- The proposed draft — an outright “*adhikar chori* (rights theft)” Bill — seeks to change the very nature of MGNREGA, the present Act.
प्रस्तावित मसौदा — एक खुला “अधिकार चोरी” विधेयक — वर्तमान मनरेगा कानून के मूल स्वरूप को ही बदलना चाहता है।
- While the Bill is a direct assault on the rights of the rural working poor, it should be seen in the framework of an attack on the Constitution of India.



जहाँ यह विधेयक ग्रामीण मेहनतकश गरीबों के अधिकारों पर सीधा हमला है, वहीं इसे भारत के संविधान पर हमले के रूप में भी देखा जाना चाहिए।

- This is why it must go to the **Standing Committee of Parliament**. इसी कारण इसे संसद की स्थायी समिति के पास भेजा जाना चाहिए।
- **Article 41 of the Constitution**
संविधान का अनुच्छेद 41
- **Article 41 of the Constitution** states “The State shall, within the limits of its **economic capacity and development**, make effective provision for securing the **right to work....**”
संविधान का अनुच्छेद 41 कहता है कि “राज्य अपनी आर्थिक क्षमता और विकास की सीमाओं के भीतर काम के अधिकार को सुनिश्चित करने के लिए प्रभावी प्रावधान करेगा...”
- In the **Constituent Assembly**, there was a strong **difference of opinion** between those influenced by **socialist ideals** who wanted the right to work included as a **fundamental right**, and the strong **capitalist lobby** who opposed it.
संविधान सभा में समाजवादी विचारों से प्रभावित लोगों, जो काम के अधिकार को मौलिक अधिकार बनाना चाहते थे, और इसका विरोध करने वाले मज़बूत पूँजीवादी लॉबी के बीच गहरा मतभेद था।
- Ultimately, it was included in the **Directive Principles of the Constitution**.
अंततः इसे संविधान के नीति-निर्देशक तत्वों में शामिल किया गया।
- **Dr. B.R. Ambedkar** had described this as a “**novel feature**”, asserting that though these Directive Principles were **not justiciable**, they were to be considered as “**instruments of instruction**” for lawmakers and as “**essential for economic democracy**”.
डॉ. बी.आर. आंबेडकर ने इसे एक “नवीन विशेषता” बताया था और कहा था कि यद्यपि ये नीति-निर्देशक तत्व न्यायालय में लागू करने योग्य नहीं हैं, फिर भी इन्हें विधायकों के लिए “निर्देश के साधन” और “आर्थिक लोकतंत्र के लिए आवश्यक” माना जाना चाहिए।
- **Pro-socialist member K.T. Shah** had then described this as “**pious wishes**”.
समाजवादी विचारों वाले सदस्य के.टी. शाह ने तब इसे “पवित्र इच्छाएँ” कहा था।
- Shah’s words resonate through these years of capitalist “**development**” in the lived experience of the **unemployed** and the **denial of work opportunities**.
पूँजीवादी “विकास” के इन वर्षों में बेरोज़गारों के जीवन अनुभव और रोज़गार अवसरों से वंचना में शाह के शब्द गूँजते प्रतीत होते हैं।

The critical role of the Left वाम दलों की निर्णायक भूमिका

- It took a **five-and-a-half decade struggle** by working people and dramatic **political developments** to ensure a policy shift somewhat closer to the **Directive Principles**, and more specifically, the **right to work**.
कामगारों के साढ़े पाँच दशक लंबे संघर्ष और नाटकीय राजनीतिक घटनाक्रमों के बाद ही नीति में ऐसा बदलाव संभव हुआ जो नीति-निर्देशक तत्वों, विशेषकर काम के अधिकार, के कुछ अधिक निकट था।
- In the **2004 general election**, the **Bharatiya Janata Party** was defeated by the **Congress-led United Progressive Alliance** but without a majority.
2004 के आम चुनाव में भारतीय जनता पार्टी को कांग्रेस-नेतृत्व वाले संयुक्त प्रगतिशील गठबंधन ने हराया, लेकिन उसे पूर्ण बहुमत नहीं मिला।
- This led to a situation where, for the **first time**, the central government was dependent on the support of **Left parties**.
इससे ऐसी स्थिति बनी कि पहली बार केंद्र सरकार वाम दलों के समर्थन पर निर्भर हुई।
- Importantly, the Left parties led by the **CPI(M)** had fought the elections **independently** on their own **programme and strength**.
महत्वपूर्ण रूप से, सीपीआई(एम) के नेतृत्व वाले वाम दलों ने चुनाव स्वतंत्र रूप से, अपने कार्यक्रम और ताकत के बल पर लड़े थे।
- **MGNREGA** was possible because of this **political configuration**.
इसी राजनीतिक संयोजन के कारण मनरेगा संभव हो पाया।
- The Left parties played a **critical role** in the shaping of the **final law** adopted **unanimously** by Parliament in 2005.
2005 में संसद द्वारा सर्वसम्मति से अपनाए गए अंतिम कानून के निर्माण में वाम दलों की निर्णायक भूमिका रही।



- The law is a **partial recognition** of the **right to work** and the acceptance of the **responsibility of the state** to ensure an increased share of **national resources** for the provision of work at a **minimum wage**.
यह कानून काम के अधिकार की आंशिक मान्यता है और न्यूनतम मज़दूरी पर काम उपलब्ध कराने के लिए राष्ट्रीय संसाधनों का अधिक हिस्सा सुनिश्चित करने की राज्य की ज़िम्मेदारी को स्वीकार करता है।
- The law guarantees a **minimum of 100 days of work** throughout the year to a **rural household** and is **universal, open to all adults** (men and women) who volunteer for **manual labour**.
यह कानून एक ग्रामीण परिवार को पूरे वर्ष में न्यूनतम 100 दिनों का काम सुनिश्चित करता है और सार्वभौमिक है, जो शारीरिक श्रम के लिए स्वेच्छा से आगे आने वाले सभी वयस्कों (पुरुष और महिला) के लिए खुला है।
- Most importantly, the law is based on **fulfilling the demand for work**, which is **not static** and can increase or decrease according to the **requirement of rural households**.
सबसे महत्वपूर्ण यह है कि यह कानून काम की माँग की पूर्ति पर आधारित है, जो स्थिर नहीं है और ग्रामीण परिवारों की आवश्यकता के अनुसार घट-बढ़ सकती है।
- There is a **deep democratic content** in this.
इसमें गहन लोकतांत्रिक तत्व निहित है।
- If a household has **better choices for employment**, it has the **right to exercise that choice** while retaining the **fallback** provided by **MGNREGA**.
यदि किसी परिवार के पास बेहतर रोज़गार विकल्प हैं, तो उसे उस विकल्प को चुनने का अधिकार है, जबकि मनरेगा द्वारा दिया गया सुरक्षा जाल बना रहता है।
- The law guarantees **equal wages for men and women**, with the entire **wage bill** to be paid by the **central government**.
यह कानून पुरुषों और महिलाओं के लिए समान मज़दूरी की गारंटी देता है और पूरी मज़दूरी राशि का भुगतान केंद्र सरकार द्वारा किया जाता है।
- The **State governments**, under the law, bear some **financial responsibility** of around **10%** and have a say in the **design of schemes** and their **implementation** in tune with the needs of the State.
कानून के तहत राज्य सरकारें लगभग 10% की वित्तीय ज़िम्मेदारी वहन करती हैं और योजनाओं की रूपरेखा तथा उनके कार्यान्वयन में राज्य की आवश्यकताओं के अनुरूप भूमिका निभाती हैं।
- **Panchayats** have both a **right and a responsibility** to identify and design projects required in the areas under their **jurisdiction**.
पंचायतों के पास अपने अधिकार क्षेत्र में आवश्यक परियोजनाओं की पहचान और डिज़ाइन करने का अधिकार और दायित्व दोनों हैं।
- This **demand-driven, universally applicable law** was probably the **first of its kind in the capitalist world**.
यह माँग-आधारित, सार्वभौमिक रूप से लागू कानून संभवतः पूँजीवादी विश्व में अपने प्रकार का पहला था।

An erasure of fundamental features

मौलिक विशेषताओं का उन्मूलन

- The **Narendra Modi government**, with its partners, the **Telugu Desam Party** and the **Janata Dal (United)** as drum beaters, scraps all these **fundamental features** in its draft Bill.
नरेंद्र मोदी सरकार, अपने सहयोगियों तेलुगु देशम पार्टी और जनता दल (यूनाइटेड) के साथ, अपने मसौदा विधेयक में इन सभी मौलिक विशेषताओं को समाप्त कर रही है।
- It will no longer be **demand driven**, but determined by **“normative financial allocations”** decided by the **central government**.
अब यह माँग-आधारित नहीं रहेगा, बल्कि केंद्र सरकार द्वारा तय किए गए “मानक वित्तीय आवंटनों” से निर्धारित होगा।
- The **Centre** will legally have **no obligation** now if expenditure exceeds this allocation.
यदि व्यय इस आवंटन से अधिक होता है तो अब केंद्र पर कानूनी बाध्यता नहीं होगी।
- The **States**, already in **financial crisis** because of the unjust denial of their share in **central tax revenues**, are being saddled with **40% of the cost**.
राज्य, जो पहले से ही केंद्रीय कर राजस्व में अपने हिस्से से वंचित किए जाने के कारण वित्तीय संकट में हैं, उन पर 40% लागत डाल दी गई है।



- The Bill is **highly centralised** and everything — from the **design of projects to digitalised audits** — will be controlled by the **central government**.
यह विधेयक अत्यधिक केंद्रीकृत है और परियोजनाओं की रूपरेखा से लेकर डिजिटल ऑडिट तक सब कुछ केंद्र सरकार के नियंत्रण में होगा।
- These features are a **direct assault** on the **federal character** of the **Constitution**.
ये विशेषताएँ संविधान के संघीय स्वरूप पर सीधा हमला हैं।
- The **class bias in favour of the rural rich** is blatantly displayed in the clause in the Bill which **prohibits any work** under the proposed law during the **peak agricultural season**.
ग्रामीण अमीरों के पक्ष में वर्गीय पक्षपात विधेयक की उस धारा में साफ दिखता है जो चरम कृषि मौसम के दौरान प्रस्तावित कानून के तहत किसी भी काम पर रोक लगाती है।
- **With increased mechanisation in agriculture, workdays have drastically reduced**.
कृषि में बढ़ती यंत्रीकरण के कारण काम के दिन काफी कम हो गए हैं।
- The work pattern of **MGNREGA** shows that it is only when **agricultural work is not available** and when **wages paid are below MGNREGA standards** that workers opt for **MGNREGA in the peak season**.
मनरेगा का कार्य-पैटर्न दिखाता है कि चरम मौसम में भी मज़दूर तभी मनरेगा चुनते हैं जब कृषि कार्य उपलब्ध नहीं होता और जब दी जाने वाली मज़दूरी मनरेगा मानकों से कम होती है।
- The **prohibition will reduce the bargaining capacity** of rural workers, who, in the absence of **MGNREGA**, will be forced to accept terms and conditions set by **big landowners**.
यह प्रतिबंध ग्रामीण मज़दूरों की मोलभाव क्षमता को घटा देगा, और मनरेगा के अभाव में वे बड़े ज़मींदारों द्वारा तय शर्तों को स्वीकार करने को मजबूर होंगे।
- **This will affect women who get lower wages than men in agriculture**.
इससे महिलाएँ प्रभावित होंगी जिन्हें कृषि में पुरुषों से कम मज़दूरी मिलती है।
- **The law legalises Aadhaar card linkage, online digitally recorded attendance as a condition for eligibility and wage payment**.
कानून आधार कार्ड लिंकिंग और ऑनलाइन डिजिटल उपस्थिति को पात्रता और मज़दूरी भुगतान की शर्त के रूप में कानूनी मान्यता देता है।
- This is despite **ample evidence** that such conditions including **poor connectivity** have **victimised workers**.
यह इस तथ्य के बावजूद है कि पर्याप्त साक्ष्य मौजूद हैं कि खराब कनेक्टिविटी सहित ऐसी शर्तों ने मज़दूरों को पीड़ित किया है।
- Using the acronym **G Ram G**, as the name of the law (**Viksit Bharat–G RAM G Bill 2025**), is a **low-level manoeuvre** to appeal to **believers**.
कानून का नाम **G Ram G** (विकसित भारत–G RAM G विधेयक 2025) रखना आस्थावानों को लुभाने की निम्न-स्तरीय चाल है।
- But when **crores of people** will shout '**G-Ram-G murdabad**' against the law, it may **hurt sentiments** and **backfire** on the **government**.
लेकिन जब करोड़ों लोग कानून के खिलाफ '**G-Ram-G मुर्दाबाद**' के नारे लगाएंगे, तो यह भावनाओं को आहत कर सकता है और सरकार पर उलटा पड़ सकता है।

A reflection of distress

संकट का प्रतिबिंब

- Those of us who have worked closely with **MGNREGA workers** know the **difficult conditions** in which people work.
हम में से जिन्होंने मनरेगा मज़दूरों के साथ निकटता से काम किया है, वे जानते हैं कि लोग कठिन परिस्थितियों में काम करते हैं।
- In some cases **women** have to lift up to **3,000 kilograms of mud a day** to fulfil the **productivity norm**.
कुछ मामलों में महिलाओं को उत्पादकता मानक पूरा करने के लिए प्रतिदिन **3,000 किलोग्राम मिट्टी** उठानी पड़ती है।
- Yet, if they make up **well over 50%** of **MGNREGA workers** in most **States**, it is surely a **reflection of deep agrarian distress** and the **lack of a better alternative**.
फिर भी यदि अधिकांश राज्यों में मनरेगा मज़दूरों में उनका हिस्सा **50% से कहीं अधिक** है, तो यह निश्चित रूप से गहरे कृषि संकट और बेहतर विकल्प की कमी का प्रतिबिंब है।



- **Adivasis constitute around 8.6% of the population.**
आदिवासी कुल जनसंख्या का लगभग 8.6% हैं।
- But among **MGNREGA workers**, according to **last year's figures**, they are as high as **18%** and **Scheduled Castes** make up **19%**.
लेकिन पिछले वर्ष के आँकड़ों के अनुसार मनरेगा मज़दूरों में उनका हिस्सा 18% तक है और अनुसूचित जातियाँ 19% हैं।
- Therefore, **over two-thirds** of workers belong to **social categories protected by the Constitution**.
अतः दो-तिहाई से अधिक मज़दूर संविधान द्वारा संरक्षित सामाजिक वर्गों से आते हैं।
- Any **reversal of their rights** is an **attack on the Constitution**.
उनके अधिकारों का कोई भी उलटफेर संविधान पर हमला है।
- But even their **representation** in the **redress/advisory councils** has been **eliminated** in the **draft law**.
लेकिन मसौदा कानून में निवारण/सलाहकार परिषदों में उनका प्रतिनिधित्व भी समाप्त कर दिया गया है।
- Since **2014**, the **Narendra Modi government** has **diluted** and **starved MGNREGA of funds** even as it has greatly increased **tax concessions and write-offs to corporates**.
2014 से नरेंद्र मोदी सरकार ने मनरेगा को कमज़ोर किया है और फंड से वंचित किया है, जबकि कॉर्पोरेट्स को कर रियायतें और राइट-ऑफ काफ़ी बढ़ाए गए हैं।
- While the number of workers increased from around **two crores** in the early days to over **7.7 crore workers** now, the **expenditures** have **stagnated or declined** — **never over 0.2% of GDP**.
जहाँ शुरुआती दिनों में मज़दूरों की संख्या लगभग दो करोड़ से बढ़कर अब 7.7 करोड़ से अधिक हो गई है, वहीं व्यय स्थिर या घटे हैं — GDP के 0.2% से कभी अधिक नहीं।
- In **2024–25**, **8.9 crore workers** demanded work but only **7.9 crore workers** got work — **99 lakh workers** were turned away.
2024–25 में 8.9 करोड़ मज़दूरों ने काम माँगा, लेकिन केवल 7.9 करोड़ को काम मिला — 99 लाख मज़दूरों को लौटा दिया गया।
- **Wage arrears** have mounted — **sometimes up to ₹8,000 crore**.
मज़दूरी बकाया बढ़ते गए हैं — कभी-कभी ₹8,000 करोड़ तक।
- On an **average**, households have got **less than 50 days of work** instead of **100 days**.
औसतन, परिवारों को 100 दिनों के बजाय 50 दिनों से भी कम काम मिला है।
- The face of promising **125 days** in the **proposed draft** rubs **salt into the wound**.
प्रस्तावित मसौदे में 125 दिनों का वादा करना घाव पर नमक छिड़कने जैसा है।
- But if people keep coming to **MGNREGA sites** it is because they have **no alternative** — such is the **desperation and instability** in the lives of **India's rural poor**.
लेकिन यदि लोग लगातार मनरेगा स्थलों पर आते रहते हैं तो इसका कारण कोई विकल्प न होना है — यही भारत के ग्रामीण गरीबों के जीवन की बेचैनी और अस्थिरता है।
- That **lifeline**, instead of being **strengthened**, is now being **cut**.
वह जीवनरेखा, जिसे मज़बूत किया जाना चाहिए था, अब काटी जा रही है।
- The **Directive Principles of the Constitution** are being **bulldozed**.
संविधान के नीति-निर्देशक तत्वों को रौंदा जा रहा है।
- **Shame on this government**.
इस सरकार पर शर्म।

GS Paper II: International Relations

TOPICS COVERED

19 December

- | | |
|----|--|
| 1. | India signs pact with Oman for duty-free exports; will also allow labour mobility
भारत ने ओमान के साथ शुल्क-मुक्त निर्यात के लिए समझौता किया; श्रम गतिशीलता को भी अनुमति |
|----|--|



2.

'India faces its greatest strategic challenge in Bangladesh since 1971'
'1971 के बाद बांग्लादेश में भारत को सबसे बड़ी रणनीतिक चुनौती'

India signs pact with Oman for duty-free exports; will also allow labour mobility

GS II: IR, West Asia



Economic cooperation: Prime Minister Narendra Modi and Sultan of Oman Haitham bin Tarik oversee the signing of the bilateral trade agreement in Muscat on Thursday. PMO

T.C.A. Sharad Raghavan
NEW DELHI

India and Oman signed a Comprehensive Economic Partnership Agreement (CEPA) on Thursday, under which Oman will provide India duty-free access to 98.08% of its tariff lines, covering 99.38% of India's exports to Oman.

India, on the other hand, has offered liberalised tariffs on 77.79% of its total tariff lines, covering 94.81% of what India imports from Oman. Apart from tariff removal on merchandise exports, the deal also includes several concessions that are expected to benefit India's service sector, including in terms of mobility of workers.

The deal was signed in Muscat by Commerce and Industry Minister Piyush Goyal and Oman's Minister of Commerce, Industry and Investment Promotion Qais bin Mohammed Al Yousef in the presence of Prime Minister Narendra Modi and Sultan Haitham bin Tarik.

'Renewed faith'

India exported merchandise worth \$4.06 billion to Oman in 2024-25, which made up 0.93% of India's total exports that financial year. It imported goods worth \$6.5 billion from

Oman, comprising 0.91% of India's total imports.

"The CEPA will infuse the India-Oman partnership in the 21st Century with renewed faith and energy," Mr. Modi said earlier in the day while speaking at the India-Oman Business Forum. "This is a blueprint for our future. It will give our trade new vigour and new trust for investments and will open the doors of new opportunities in every sector."

This is the first bilateral agreement that Oman has signed with any country since it signed a deal with the U.S. in 2006. It is also the second deal India has signed with a country in the Gulf Cooperation Council (GCC), the first being with the United Arab Emirates in February 2022.

Mr. Goyal had also pointed out that a trade deal with Oman also served as a gateway for India to the GCC region, eastern Europe, central Asia, and Africa.

Mr. Modi added that the CEPA would create new opportunities for growth, employment and innovation for the youth of both countries.

According to the government's press release, labour-intensive sectors such as gems and jewellery, textiles, leather, foot-

wear, sports goods, plastics, furniture, agricultural products, engineering products, pharmaceuticals, medical devices, and automobiles will receive full tariff elimination.

India has kept sensitive products such as agricultural goods, including dairy, tea, coffee, rubber, and tobacco products, gold and silver bullion, jewellery, and other labour-intensive products such as footwear, sports goods, and the scrap of many base metals out of the deal.

Mobility of workers

According to the release, a major highlight of the CEPA is the enhanced mobility framework for Indian professionals.

"For the first time, Oman has offered wide-ranging commitments under Mode 4, including a notable increase in the quota for Intra-Corporate Transferees from 20% to 50%, together with a longer permitted duration of stay for Contractual Service Suppliers – extended from the existing 90 days to two years, with the possibility of a further two-year extension," it said.

The agreement also provides for more liberal entry and stay conditions for skilled professionals in key sectors, the release added.

India signs pact with Oman for duty-free exports; will also allow labour mobility

भारत ने ओमान के साथ शुल्क-मुक्त निर्यात के लिए समझौता किया; श्रम गतिशीलता को भी अनुमति

• **India and Oman signed a Comprehensive Economic Partnership Agreement (CEPA)** on Thursday, under which Oman will provide India duty-free access to **98.08%** of its tariff lines, covering **99.38%** of India's exports to Oman.

भारत और ओमान ने गुरुवार को **व्यापक आर्थिक साझेदारी समझौते (CEPA)** पर हस्ताक्षर किए, जिसके तहत ओमान भारत को अपने **98.08%** टैरिफ लाइनों पर शुल्क-मुक्त पहुंच देगा, जो ओमान को भारत के **99.38%** निर्यात को कवर करता है।

• **India, on the other hand, has offered liberalised tariffs on 77.79%** of its total tariff lines, covering **94.81%** of what India imports from Oman.

• The deal was signed in Muscat by **Commerce and Industry Minister Piyush Goyal** and Oman's Minister of Commerce, Industry and Investment Promotion **Qais bin Mohammed Al Yousef** in the presence of **Prime Minister Narendra Modi** and **Sultan Haitham bin Tarik**.

• **India exported merchandise worth \$4.06 billion** to Oman in **2024-25**, which made up **0.93%** of India's total exports that financial year.

भारत ने **2024-25** में ओमान को **4.06 अरब डॉलर** का माल निर्यात किया, जो उस वित्तीय वर्ष में भारत के कुल निर्यात का **0.93%** था।

• **It imported goods worth \$6.5 billion** from Oman, comprising **0.91%** of India's total imports.

• "This is a blueprint for our future. **It will give our trade new vigour and new trust for investments and will open the doors of new opportunities in every sector.**"

"यह हमारे भविष्य की रूपरेखा है। यह हमारे व्यापार को नई गति और निवेश के लिए नया भरोसा देगा और हर क्षेत्र में नए अवसरों के द्वार खोलेगा।"

• **This is the first bilateral agreement that Oman has signed with any country since it signed a deal with the U.S. in 2006.**

यह पहला द्विपक्षीय समझौता है जो ओमान ने **2006** में **अमेरिका** के साथ समझौते के बाद किसी भी देश के साथ किया है।



- It is also the **second deal** India has signed with a country in the **Gulf Cooperation Council (GCC)**, the first being with the **United Arab Emirates** in **February 2022**.
यह **खाड़ी सहयोग परिषद (GCC)** के किसी देश के साथ भारत द्वारा किया गया दूसरा समझौता भी है, पहला **संयुक्त अरब अमीरात** के साथ **फरवरी 2022** में हुआ था।
- Mr. Goyal had also pointed out that a trade deal with **Oman** also served as a gateway for **India to the GCC region, eastern Europe, central Asia, and Africa**.
श्री गोयल ने यह भी कहा कि ओमान के साथ व्यापार समझौता भारत के लिए **GCC क्षेत्र, पूर्वी यूरोप, मध्य एशिया और अफ्रीका** के लिए एक प्रवेश द्वार के रूप में भी काम करता है।
- Mr. Modi added that the **CEPA would create new opportunities for growth, employment and innovation for the youth of both countries**.
श्री मोदी ने कहा कि **CEPA** दोनों देशों के युवाओं के लिए **विकास, रोजगार और नवाचार** के नए अवसर पैदा करेगा।
- According to the government's press release, **labour-intensive sectors such as gems and jewellery, textiles, leather, footwear, sports goods, plastics, furniture, agricultural products, engineering products, pharmaceuticals, medical devices, and automobiles will receive full tariff elimination**.
सरकार की प्रेस विज्ञप्ति के अनुसार, **श्रम-प्रधान क्षेत्र** जैसे रत्न और आभूषण, वस्त्र, चमड़ा, जूते, खेल सामग्री, प्लास्टिक, फर्नीचर, कृषि उत्पाद, इंजीनियरिंग उत्पाद, फार्मास्यूटिकल्स, चिकित्सा उपकरण और ऑटोमोबाइल को पूर्ण शुल्क समाप्ति मिलेगी।
- **India has kept sensitive products such as agricultural goods, including dairy, tea, coffee, rubber, and tobacco products, gold and silver bullion, jewellery, and other labour-intensive products such as footwear, sports goods, and the scrap of many base metals out of the deal**.
भारत ने **कृषि उत्पाद**, जिनमें **डेयरी, चाय, कॉफी, रबर और तंबाकू उत्पाद, सोना और चांदी की बुलियन, आभूषण**, तथा अन्य श्रम-प्रधान उत्पाद जैसे **जूते, खेल सामग्री, और कई आधार धातुओं के स्कैप** को इस समझौते से बाहर रखा है।

Mobility of workers श्रमिकों की गतिशीलता

- According to the release, a **major highlight of the CEPA is the enhanced mobility framework for Indian professionals**.
विज्ञप्ति के अनुसार, **CEPA** की एक प्रमुख विशेषता **भारतीय पेशेवरों** के लिए उन्नत गतिशीलता ढांचा है।
- "For the first time, **Oman has offered wide-ranging commitments under Mode 4, including a notable increase in the quota for Intra-Corporate Transferees from 20% to 50%, together with a longer permitted duration of stay for Contractual Service Suppliers — extended from the existing 90 days to two years, with the possibility of a further two-year extension,**" it said.
- The **agreement also provides for more liberal entry and stay conditions for skilled professionals in key sectors**, the release added.



'India faces its greatest strategic challenge in Bangladesh since 1971'

GS II: IR: West Asia

Kallol Bhattacharjee

NEW DELHI

The developments in Bangladesh pose the "greatest strategic challenge" to India since the Liberation War of 1971, a parliamentary panel has said in its report. The report of the Parliamentary Standing Committee on External Affairs, chaired by Lok Sabha MP Shashi Tharoor, has covered the turbulent India-Bangladesh relation of the past two years and said that Bangladesh is witnessing a "shift" and that New Delhi could end up losing the "strategic space" in Dhaka without necessary recalibration.

"India faces its greatest strategic challenge in Bangladesh since the Liberation War of 1971. The challenge in 1971 was existential, a humanitarian crisis, and the birth of a new nation. Today, the threat is subtler but proba-



Bangladeshi Police try to stop protesters marching to the Assistant Indian High Commissioner's office in Rajshahi on Thursday. AFP

bly graver, more serious; a generational discontinuity, a shift of political order, and a potential strategic realignment away from India," the report said, quoting an expert who deposed before the panel on June 27, 2025.

"The collapse of the Awami League dominance, the surge of youth-led nationalism, the re-entry of Islamists, and intensifying Chinese and Pakistani influence marked a turning

point," said the report, adding, "If India fails to recalibrate at this moment, it risks losing strategic space in Dhaka not to war, but to irrelevance."

Giving a detailed account of interactions held between the Committee and officials of the Ministry of External Affairs since the fall of the Sheikh Hasina government on August 5, 2024, the report said India has taken the right decision in providing shelter

to ousted Prime Minister Hasina but pointed out that New Delhi needs to ensure that Ms. Hasina does not carry out political activities aimed at her country from Indian soil.

Giving refuge to Ms. Hasina has been a major issue between India and Bangladesh since the fall of the Awami League government, and the matter has come up repeatedly since Ms. Hasina was given a death sentence last month, and the authorities in Bangladesh have been accusing Ms. Hasina and her colleagues of fomenting trouble in various parts of the country.

Foreign Secretary Vikram Misri told the panel Ms. Hasina is issuing statements using "personal communication devices she has access to" and India "does not provide her with a political platform to undertake political activity from Indian territory".

'India faces its greatest strategic challenge in Bangladesh since 1971'

'1971 के बाद बांग्लादेश में भारत को सबसे बड़ी रणनीतिक चुनौती'

- "India faces its greatest strategic challenge in Bangladesh since the Liberation War of 1971. The challenge in 1971 was existential, a humanitarian crisis, and the birth of a new nation. Today, the threat is subtler but probably graver, more serious; a generational discontinuity, a shift of political order, and a potential strategic realignment away from India," the report said, quoting an expert who deposed before the panel on June 27, 2025.
- "The collapse of the Awami League dominance, the surge of youth-led nationalism, the re-entry of Islamists, and intensifying Chinese and Pakistani influence marked a turning point," said the report, adding, "If India fails to recalibrate at this moment, it risks losing strategic space in Dhaka not to war, but to irrelevance."
- Giving a detailed account of interactions held between the **Committee** and officials of the **Ministry of External Affairs** since the fall of the **Sheikh Hasina government** on **August 5, 2024**, the report said India has taken the right decision in providing shelter to ousted **Prime Minister Hasina** but pointed out that **New Delhi** needs to ensure that **Ms. Hasina** does not carry out political activities aimed at her country from **Indian soil**.
- Giving refuge to **Ms. Hasina** has been a major issue between **India and Bangladesh** since the fall of the **Awami League government**, and the matter has come up repeatedly since **Ms.**



Hasina was given a **death sentence last month**, and the authorities in **Bangladesh** have been accusing **Ms. Hasina** and her colleagues of fomenting trouble in various parts of the country.

- **Foreign Secretary Vikram Misri** told the panel **Ms. Hasina** is issuing statements using “personal communication devices she has access to” and India “does not provide her with a political platform to undertake political activity from Indian territory”.

Trade deal under fire



Police walk past a fire following a farmers' protest in Brussels against the **European Union-Mercosur trade deal** on Thursday. The farmers fear that the deal will pave the way for cheap South American goods to flood Europe, thus destroying their livelihoods. REUTERS

Police walk past a fire following a farmers' protest in Brussels against the European Union-Mercosur trade deal on Thursday. The farmers fear that the deal will pave the way for cheap South American goods to flood Europe, thus destroying their livelihoods.

GS Paper III: Economy,	
TOPICS COVERED	19 12 2025
1.	Temporary relief अस्थायी राहत
	FinMin unveils new logo for Regional Rural Banks वित्त मंत्रालय ने क्षेत्रीय ग्रामीण बैंकों के लिए नया लोगो जारी किया
	FM tables Securities Market Code Bill 2025 in Lok Sabha FM लोकसभा में सिक्योरिटीज़ मार्केट कोड बिल 2025 पेश करती हैं



GS III: Economy

Temporary relief

The depreciation of the rupee is helping bring down trade deficit

India's remarkable merchandise trade performance in November should come as some relief for the government, but should not be the basis for any complacency. India's merchandise exports, hit by the stiff headwind of 50% tariffs by the United States, the biggest export destination, unexpectedly grew 19.4% to \$38.1 billion in November 2025. This is the highest it has been in any November in the last 10 years. Also, India's exports to the U.S. grew 22.6% to \$6.98 billion in November 2025 as compared to November 2024. This was also 10.7% higher than in October 2024. This is all certainly welcome news, but it hides an element of deeper distress that will make itself apparent in the months ahead. While exports to the U.S. recovered in November, exporters say that this is because they are absorbing the hit of the higher tariffs, hoping that they will be short-lived. The other option, of losing customers and trying to win them back later after moderation of tariffs, is seen to be harder, at least for now. However, it might soon be the only option. Indian exporters to the U.S., a large chunk of which are micro, small, and medium enterprises in labour-intensive sectors, cannot continue absorbing the tariff impact for too long. The depreciating rupee is helping offset some of the impact, but India's tariff differential with competing countries is too big to overcome. It also takes some time for supply chains to re-route. Reports are already coming in that exporters are seeing a significant drop in orders for January.

The trade deficit also shrank because India's merchandise imports fell 1.9% to \$62.7 billion in November 2025. Reducing imports is a tricky topic for India. While it is preferable to reduce import dependence in the medium term, India's domestic capabilities are not yet robust enough to shoulder the load. Falling merchandise imports, therefore, suggest slackening demand. Coming so soon after the Goods and Services Tax rate reductions, this should be monitored carefully by the government. The broad outlines of the government's Export Promotion Mission show that the government is thinking about how to alleviate the financial stress being faced by exporters. However, the detailed schemes have not been notified yet. These must be expedited. The government could also perhaps adapt some of its more successful COVID-era relief measures as well. For example, a credit guarantee scheme for exporters will do them more good than the planned moratorium on loan repayments will. Of course, these troubles will go away once the tariffs issue is resolved, which the government is saying will happen "very soon". But the decision on this lies with the mercurial U.S. President Donald Trump. As such, the most prudent way forward is to hope for the best but continue preparing for the worst.

- For example, a **credit guarantee scheme** for exporters will do them more good than the planned **moratorium on loan repayments** will.

Temporary relief अस्थायी राहत

• The **depreciation of the rupee** is helping bring down **trade deficit**

रुपये का अवमूल्यन व्यापार घाटे को कम करने में मदद कर रहा है

India's remarkable merchandise trade performance in November

नवंबर में भारत का उल्लेखनीय वस्तु व्यापार प्रदर्शन

• India's remarkable **merchandise trade performance in November** should come as some **relief** for the **government**, but should not be the basis for any **complacency**.

नवंबर में भारत का उल्लेखनीय **वस्तु व्यापार प्रदर्शन सरकार** के लिए कुछ **राहत** लेकर आ सकता है, लेकिन इसे किसी भी प्रकार की **आत्मसंतुष्टि** का आधार नहीं बनाना चाहिए।

• India's **merchandise exports, hit by the stiff headwind of 50% tariffs by the United States, the biggest export destination, unexpectedly grew 19.4% to \$38.1 billion in November 2025.**

भारत के **वस्तु निर्यात**, जो सबसे बड़े निर्यात गंतव्य **संयुक्त राज्य अमेरिका** द्वारा लगाए गए **50% टैरिफ** के कड़े दबाव से प्रभावित थे, **नवंबर 2025** में अप्रत्याशित रूप से **19.4%** बढ़कर **38.1 अरब डॉलर** हो गए।

• This is the **highest** it has been in any **November** in the last **10 years**.

यह पिछले **10 वर्षों** में किसी भी **नवंबर** का **सबसे उच्च** स्तर है।

• Also, India's exports to the **U.S. grew 22.6% to \$6.98 billion in November 2025** as compared to **November 2024**.

• **Indian exporters to the U.S., a large chunk of which are micro, small, and medium enterprises in labour-intensive sectors, cannot continue absorbing the tariff impact for too long.**

अमेरिका को निर्यात करने वाले भारतीय निर्यातक, जिनमें से एक बड़ा हिस्सा **श्रम-प्रधान क्षेत्रों** में **सूक्ष्म, लघु और मध्यम उद्यमों** का है, टैरिफ के प्रभाव को **लंबे समय** तक सहन नहीं कर सकते।

• The **depreciating rupee** is helping offset some of the **impact, but India's tariff differential with competing countries is too big to overcome**.

कमज़ोर होता रुपया कुछ प्रभाव को संतुलित करने में मदद कर रहा है, लेकिन प्रतिस्पर्धी देशों के साथ भारत का **टैरिफ अंतर** इतना **बड़ा** है कि उसे पार करना कठिन है।

• It also takes some time for **supply chains to reroute**.

आपूर्ति श्रृंखलाओं को **पुनः मार्गित** होने में भी समय लगता है।

• Reports are already coming in that exporters are seeing a **significant drop in orders for January**.

पहले से ही ऐसी रिपोर्टें आ रही हैं कि निर्यातकों को **जनवरी** के लिए **ऑर्डरों में भारी गिरावट** दिखाई दे रही है।

• The **trade deficit** also shrank because India's **merchandise imports fell 1.9% to \$62.7 billion in November 2025**.



GS III: Economy: Banking

FinMin unveils new logo for Regional Rural Banks

The Finance Ministry on Thursday unveiled a new logo for Regional Rural Banks (RRBs) to signify a single and unified brand identity. On the principle of 'One State One RRB', the Department of Financial Services, Ministry of Finance, has consolidated 26 Regional Rural Banks (RRBs) across 11 States/Union Territories, effective from May 1, 2025. The reform marks a crucial step toward building stronger and more efficient RRBs. PTI

मई, 2025 से प्रभावी है।

- The reform marks a **crucial step** toward building **stronger and more efficient RRBs**. यह सुधार अधिक मजबूत और अधिक कुशल आरआरबी के निर्माण की दिशा में एक महत्वपूर्ण कदम है।

FinMin unveils new logo for Regional Rural Banks

वित्त मंत्रालय ने क्षेत्रीय ग्रामीण बैंकों के लिए नया लोगो जारी किया

- FinMin unveils a new logo for **Regional Rural Banks (RRBs)** to signify a **single and unified brand identity**.

वित्त मंत्रालय ने **क्षेत्रीय ग्रामीण बैंकों (आरआरबी)** के लिए एकल और एकीकृत ब्रांड पहचान को दर्शाने के लिए नया लोगो जारी किया।

- The **Finance Ministry** on **Thursday** unveiled a new logo for **Regional Rural Banks (RRBs)** to signify a **single and unified brand identity**.

वित्त मंत्रालय ने गुरुवार को **क्षेत्रीय ग्रामीण बैंकों (आरआरबी)** के लिए एकल और एकीकृत ब्रांड पहचान को दर्शाने हेतु नया लोगो जारी किया।

- On the principle of '**One State One RRB**', the **Department of Financial Services, Ministry of Finance**, has consolidated **26 Regional Rural Banks (RRBs)** across **11 States/Union Territories**, effective from **May 1, 2025**.

'**एक राज्य एक आरआरबी**' के सिद्धांत पर, वित्त मंत्रालय के वित्तीय सेवा विभाग ने 11 राज्यों/केंद्र शासित प्रदेशों में 26 क्षेत्रीय ग्रामीण बैंकों (आरआरबी) का विलय किया है, जो 1



FM tables Securities Market Code Bill 2025 in Lok Sabha

GS III: Economy

The Bill, which seeks to unify three laws governing the securities market, has been referred to the Standing Committee on Finance for review

Ashokamithran T.
MUMBAI

Finance Minister Nirmala Sitharaman on Thursday tabled the Securities Market Code Bill 2025 in the Lok Sabha.

The Bill, which seeks to unify three laws governing securities market, was referred to the Standing Committee on Finance for review.

The Bill proposes to consolidate the Securities Contracts (Regulation) Act, 1956, Securities and Exchange Board of India (SEBI) Act, 1992, and the Depositories Act, 1996.

The move was announced in the Union Budget in 2021-22 and the Bill has now been tabled to rationalise and consolidate the existing provisions, and provides a modern regulatory framework for investor protection and capital mobilisation at scale, according to the statement of objectives in the Bill.

As per the Bill, the government proposes to increase the number of members in SEBI to 15 from the current nine, including the Chairperson.

This will include the Chairperson, two officers appointed by the Central Government and one from the RBI as ex-officio members, and 11 others, of whom at least five will be



Union Finance Minister Nirmala Sitharaman speaks in Lok Sabha during the Winter session of Parliament on Thursday. PTI

whole-time members. Currently there are three whole-time members.

In another significant change, Union Government also proposed to criminalise violations of "minor, procedural and technical nature" into civil penalties to "facilitate the ease of doing business and to reduce the compliance burden."

Civil penalties

The Bill, if enacted in its current form, would bring "unlawful gains or losses" under civil penalties and limit punishments only to cases of market abuse such as insider trading or trading while in possession of material or non-public information. Further, in the case of contravention of any rules or provisions of the code, no inspection can be done if eight years had passed from the date of contravention. The Bill

also mandates that the members of the board disclose any direct or indirect interests before making a decision to eliminate conflict of interest.

"These changes appear to be made in keeping with extant requirements balancing faster adjudication processes with the need for better deterrence," said Paras Parekh, Partner at CMS INDUSLAW.

Even as the Bill was being introduced, DMK MP Arun Nehru and Congress' Manish Tewari opposed it saying it gave excessive powers to a single body, which was against the principle of the separation of powers.

Responding to this, Ms. Sitharaman said that since the government was referring it to the standing committee, such details could be discussed by the panel.

(With inputs from Sreeparna Chakrabarty)

rationalise and consolidate the existing provisions, and provides a modern regulatory framework for **investor protection** and **capital mobilisation** at scale, according to the statement of objectives in the Bill.

- इस कदम की घोषणा **केंद्र सरकार के बजट 2021-22** में की गई थी और अब यह बिल मौजूदा प्रावधानों को समेकित करने और तार्किक बनाने के लिए पेश किया गया है, और यह **निवेशक सुरक्षा** और **पूंजी जुटाने** के लिए एक आधुनिक नियामक ढांचा प्रदान करता है, जैसा कि बिल के उद्देश्य के बयान में उल्लेख है।

FM tables Securities Market Code Bill 2025 in Lok Sabha
FM लोकसभा में सिक्योरिटीज़ मार्केट कोड बिल 2025 पेश करती हैं

- The Bill, which seeks to unify three laws governing the securities market, has been referred to the **Standing Committee on Finance** for review.

- यह बिल, जो **सिक्योरिटीज़ मार्केट** को नियंत्रित करने वाले तीन कानूनों को एकीकृत करने का प्रयास करता है, की समीक्षा के लिए **वित्त स्थायी समिति** को भेजा गया है।

- Finance Minister **Nirmala Sitharaman** on Thursday tabled the **Securities Market Code Bill 2025** in the Lok Sabha.

- वित्त मंत्री **Nirmala सीतारमण** ने गुरुवार को **लोकसभा में सिक्योरिटीज़ मार्केट कोड बिल 2025** पेश किया।

- The Bill, which seeks to unify three laws governing the securities market, was referred to the **Standing Committee on Finance** for review.

- यह बिल, जो **सिक्योरिटीज़ मार्केट** को नियंत्रित करने वाले तीन कानूनों को एकीकृत करने का प्रयास करता है, की समीक्षा के लिए **वित्त स्थायी समिति** को भेजा गया।

- The Bill proposes to consolidate the **Securities Contracts (Regulation) Act, 1956, Securities and Exchange Board of India (SEBI) Act, 1992, and the Depositories Act, 1996.**

- यह बिल **सिक्योरिटीज़ कॉन्ट्रैक्ट्स (रेगुलेशन) एक्ट, 1956, सिक्योरिटीज़ एंड एक्सचेंज बोर्ड ऑफ इंडिया (SEBI) एक्ट, 1992, और डिपॉजिटरीज एक्ट, 1996** को समेकित करने का प्रस्ताव करता है।

- The move was announced in the **Union Budget 2021-22** and the Bill has now been tabled to



- As per the Bill, the government proposes to increase the number of members in **SEBI** to **15** from the current nine, including the **Chairperson**.
- बिल के अनुसार, सरकार **SEBI** में सदस्यों की संख्या को वर्तमान **नौ** से बढ़ाकर **15** करने का प्रस्ताव करती है, जिसमें **अध्यक्ष** शामिल हैं।
- This will include the **Chairperson**, two officers appointed by the **Central Government** and one from the **RBI** as ex-officio members, and 11 others, of whom at least five will be **whole-time members**.
- इसमें **अध्यक्ष**, **केंद्रीय सरकार** द्वारा नियुक्त दो अधिकारी और **RBI** से एक कार्यकारी सदस्य के रूप में शामिल होंगे, और 11 अन्य सदस्य होंगे, जिनमें से कम से कम पांच **पूर्णकालिक सदस्य** होंगे।
- Currently there are **three full-time members**.

वर्तमान में **तीन पूर्णकालिक सदस्य** हैं।

- In another significant change, **the Union Government** also proposed to **decriminalise violations** of “minor, procedural and technical nature” into **civil penalties** to “facilitate the ease of doing business and to reduce the compliance burden.”
- एक अन्य महत्वपूर्ण बदलाव में, **केंद्र सरकार** ने “छोटे, प्रक्रियात्मक और तकनीकी प्रकृति” के उल्लंघनों को **अपराधिक अपराध** से हटाकर **नागरिक दंड** में बदलने का प्रस्ताव किया, ताकि “व्यवसाय करने में आसानी और अनुपालन भार को कम किया जा सके।”

Civil penalties नागरिक दंड

- The Bill, if enacted in its current form, would bring “**unlawful gains or losses**” under civil penalties and limit punishments only to cases of **market abuse** such as **insider trading** or trading while in possession of **material or non-public information**.
- यदि यह बिल वर्तमान रूप में पारित होता है, तो यह “**अवैध लाभ या हानि**” को नागरिक दंड के अंतर्गत लाएगा और केवल **बाजार दुरुपयोग** के मामलों तक दंड को सीमित करेगा जैसे कि **इनसाइडर ट्रेडिंग** या **सामग्री या गैर-सार्वजनिक जानकारी** के अधिग्रहण के समय ट्रेडिंग।
- Further, in the case of contravention of any rules or provisions of the code, **no inspection** can be done if **eight years** had passed from the date of contravention.
- इसके अलावा, किसी भी नियम या प्रावधान के उल्लंघन के मामले में, यदि उल्लंघन की तारीख से **आठ साल** बीत चुके हों, तो **कोई निरीक्षण** नहीं किया जा सकता।
- The Bill also mandates that the members of the board **disclose any direct or indirect interests** before making a decision to eliminate **conflict of interest**.
- बिल यह भी अनिवार्य करता है कि बोर्ड के सदस्य निर्णय लेने से पहले किसी भी **प्रत्यक्ष या अप्रत्यक्ष हितों का खुलासा** करें ताकि **हितों के टकराव** को समाप्त किया जा सके।
- “These changes appear to be made in keeping with extant requirements balancing faster adjudication processes with the need for better deterrence,” said **Paras Parekh, Partner at CMS INDUSLAW**.
- “ये बदलाव मौजूदा आवश्यकताओं के अनुरूप प्रतीत होते हैं, जो तेज़ निर्णय प्रक्रिया और बेहतर निवारक उपायों की आवश्यकता के बीच संतुलन बनाते हैं,” कहा **Paras Parekh, पार्टनर, CMS INDUSLAW** ने।
- Even as the Bill was being introduced, **DMK MP Arun Nehru** and **Congress’ Manish Tewari** opposed it saying it gave excessive powers to a single body, which was against the principle of the **separation of powers**.
- बिल पेश किए जाने के दौरान ही, **DMK सांसद अरुण नेहरू** और **कांग्रेस के मनीष तिवारी** ने इसका विरोध किया, कहा कि यह एकल निकाय को अत्यधिक शक्ति देता है, जो **सत्ता के पृथक्करण** के सिद्धांत के खिलाफ है।
- Responding to this, **Ms. Sitharaman** said that since the government was referring it to the **standing committee**, such details could be discussed by the panel.



- इसका जवाब देते हुए, सुश्री सीतारमण ने कहा कि चूंकि सरकार इसे स्थायी समिति को भेज रही है, ऐसे विवरणों पर समिति द्वारा चर्चा की जा सकती है।

GS Paper III: S&T,	
TOPICS COVERED	19 12 2025
1.	Rajya Sabha passes Bill to allow private firms in nuclear sector राज्यसभा ने परमाणु क्षेत्र में निजी कंपनियों को अनुमति देने वाला विधेयक पारित किया
2.	'900 million people will have diabetes by 2050, strong steps needed to slow progression' '2050 तक 900 मिलियन लोगों को मधुमेह होगा, प्रगति को धीमा करने के लिए कड़े कदम ज़रूरी'
3.	A bold step amid an ambitious nuclear energy target महत्वाकांक्षी परमाणु ऊर्जा लक्ष्य के बीच एक साहसिक कदम
4.	Is the Artificial Intelligence boom a bubble? क्या कृत्रिम बुद्धिमत्ता का उछाल एक बुलबुला है?
5.	Inside the DHRUV64 microprocessor DHRUV 64 माइक्रोप्रोसेसर के भीतर
6.	How China built 'Manhattan Project' to rival the West in AI chips चीन ने पश्चिम को चुनौती देने के लिए एआई चिप्स में 'मैनहट्टन प्रोजेक्ट' कैसे बनाया

Rajya Sabha passes Bill to allow private firms in nuclear sector

Amendments to SHANTI Bill and proposal to send it to a panel, moved by Opposition MPs, defeated in a voice vote; Jairam Ramesh warns against relaxation of any liability norms while Jitendra Singh says there will be no compromise with safety

GS III: S&T

The Hindu Bureau
NEW DELHI

With the Rajya Sabha also clearing the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill on Thursday, the Union government said the Bill seeks to reduce the dependence on fossil fuels and increase the capacity of India's atomic energy sector. Senior Congress MP Jairam Ramesh, who initiated a debate, claimed that the Bill was brought with the intention of increasing the contribution of private companies in the nuclear sector. Mr. Ramesh warned the Centre against any relaxation in liability norms and cited the example of France, where all nuclear reactors are under government control.

The amendments to the Bill and the proposal to send the Bill to a Select Committee, moved by Opposition MPs, were defeated in a voice vote.



Big change: Union Minister Jitendra Singh speaking in the Rajya Sabha during the Winter Session of Parliament on Thursday. ANI

Countering the Opposition charges, Minister of State for Department of Atomic Energy Jitendra Singh said that nuclear power is a reliable source of energy, unlike other renewable energy options. He said there will be no compromise with safety. Mr. Singh said there has been no report of any radiation-related hazards to the public from any Indian reactors.

Mr. Ramesh said, "The Narendra Modi government has the habit of ig-

noring the milestones achieved by past governments." He said the BJP opposed the nuclear deal between India and America in 2008. "The BJP had then said that there is not much future in nuclear energy. It is because of the nuclear deal that happened in 2008 that now the BJP can think of such a Bill," he said.

"Our country has the capacity - we have installed plants of 220 megawatts and 540 megawatts. Utilise that capacity. Similarly, the

government had brought farm laws to benefit the private sector, which had to be withdrawn. This Bill should not be vendor-driven. We are self-reliant in the matter of nuclear power. So, promote indigenous technology," Mr. Ramesh said. He said the private sector will bring capital, not technology.

'Will shape sector'

Harsh Vardhan Shringla, MP, said the country stands at a decisive juncture in its energy journey and the SHANTI Bill will shape the civil nuclear sector for generations, ending fragmented governance and creating an investment-ready framework. "This is not privatisation; this is partnership with accountability," he said.

Trinamool Congress MP Sagarika Ghose said the Bill is fundamentally dangerous. "This Bill brings neither Shanti nor security... we are not debating whether India should pursue nuclear energy, India has always pursued nuclear

energy responsibly for decades..." she said.

DMK MP P. Wilson said the Bill was a "nuclear bomb which threatens the country's peace and security". "There is nothing peaceful, nothing sustainable, nothing transformative about this legislation. On the contrary, it is a reckless, dangerous and deeply flawed attempt to privatise one of the most sensitive and high-risk sectors of a nation - the nuclear energy sector," he said.

Unions oppose Bill

The legislation will dismantle India's carefully built nuclear safety and accountability framework and opens the most hazardous energy sector to large-scale private and foreign participation, the National Coordination Committee of Electricity Employees and Engineers, the platform of 10 central trade unions and the Samyukt Kisan Morcha (SKM) said in a joint statement. It says it would oppose the "draconian" Bill.



Rajya Sabha passes Bill to allow private firms in nuclear sector

राज्यसभा ने परमाणु क्षेत्र में निजी कंपनियों को अनुमति देने वाला विधेयक पारित किया

- Amendments to **SHANTI Bill** and proposal to send it to a panel, moved by **Opposition MPs**, defeated in a **voice vote**; **Jairam Ramesh** warns against relaxation of any **liability norms** while **Jitendra Singh** says there will be no compromise with **safety**.
शांति विधेयक में संशोधन और इसे एक समिति को भेजने का प्रस्ताव, जिसे विपक्षी सांसदों ने रखा था, ध्वनि मत से खारिज कर दिया गया; जयराम रमेश ने किसी भी दायित्व मानदंड में ढील के खिलाफ चेतावनी दी, जबकि जितेंद्र सिंह ने कहा कि सुरक्षा से कोई समझौता नहीं होगा।
- With the **Rajya Sabha** also clearing the **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill** on **Thursday**, the **Union government** said the Bill seeks to reduce the dependence on **fossil fuels** and increase the capacity of **India's atomic energy sector**.
गुरुवार को राज्यसभा द्वारा भारत को रूपांतरित करने के लिए परमाणु ऊर्जा के सतत उपयोग और उन्नति (SHANTI) विधेयक को पारित किए जाने के साथ, केंद्र सरकार ने कहा कि यह विधेयक जीवाश्म ईंधन पर निर्भरता कम करने और भारत के परमाणु ऊर्जा क्षेत्र की क्षमता बढ़ाने का प्रयास करता है।
- Senior **Congress MP Jairam Ramesh**, who initiated a debate, claimed that the Bill was brought with the intention of increasing the contribution of **private companies** in the **nuclear sector**.
बहस की शुरुआत करने वाले वरिष्ठ कांग्रेस सांसद जयराम रमेश ने दावा किया कि यह विधेयक परमाणु क्षेत्र में निजी कंपनियों की भागीदारी बढ़ाने के उद्देश्य से लाया गया है।
- Mr. Ramesh warned the **Centre** against any relaxation in **liability norms** and cited the example of **France**, where all nuclear reactors are under **government control**.
श्री रमेश ने केंद्र को दायित्व मानदंडों में किसी भी प्रकार की ढील के खिलाफ चेतावनी दी और फ्रांस का उदाहरण दिया, जहां सभी परमाणु रिएक्टर सरकारी नियंत्रण में हैं।
- The amendments to the Bill and the proposal to send the Bill to a **Select Committee**, moved by **Opposition MPs**, were defeated in a **voice vote**.
विपक्षी सांसदों द्वारा लाए गए विधेयक में संशोधन और इसे चयन समिति को भेजने के प्रस्ताव को ध्वनि मत से खारिज कर दिया गया।
- Countering the **Opposition** charges, **Minister of State for Department of Atomic Energy Jitendra Singh** said that **nuclear power** is a reliable source of energy, unlike other **renewable energy** options.
विपक्ष के आरोपों का जवाब देते हुए परमाणु ऊर्जा विभाग के राज्य मंत्री जितेंद्र सिंह ने कहा कि परमाणु ऊर्जा अन्य नवीकरणीय ऊर्जा विकल्पों के विपरीत, ऊर्जा का एक विश्वसनीय स्रोत है।
- He said there will be no compromise with **safety**.
उन्होंने कहा कि सुरक्षा से कोई समझौता नहीं किया जाएगा।
- Mr. Singh said there has been no report of any **radiation-related hazards** to the public from any **Indian reactors**.
श्री सिंह ने कहा कि किसी भी भारतीय रिएक्टर से जनता को किसी प्रकार के विकिरण से जुड़े खतरे की कोई रिपोर्ट नहीं आई है।
- Mr. Ramesh said, "The **Narendra Modi government** has the habit of ignoring the milestones achieved by **past governments**."
श्री रमेश ने कहा, "नरेंद्र मोदी सरकार को पूर्ववर्ती सरकारों द्वारा हासिल की गई उपलब्धियों की अनदेखी करने की आदत है।"
- He said the **BJP** opposed the **nuclear deal** between **India and America** in **2008**.
उन्होंने कहा कि बीजेपी ने 2008 में भारत और अमेरिका के बीच हुए परमाणु समझौते का विरोध किया था।
- "The **BJP** had then said that there is not much future in **nuclear energy**. It is because of the nuclear deal that happened in **2008** that now the **BJP** can think of such a Bill," he said.
उन्होंने कहा, "तब बीजेपी ने कहा था कि परमाणु ऊर्जा का अधिक भविष्य नहीं है। 2008 में हुए परमाणु समझौते की वजह से ही आज बीजेपी ऐसे विधेयक के बारे में सोच सकती है।"
- "Our country has the capacity — we have installed plants of **220 megawatts** and **540 megawatts**. Utilise that capacity."
"हमारे देश के पास क्षमता है — हमने 220 मेगावाट और 540 मेगावाट के संयंत्र लगाए हैं। उस क्षमता का उपयोग करें।"



- “Similarly, the government had brought **farm laws** to benefit the **private sector**, which had to be withdrawn.”
“इसी तरह, सरकार **निजी क्षेत्र** को लाभ पहुंचाने के लिए **कृषि कानून** लाई थी, जिन्हें वापस लेना पड़ा।”
- “This Bill should not be **vendor-driven**. We are **self-reliant** in the matter of **nuclear power**. So, promote **indigenous technology**,” Mr. Ramesh said.
श्री रमेश ने कहा, “यह विधेयक **वेंडर-प्रेरित** नहीं होना चाहिए। **परमाणु ऊर्जा** के मामले में हम **आत्मनिर्भर** हैं। इसलिए **स्वदेशी तकनीक** को बढ़ावा दें।”
- He said the **private sector** will bring **capital**, not **technology**.
उन्होंने कहा कि **निजी क्षेत्र पूंजी** लाएगा, **तकनीक** नहीं।

‘Will shape sector’ ‘क्षेत्र को आकार देगा’

- **Harsh Vardhan Shringla**, MP, said the country stands at a decisive juncture in its **energy journey** and the **SHANTI Bill** will shape the **civil nuclear sector** for generations, ending fragmented governance and creating an **investment-ready framework**.
सांसद **हर्षवर्धन श्रंगला** ने कहा कि देश अपनी **ऊर्जा यात्रा** के एक निर्णायक मोड़ पर खड़ा है और **SHANTI विधेयक** आने वाली पीढ़ियों के लिए **नागरिक परमाणु क्षेत्र** को आकार देगा, बिखरे हुए शासन को समाप्त करेगा और एक **निवेश-तैयार ढांचा** तैयार करेगा।
- “This is not **privatisation**; this is **partnership with accountability**,” he said.
उन्होंने कहा, “यह **निजीकरण** नहीं है; यह **जवाबदेही के साथ साझेदारी** है।”
- **Trinamool Congress MP Sagarika Ghose** said the Bill is fundamentally **dangerous**.
तृणमूल कांग्रेस सांसद सागरिका घोष ने कहा कि यह विधेयक मूल रूप से **खतरनाक** है।
- “This Bill brings neither **Shanti** nor **security**... we are not debating whether India should pursue **nuclear energy**, India has always pursued nuclear energy responsibly for decades...” she said.
उन्होंने कहा, “यह विधेयक न तो **शांति** लाता है और न ही **सुरक्षा**... हम यह बहस नहीं कर रहे हैं कि भारत को **परमाणु ऊर्जा** अपनानी चाहिए या नहीं, भारत दशकों से जिम्मेदारी के साथ परमाणु ऊर्जा का उपयोग करता आया है...”
- **DMK MP P. Wilson** said the Bill was a “**nuclear bomb** which threatens the country’s **peace and security**”.
डीएमके सांसद पी. विल्सन ने कहा कि यह विधेयक एक “**परमाणु बम**” है जो देश की **शांति और सुरक्षा** को खतरे में डालता है।
- “There is nothing peaceful, nothing sustainable, nothing transformative about this legislation. On the contrary, it is a **reckless, dangerous and deeply flawed attempt to privatise** one of the most sensitive and high-risk sectors of a nation — the **nuclear energy sector**,” he said.
उन्होंने कहा, “इस कानून में कुछ भी शांतिपूर्ण, कुछ भी टिकाऊ, कुछ भी परिवर्तनकारी नहीं है। इसके विपरीत, यह देश के सबसे संवेदनशील और उच्च जोखिम वाले क्षेत्रों में से एक — **परमाणु ऊर्जा क्षेत्र** — को **निजीकरण** करने का एक **लापरवाह, खतरनाक और गंभीर रूप से दोषपूर्ण प्रयास** है।”

Unions oppose Bill

यूनियनों ने विधेयक का विरोध किया

- The legislation will dismantle India’s carefully built **nuclear safety and accountability framework** and opens the most hazardous energy sector to large-scale **private and foreign participation**, the **National Coordination Committee of Electricity Employees and Engineers**, the platform of **10 central trade unions** and the **Samyukt Kisan Morcha (SKM)** said in a joint statement.
इस कानून से भारत की सावधानीपूर्वक बनाई गई **परमाणु सुरक्षा और जवाबदेही व्यवस्था** कमजोर होगी और सबसे खतरनाक ऊर्जा क्षेत्र को बड़े पैमाने पर **निजी और विदेशी भागीदारी** के लिए खोल दिया जाएगा, ऐसा **बिजली कर्मचारी एवं अभियंता राष्ट्रीय समन्वय समिति**, **10 केंद्रीय ट्रेड यूनियनों** के मंच और **संयुक्त किसान मोर्चा (SKM)** ने संयुक्त बयान में कहा।



- It says it would oppose the “draconian” Bill.
बयान में कहा गया कि वे इस “दमनकारी” विधेयक का विरोध करेंगे।

A bold step amid an ambitious nuclear energy target

GS III: S&T

MOB

Human development correlates with energy consumption. In a seminal paper published in *Scientific American* in 1971, Earl Cook traced the growth in per capita energy consumption through stages, from primitive to technological man. The primitive man needed energy only for food. The energy needs for home and commerce were added at the hunting stage. When humans became agriculturists, their energy needs also arose from industry, agriculture and transportation. The energy needs for food, home, commerce, agriculture and transportation continued to increase through the industrial and technological stages. The present era belongs to digital technologies, and the digitalisation of the economy demands additional energy.

Growth rate and generation

The metric “Human Development Index (HDI)” is a fair representation of human development. It combines three important indicators, viz., per capita income, education and health. Using the correlation between HDI and per capita Final Energy Consumption (FEC), one can determine the level of energy needed to reach a specific HDI.

As a member of the G-20 grouping, India rubs shoulders with countries that have an HDI above 0.9. Estimates indicate that to reach 0.9, and considering further improvements in energy efficiency and electrification of end uses, India will need to generate about 24,000 Terra-Watt-Hours (TWh) per annum (*Curr. Sci.*, 2022, 122(5), 517-527). As a part of it, about 60% will be used as electricity, and the rest to generate hydrogen in electrolyzers. Hydrogen is needed to decarbonise sectors such as the production of steel, fertilizers and plastics. When alternative processes for producing hydrogen are developed at scale, less electricity will be needed.

The generation in 2023-24 was about 1,950 TWh, and the CAGR in the recent past has been about 4.8%. Maintaining a growth rate at about this level, it would be possible to generate 24,000



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TWh per annum in four to five decades. However, there are two complexities. First, India has to decarbonise its energy mix. Therefore, the growth in electricity generation must be accompanied by end-use electrification and a redesign of the energy mix.

The present share of electricity in the FEC is about 22% and must rise significantly. The present energy mix is one that is heavily reliant on fossil fuels, and has to be replaced by energy sources that do not emit carbon. That implies that India has to generate more using hydro, nuclear, solar and wind power.

The decarbonised energy mix

In India, hydro and wind potential in India is limited. India is densely populated and it precludes diverting large tracts of land for the deployment of solar photovoltaic. While the potential of hydro, solar and wind must be exploited, their potential is insufficient to provide the energy level necessary to achieve an HDI above 0.9. Therefore, nuclear generation has to be ramped up. Until that is done, India will have to continue exploiting fossil fuels.

Second, solar and wind are intermittent sources. Electricity generated by photovoltaic cells or windmills is variable. Therefore, to match electricity supply with demand, it must be stored when it is in excess and augmented when generation is less than demand. Storage is expensive and providing storage to address seasonal variations in solar and wind is prohibitively expensive. To provide affordable electricity to consumers, the electricity mix must have sufficient baseload generation capacity – that is, generation that is not dependent on seasons or time of day. Nuclear power plants are base-load and must be a part of a decarbonised energy mix.

Realising this imperative, the units of the Department of Atomic Energy, in cooperation with Indian industry, have been working to harness nuclear energy in a manner so that the complete supply chain is indigenous. It is only

uranium that has to be imported as India does not have enough uranium. India has developed technology for fabricating fuel, producing heavy water, and manufacturing all the equipment that is needed to support the construction of Pressurised Heavy Water Reactors (PHWRs). The Nuclear Power Corporation of India Limited has mastered the design and operation of PHWRs of various ratings, the highest being 700 MW. Three 700 MW units are already working, and the fourth is about to be completed. Two more are in an advanced stage of construction. In 2017, the central government sanctioned the construction of 10 700 MW PHWRs and work on these units is progressing.

A regulatory body was established in the 1980s and has developed the capability and capacity to regulate nuclear power plants. The Bhabha Atomic Research Centre has developed technologies to reprocess spent nuclear fuel to recover valuable materials and handle nuclear waste. As a result of these efforts, nuclear power generation is a technically-feasible, affordable and safe option for India.

The SHANTI Bill

These successes have emboldened the central government to set a target of 100 GW of nuclear installed capacity by mid-century. Both Houses of Parliament have passed The Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025. The Bill is an overarching piece of legislation and combines provisions included in the Atomic Energy Act, 1962, and the Civil Liability for Nuclear Damage Act, 2010. It says that the existing Atomic Energy Regulatory Board “shall be deemed to have been constituted under this Act”. The Bill ensures that the prime responsibility for safety, security and safeguards lies with the licensee of the facility.

The target set for nuclear energy is ambitious. The Bill passed by Parliament is a bold step. India needs ambitious targets and bold steps to become a developed country.

A bold step amid an ambitious nuclear energy target

महत्वाकांक्षी परमाणु ऊर्जा लक्ष्य के बीच एक साहसिक कदम

- Human development correlates with energy consumption.
मानव विकास का ऊर्जा उपभोग से संबंध है।
- In a seminal paper published in *Scientific American* in 1971, Earl Cook traced the growth in per capita energy consumption through stages, from primitive to technological man.
1971 में साइंटिफिक अमेरिकन में प्रकाशित एक महत्वपूर्ण शोध पत्र में अर्ल कुक ने आदिम मानव से प्रौद्योगिकीय मानव तक प्रति व्यक्ति ऊर्जा उपभोग की वृद्धि के चरणों का वर्णन किया।
- The primitive man needed energy only for food.
आदिम मानव को ऊर्जा केवल भोजन के लिए चाहिए थी।
- The energy needs for home and commerce were added at the hunting stage.
शिकार चरण में घर और व्यापार के लिए ऊर्जा की आवश्यकता जुड़ी।
- When humans became agriculturists, their energy needs also arose from industry, agriculture and transportation.
जब मनुष्य कृषक बने, तब उनकी ऊर्जा आवश्यकताएँ उद्योग, कृषि और परिवहन से भी उत्पन्न हुईं।
- The energy needs for food, home, commerce, agriculture and transportation continued to increase through the industrial and technological stages.
औद्योगिक और प्रौद्योगिकीय चरणों में भोजन, घर, व्यापार, कृषि और परिवहन के लिए ऊर्जा की आवश्यकता लगातार बढ़ती गई।



- The present era belongs to **digital technologies**, and the **digitalisation of the economy** demands **additional energy**.
वर्तमान युग डिजिटल प्रौद्योगिकियों का है, और अर्थव्यवस्था का डिजिटलीकरण अतिरिक्त ऊर्जा की माँग करता है।

Growth rate and generation वृद्धि दर और उत्पादन

- The metric **Human Development Index (HDI)** is a fair representation of **human development**.
मानव विकास सूचकांक (HDI) मानव विकास का एक उपयुक्त माप है।
- It combines three important indicators, viz., **per capita income, education and health**.
यह तीन महत्वपूर्ण संकेतकों को जोड़ता है, अर्थात् प्रति व्यक्ति आय, शिक्षा और स्वास्थ्य।
- Using the correlation between **HDI and per capita Final Energy Consumption (FEC)**, one can determine the level of energy needed to reach a **specific HDI**.
HDI और प्रति व्यक्ति अंतिम ऊर्जा उपभोग (FEC) के बीच संबंध का उपयोग करके किसी विशिष्ट HDI तक पहुँचने के लिए आवश्यक ऊर्जा स्तर निर्धारित किया जा सकता है।
- As a member of the **G-20 grouping**, India rubs shoulders with countries that have an **HDI above 0.9**.
G-20 समूह के सदस्य के रूप में भारत उन देशों के साथ खड़ा है जिनका HDI 0.9 से अधिक है।
- Estimates indicate that to reach **0.9**, and considering further improvements in **energy efficiency and electrification of end uses**, India will need to generate about **24,000 Terra-Watt-Hours (TWh) per annum (Curr. Sci., 2022, 122(5), 517–527)**.
अनुमान बताते हैं कि 0.9 तक पहुँचने के लिए, और ऊर्जा दक्षता तथा अंतिम उपयोगों के विद्युतीकरण में और सुधार को ध्यान में रखते हुए, भारत को लगभग **24,000 टेरावॉट-घंटे (TWh) प्रति वर्ष** ऊर्जा उत्पादन करना होगा।
- As a part of it, about **60% will be used as electricity, and the rest to generate hydrogen in electrolyzers**.
इसका लगभग **60% बिजली** के रूप में उपयोग होगा, और शेष **इलेक्ट्रोलाइज़र** में **हाइड्रोजन** उत्पादन के लिए।
- Hydrogen is needed to decarbonise sectors** such as the production of **steel, fertilizers and plastics**.
हाइड्रोजन की आवश्यकता **इस्पात, उर्वरक और प्लास्टिक** जैसे क्षेत्रों के **डी-कार्बोनाइज़ेशन** के लिए है।
- When **alternative processes** for producing hydrogen are developed at **scale**, **less electricity** will be needed.
जब **हाइड्रोजन उत्पादन की वैकल्पिक प्रक्रियाएँ** बड़े पैमाने पर विकसित हो जाएँगी, तब **कम बिजली** की आवश्यकता होगी।
- The **generation in 2023–24** was about **1,950 TWh**, and the **CAGR** in the recent past has been about **4.8%**.
2023–24 में ऊर्जा उत्पादन लगभग **1,950 TWh** था, और हाल के वर्षों में **CAGR** लगभग **4.8%** रहा है।
- Maintaining a growth rate at about this level, it would be possible to generate 24,000 TWh per annum in four to five decades**.
यदि इसी स्तर की वृद्धि दर बनी रहती है, तो **चार से पाँच दशकों में 24,000 TWh प्रति वर्ष** का उत्पादन संभव होगा।
- However, there are **two complexities**.
हालाँकि, इसमें **दो जटिलताएँ** हैं।
- First, **India has to decarbonise its energy mix**.
पहला, भारत को अपने **ऊर्जा मिश्रण का डी-कार्बोनाइज़ेशन** करना होगा।
- Therefore, the growth in electricity generation must be accompanied by end-use electrification and a redesign of the energy mix**.
इसलिए **बिजली उत्पादन की वृद्धि के साथ-साथ अंतिम उपयोगों का विद्युतीकरण और ऊर्जा मिश्रण का पुनःडिज़ाइन** आवश्यक है।
- The present share of **electricity in the FEC** is about **22%** and must rise **significantly**.
FEC में **बिजली** की वर्तमान हिस्सेदारी लगभग **22%** है और इसे **काफ़ी बढ़ना** होगा।



- The present **energy mix** is one that is heavily reliant on **fossil fuels**, and has to be replaced by energy sources that **do not emit carbon**.
वर्तमान ऊर्जा मिश्रण जीवाश्म ईंधनों पर अत्यधिक निर्भर है, और इसे ऐसे ऊर्जा स्रोतों से बदलना होगा जो कार्बन उत्सर्जन नहीं करते।
- That implies that India has to generate more using **hydro, nuclear, solar and wind power**.
इसका अर्थ है कि भारत को जलविद्युत, परमाणु, सौर और पवन ऊर्जा से अधिक उत्पादन करना होगा।

The decarbonised energy mix डी-कार्बोनाइज़्ड ऊर्जा मिश्रण

- In India, **hydro and wind potential in India is limited**.
भारत में जलविद्युत और पवन ऊर्जा की क्षमता सीमित है।
- India is **densely populated** and it precludes diverting **large tracts of land for the deployment of solar photovoltaic**.
भारत घनी आबादी वाला देश है और इससे सौर फोटोवोल्टिक की तैनाती के लिए बड़े भू-भाग को मोड़ना संभव नहीं होता।
- While the full potential of **hydro, solar and wind** must be exploited, their potential is **insufficient to provide the energy level necessary to achieve an HDI above 0.9**.
हालाँकि जल, सौर और पवन ऊर्जा की पूरी क्षमता का उपयोग किया जाना चाहिए, लेकिन 0.9 से अधिक HDI प्राप्त करने के लिए आवश्यक ऊर्जा स्तर उपलब्ध कराने में यह अपर्याप्त है।
- Therefore, **nuclear generation** has to be **ramped up**.
अतः परमाणु ऊर्जा उत्पादन को तेज़ी से बढ़ाना होगा।
- Until that is done, India will have to continue exploiting **fossil fuels**.
जब तक यह नहीं हो जाता, भारत को जीवाश्म ईंधनों का उपयोग जारी रखना पड़ेगा।
- Second, **solar and wind are intermittent sources**.
दूसरे, सौर और पवन ऊर्जा अनियमित स्रोत हैं।
- Electricity generated by **photovoltaic cells** or **windmills** is **variable**.
फोटोवोल्टिक सेल या पवनचक्कियों से उत्पन्न बिजली परिवर्तनीय होती है।
- Therefore, to match **electricity supply with demand**, it must be **stored** when it is in excess and **augmented** when generation is less than demand.
इसलिए बिजली आपूर्ति और माँग के संतुलन हेतु, अतिरिक्त होने पर इसे भंडारित करना और उत्पादन कम होने पर बढ़ाना आवश्यक है।
- Storage is expensive** and providing storage to address **seasonal variations in solar and wind is prohibitively expensive**.
भंडारण महँगा है और सौर व पवन की मौसमी भिन्नताओं के लिए भंडारण उपलब्ध कराना अत्यधिक महँगा है।
- To provide **affordable electricity** to consumers, the electricity mix must have sufficient **baseload generation capacity** — that is, generation that is **not dependent on seasons or time of day**.
उपभोक्ताओं को सस्ती बिजली देने के लिए ऊर्जा मिश्रण में पर्याप्त बेसलोड उत्पादन क्षमता होनी चाहिए — अर्थात् ऐसा उत्पादन जो मौसम या दिन के समय पर निर्भर न हो।
- Nuclear power plants** are **base-load** and must be a part of a **decarbonised energy mix**.
परमाणु ऊर्जा संयंत्र बेसलोड होते हैं और डी-कार्बोनाइज़्ड ऊर्जा मिश्रण का हिस्सा होना अनिवार्य है।
- Realising this **imperative**, the units of the **Department of Atomic Energy**, in cooperation with **Indian industry**, have been working to harness nuclear energy so that the **complete supply chain is indigenous**.
इस आवश्यकता को समझते हुए, परमाणु ऊर्जा विभाग की इकाइयाँ भारतीय उद्योग के सहयोग से परमाणु ऊर्जा के उपयोग पर काम कर रही हैं ताकि पूरी आपूर्ति श्रृंखला स्वदेशी हो।
- It is only **uranium** that has to be imported as India does not have enough uranium.
केवल यूरेनियम का आयात करना पड़ता है क्योंकि भारत के पास पर्याप्त यूरेनियम नहीं है।
- India has developed technology for **fabricating fuel, producing heavy water, and manufacturing all the equipment** needed to support the construction of **Pressurised Heavy Water Reactors (PHWRs)**.
भारत ने ईंधन निर्माण, हेवी वाटर उत्पादन, और प्रेशराइज़्ड हेवी वाटर रिएक्टर (PHWRs) के निर्माण हेतु आवश्यक सभी उपकरणों के निर्माण की तकनीक विकसित की है।



- The **Nuclear Power Corporation of India Limited** has mastered the **design and operation** of PHWRs of various ratings, the highest being **700 MW**.
न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड ने विभिन्न क्षमताओं वाले PHWRs के डिज़ाइन और संचालन में महारत हासिल की है, जिनमें सबसे अधिक **700 मेगावाट** है।
- Three 700 MW units are already working, and the fourth is about to be completed.**
तीन **700 मेगावाट** इकाइयाँ पहले से कार्यरत हैं और चौथी लगभग पूरी होने वाली है।
- Two more are in an **advanced stage of construction.**
दो और इकाइयाँ **निर्माण के उन्नत चरण** में हैं।
- In 2017, the central government sanctioned the construction of 10 700 MW PHWRs and work on these units is progressing.**
2017 में केंद्र सरकार ने 10 × 700 मेगावाट PHWRs के निर्माण को मंजूरी दी और इन पर कार्य प्रगति पर है।
- A regulatory body was established in the 1980s and has developed the capability and capacity to regulate nuclear power plants.**
1980 के दशक में एक नियामक निकाय स्थापित किया गया जिसने परमाणु संयंत्रों को विनियमित करने की क्षमता और सामर्थ्य विकसित की है।
- The **Bhabha Atomic Research Centre** has developed technologies to **reprocess spent nuclear fuel to recover valuable materials and handle nuclear waste.**
भाभा परमाणु अनुसंधान केंद्र ने उपयोग किए गए परमाणु ईंधन के पुनःप्रसंस्करण, मूल्यवान पदार्थों की पुनर्प्राप्ति और परमाणु अपशिष्ट के प्रबंधन की तकनीकें विकसित की हैं।
- As a result of these efforts, nuclear power generation is a technically-feasible, affordable and safe option for India.**
इन प्रयासों के परिणामस्वरूप **परमाणु ऊर्जा उत्पादन** भारत के लिए तकनीकी रूप से संभव, किफायती और सुरक्षित विकल्प है।

The SHANTI Bill

शांति विधेयक

- These successes have **emboldened** the central government to set a target of **100 GW of nuclear installed capacity by mid-century.**
इन सफलताओं ने केंद्र सरकार को **मध्य-शताब्दी तक 100 गीगावाट परमाणु स्थापित क्षमता** का लक्ष्य निर्धारित करने के लिए **प्रोत्साहित** किया है।
- Both Houses of **Parliament** have passed the **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025.**
संसद के दोनों सदनों ने **भारत के रूपांतरण हेतु परमाणु ऊर्जा के सतत उपयोग और उन्नयन (SHANTI) विधेयक, 2025** को पारित कर दिया है।
- The **Bill is an overarching piece of legislation** and combines provisions included in the **Atomic Energy Act, 1962, and the Civil Liability for Nuclear Damage Act, 2010.**
यह विधेयक एक **समग्र कानून** है और **परमाणु ऊर्जा अधिनियम, 1962** तथा **परमाणु क्षति हेतु नागरिक दायित्व अधिनियम, 2010** के प्रावधानों को सम्मिलित करता है।
- It says that the existing **Atomic Energy Regulatory Board** “shall be deemed to have been constituted under this Act”.
इसमें कहा गया है कि वर्तमान **परमाणु ऊर्जा नियामक बोर्ड** को “इस अधिनियम के अंतर्गत गठित माना जाएगा”।
- The Bill ensures that the **prime responsibility for safety, security and safeguards** lies with the **licensee** of the facility.
यह विधेयक सुनिश्चित करता है कि **सुरक्षा, संरक्षण और सुरक्षात्मक उपायों** की **मुख्य ज़िम्मेदारी** सुविधा के **लाइसेंसी** पर होगी।
- The target set for **nuclear energy is ambitious.**
परमाणु ऊर्जा के लिए निर्धारित लक्ष्य **महत्वाकांक्षी** है।
- The Bill passed by Parliament is a **bold step.**
संसद द्वारा पारित यह विधेयक एक **साहसिक कदम** है।
- India needs **ambitious targets and bold steps** to become a **developed country.**
भारत को **विकसित देश** बनने के लिए **महत्वाकांक्षी लक्ष्य** और **साहसिक कदम** उठाने की आवश्यकता है।



Pressurised Heavy Water Reactors (PHWRs)

A **Pressurised Heavy Water Reactor (PHWR)** is a type of **nuclear power reactor** that produces electricity using **nuclear fission**—the splitting of atoms to release energy.

This type of reactor is **widely used in India**, including in places like **Kakrapar (Gujarat)** and **Rawatbhata (Rajasthan)**.

1. What does the name "Pressurised Heavy Water Reactor" mean?

(A) Pressurised

The **water inside the reactor is kept under very high pressure.**

Why?

Because water under pressure **does not boil easily**, even at very high temperatures.

This allows the reactor to:

- carry heat safely,
- avoid steam formation inside the core,
- operate more efficiently.

(B) Heavy Water

Heavy water (D₂O) looks like normal water, but it contains a **heavier form of hydrogen** called **deuterium**.

It is used as a **moderator** — meaning it slows down fast-moving neutrons so that nuclear fission can continue smoothly.

(C) Reactor

A reactor is simply a system where nuclear fission occurs in a controlled manner to produce heat.

2. How does a PHWR work?

PHWR act like a **giant pressure cooker + heating system**.

Step-by-step process:

1. Fuel



PHWRs use **natural uranium** as fuel (unlike many reactors that need enriched uranium). This is one reason PHWRs are cost-effective for India.

2. Fission starts

Inside the reactor core, uranium atoms split and release:

- heat
- neutrons

3. Heavy water slows the neutrons

Slow neutrons are better for fission.

So heavy water ensures the chain reaction continues steadily.

4. Pressurised heavy water absorbs the heat

The hot water (still liquid due to high pressure) carries heat away from the core.

5. Heat boils ordinary water

The hot heavy water passes through tubes in a separate system. There, it heats **normal water**, turning it into steam.

6. Steam spins a turbine

The steam turns a turbine.

7. Turbine drives the generator to make electricity

This electricity is sent into the power grid.

8. Steam cools and returns as water

The steam is cooled back into water and reused.

3. Why does India prefer PHWRs?

✓ Uses natural uranium

India has limited enriched uranium but good reserves of natural uranium.

✓ Heavy water moderation is very efficient

It gives high neutron economy — meaning more fission reactions using less fuel.

✓ Safe design



The reactor is divided into many pressure tubes instead of one large pressure vessel.
This:

- makes construction easier,
- allows easier maintenance,
- limits the impact of any failure.

✓ Suitable for India's 3-stage nuclear programme

PHWRs produce **plutonium-239**, which is needed for India's next-generation reactors.

5. PHWRs in India

India operates **18+ PHWRs**, including:

Kakrapar Atomic Power Station (Gujarat)

- Units 1, 2 (220 MW)
- Units 3, 4 (700 MW, India's largest PHWRs)

Rajasthan Atomic Power Station (Rawatbhata)

- Multiple PHWR units (220 MW each)

Narora Atomic Power Station (UP)

- 2 × 220 MW PHWRs

Madras (Kalpakkam) Atomic Power Station (Tamil Nadu)

- PHWRs that also support research for fast-breeder reactor

These reactors collectively contribute **significantly** to India's nuclear electricity generation.

6. Safety Features

PHWRs are designed with:

✓ Multiple shutdown systems

Reactor can be shut down within seconds if needed.

✓ Containment buildings

Thick concrete domes prevent radiation release.



✓ Passive safety features

Even if operators fail, natural processes (like gravity or cooling by convection) reduce risk.

Is the Artificial Intelligence boom a bubble?



Bhagwan Chowdhry

Professor of Finance and Faculty Director, I-Venture at the Indian School of Business and Professor Emeritus at UCLA Anderson



Anoop Kunchukuttan

Principal Applied Researcher at Microsoft India and founding member and co-lead of AI4Bharat, a research centre based in IIT Madras that works on advancing language technologies for Indian languages

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Global spending on Artificial Intelligence (AI) is projected to reach \$375 billion this year and \$500 billion by 2026, according to the UBS. That raises a fundamental question: is AI's value being driven by genuine technological progress, or by investor enthusiasm racing ahead of reality? Is the AI boom a bubble? Bhagwan Chowdhry and Anoop Kunchukuttan discuss the question in a conversation moderated by **Areena Arora**. Edited excerpts:

Where did the idea that the AI boom might be a bubble originate? Is it driven by weak monetisation, comparisons to the dot-com bubble era, or by limits in what current AI can realistically deliver?

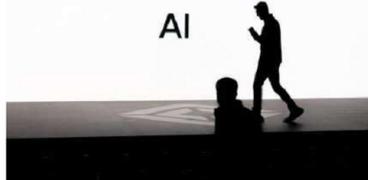
Bhagwan Chowdhry: People only remember dot-com as a bubble. I don't think of dot-com as a failure at all. What came out of that bubble was great progress. Look where we are today and how much we use the Internet. It wouldn't have been possible if not for the dot-com hype. All technological revolutions follow the same pattern. It starts with hope, goes to hype, which then translates to make. Make also means break. AI is going to be like that too.

With widespread usage but limited customer willingness to pay, what does AI resemble at this stage? Is it similar to early social media and cloud computing or something fundamentally different?

Anoop Kunchukuttan: In one sense, AI is already pervasive throughout the technology stack, from very early systems like email spam classifiers to recommendation systems. Increasingly, AI has started doing really well in narrow domains like speech recognition and translation. What we are seeing, especially since ChatGPT was released in late 2022, is the idea of a chat assistant and, more recently, highly autonomous agents. The bet is on whether we can automate tasks at a very large scale. In some narrow domains, AI is already successful. We will find more use cases where it boosts productivity. The challenge is whether we will have something transformative in terms of highly autonomous agents. We are not there yet and there is a lot of speculation and hype. The important thing is to ensure reliability, trust, factual correctness, safety, and common sense. These are challenges that should be addressed before mass adoption.

Do you have any predictions you would be comfortable making about AI's mass scale

MOE



REUTERS

and adaptability?

AK: It is difficult to predict a timeline. Research takes its own path.

BC: We are going to overestimate what is going to happen in one year, but we will underestimate what is going to happen in 5-10 years.

What does the dot-com comparison get wrong about today's AI market?

BC: Speculators are going to bet on a hundred things of which 95 will fail. But they will fail financially, not in terms of technology. Technology will continue to get better. Out of so many startups, maybe only a handful will survive. So, it may look like a failure from that point of view. But the ones that do survive are going to change the world. This genie is out of the bottle and we are not going to put it back.

Where is the biggest mismatch between scientific progress and market expectations?

AK: Let us go back to the dot-com analogy. It was the idea that the Internet was a transformative technology and people built businesses which reached mass scale and achieved a lot of business value.

AI is different. The technology is known to some extent in some narrow domains and we will continue to see benefits there. However, when it comes to artificial general intelligence (human-like intelligence) and highly autonomous behaviour, we don't know to what extent they will succeed. Until 2-3 years ago, there was a notion that you could simply scale up models and they would get better. Those scaling laws are being challenged now. You don't get that quantum of improvement just by making models larger. It is difficult to predict the paths (AI) will take. A better analogy is the search engine infrastructure and the hype that came with it. Its potential was not clear. It was



We are making rapid advances in AI. No doubt a lot of experiments will fail. That is the nature of science. But I hope people investing in science understand that that is important.

ANOOP KUNCHUKUTTAN

very ambitious to say that you could index the whole web and in microseconds it would fetch you an answer to a query. But it was done over time. Multiple search engine companies invested and built the technology that made this possible. AI is similar. Today, the gains might be smaller, but over time, the gains will accrue.

What are some of the important capability challenges in today's AI systems that we are underestimating or misunderstanding?

BC: When lay people think about AI, they only think about AI that is going to benefit them immediately. The biggest gains are going to come from how AI handles science – in biology, chemistry, 3D modelling, or the discovery of proteins and drugs. Most of us don't pay attention to those. Even mathematical research is going to change in a fundamental way.

AK: There are use cases which can make a larger impact in science, education, or medical science. We need to ask ourselves whether we are willing to invest in areas where the returns might not be immediate. There are transformative areas where sustained efforts will lead to gains.

Do you think scientific progress should always be judged against investor confidence? Does the fear of a bubble burst slow down genuine innovation?

AK: This is not the first time this is happening in AI. There is a term for it: AI winter. In the 1960s and 1970s, and then in the 1980s and 1990s, there was the promise that AI could come up with autonomous agents. But it did not pan out. Back then, the sentiment was the same and the hype did not materialise and there was a freeze in funding for AI. So, that risk exists. We should invest for the long term while also looking for short-term gains. Because we are focusing on innovation right now, there isn't as much focus on efficiency. If we focus on efficiency and competition in the chip market, we can make economics more viable.

BC: What we have to worry about is whether this will lead to any systemic crisis. Will it cause a sequence of banks failing or the economy

going down? That is what we have to focus on. But the nature of the game of speculation is that some people will lose money and some people won't. When we ask if we should be worried about AI, we have to ask, who is this we? Even in the dot-com bubble, consumers benefited.

Investment in chip making and data centres amounts to roughly 0.5% of global GDP. Is that level of spending economically justified?

AK: It is difficult to judge. But one trend in computing is clear – that more computing power typically helps to improve systems. To that extent, investment in data centres and chips is warranted.

A McKinsey report said only a small minority of companies has reported any meaningful profits driven by AI. If productivity gains don't monetise in the next few years, will markets reprice AI like they do any other asset? How would researchers then make the case to keep investing in these companies that are not seeing profits from AI?

BC: Markets are going to reprice companies; they are not going to reprice AI as a whole. That will continue to exist. Companies and attempts may fail, but there will be successes too.

AK: From a technologist's standpoint, we are making rapid advances in AI. No doubt a lot of experiments will fail. That is the nature of science. But I hope people investing in science understand that that is important.

Is the AI boom a bubble waiting to be burst, or is this the early, messy phase of a real lasting technological shift?

BC: I would say it is both. There are little bubbles that will burst, but that is a good thing. In 10 years, we as a society will be ahead if we make sure it doesn't lead to a systemic crisis, either in terms of security or in terms of failure that percolates from one place to other.

AK: As far as technology goes, there is no doubt that it is positive. We are already living through a lot of AI embedded in whatever we are doing, and it is only going to grow more. ChatGPT was a moment of inflection that has led to this boom. In the process, there might be failures, but the overall trend is forward looking.



To listen to the full interview
Scan the code or go to the link
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Is the Artificial Intelligence boom a bubble?

क्या कृत्रिम बुद्धिमत्ता का उछाल एक बुलबुला है?

Global spending on Artificial Intelligence (AI)

कृत्रिम बुद्धिमत्ता (AI) पर वैश्विक खर्च

- Global spending on **Artificial Intelligence (AI)** is projected to reach **\$375 billion** this year and **\$500 billion by 2026**, according to the **UBS**.

UBS के अनुसार, कृत्रिम बुद्धिमत्ता (AI) पर वैश्विक खर्च इस वर्ष \$375 बिलियन और 2026 तक \$500 बिलियन तक पहुँचने का अनुमान है।

- That raises a **fundamental question**: is AI's value being driven by **genuine technological progress**, or by **investor enthusiasm** racing ahead of reality.

यह एक मौलिक प्रश्न खड़ा करता है कि क्या AI का मूल्य वास्तविक तकनीकी प्रगति से प्रेरित है या फिर निवेशकों के उत्साह से, जो वास्तविकता से आगे निकल रहा है।



- Is the **AI boom a bubble?**
क्या **AI का उछाल एक बुलबुला** है।
- **Bhagwan Chowdhry and Anoop Kunchukuttan** discuss the question in a conversation moderated by **Areena Arora**.
भगवान चौधरी और अनूप कुंचुकुट्टन इस प्रश्न पर **अरीना अरोड़ा** द्वारा संचालित बातचीत में चर्चा करते हैं।
- **Edited excerpts.**
संपादित अंश।

Where did the idea that the AI boom might be a bubble originate?
यह विचार कि **AI का उछाल एक बुलबुला** हो सकता है, कहाँ से उत्पन्न हुआ।

Is it driven by weak monetisation, comparisons to the dot-com bubble era, or by limits in what current AI can realistically deliver.

क्या यह कमज़ोर मुद्राकरण, डॉट-कॉम बुलबुला युग से तुलना, या वर्तमान AI की व्यावहारिक सीमाओं से प्रेरित है।

Bhagwan Chowdhry
भगवान चौधरी

- People only remember **dot-com** as a **bubble**.
लोग **डॉट-कॉम** को केवल एक **बुलबुला** के रूप में याद करते हैं।
- I don't think of dot-com as a **failure** at all.
मैं डॉट-कॉम को बिल्कुल भी **असफलता** नहीं मानता।
- What came out of that bubble was **great progress**.
उस बुलबुले से जो निकला वह **बड़ी प्रगति** थी।
- Look where we are today and how much we use the **Internet**.
देखिए आज हम कहाँ हैं और **इंटरनेट** का कितना व्यापक उपयोग करते हैं।
- It wouldn't have been possible if not for the **dot-com hype**.
यदि **डॉट-कॉम हाइप** न होती तो यह संभव नहीं होता।
- **All technological revolutions follow the same pattern**.
सभी **तकनीकी क्रांतियाँ** एक ही **पैटर्न** का अनुसरण करती हैं।
- **It starts with hope, goes to hype, which then translates to make**.
यह **आशा** से शुरू होती है, फिर **हाइप** तक जाती है, जो आगे चलकर **निर्माण** में बदलती है।
- **Make** also means **break**.
निर्माण का अर्थ **विघटन** भी होता है।
- **AI** is going to be like that too.
AI भी इसी तरह की होगी।
- With widespread usage but limited **customer willingness to pay**, what does AI resemble at this stage.
व्यापक उपयोग लेकिन **ग्राहकों की भुगतान करने की सीमित इच्छा** के साथ, इस चरण पर AI किससे मिलती-जुलती है।
- Is it similar to early **social media** and **cloud computing** or something **fundamentally different**.
क्या यह शुरुआती **सोशल मीडिया** और **क्लाउड कंप्यूटिंग** जैसी है या कुछ **मौलिक रूप से अलग**।

Anoop Kunchukuttan
अनूप कुंचुकुट्टन

- In one sense, **AI** is already **pervasive** throughout the **technology stack**.
एक अर्थ में, **AI** पहले से ही पूरे **टेक्नोलॉजी स्टैक** में **व्याप्त** है।
- From very early systems like **email spam classifiers** to **recommendation systems**.
ईमेल स्पैम क्लासिफायर जैसे शुरुआती सिस्टम से लेकर **रिकमेंडेशन सिस्टम** तक।
- Increasingly, AI has started doing really well in **narrow domains** like **speech recognition** and **translation**.
तेज़ी से AI **स्पीच रिकग्निशन** और **अनुवाद** जैसे **सीमित क्षेत्रों** में बहुत अच्छा प्रदर्शन करने लगी है।



- What we are seeing, especially since **ChatGPT** was released in **late 2022**, is the idea of a **chat assistant**.
विशेष रूप से **2022** के अंत में **ChatGPT** के जारी होने के बाद, हम **चैट असिस्टेंट** की अवधारणा देख रहे हैं।
- And, more recently, **highly autonomous agents**.
और हाल ही में, **अत्यधिक स्वायत्त एजेंट्स**।
- The bet is on **whether we can automate tasks at a very large scale**.
दांव इस बात पर है कि क्या हम **बहुत बड़े पैमाने** पर कार्यों को **स्वचालित** कर सकते हैं।
- In some **narrow domains**, AI is already **successful**.
कुछ **सीमित क्षेत्रों** में AI पहले से ही **सफल** है।
- We will find more **use cases** where it **boosts productivity**.
हम और अधिक **उपयोग के मामले** पाएँगे जहाँ यह **उत्पादकता** बढ़ाएगी।
- The challenge is whether we will have something **transformative** in terms of **highly autonomous agents**.
चुनौती यह है कि क्या हमें **अत्यधिक स्वायत्त एजेंट्स** के रूप में कुछ **परिवर्तनकारी** मिलेगा।
- We are **not there yet** and there is a lot of **speculation and hype**.
हम अभी वहाँ **नहीं पहुँचे हैं** और काफी **अटकलें और हाइप** हैं।
- The **important thing is to ensure reliability, trust, factual correctness, safety, and common sense**.
Speculators are going to bet on a **hundred things** of which **95 will fail**.
सट्टेबाज़ **सौ चीज़ों** पर दांव लगाएंगे, जिनमें से **95 असफल** होंगी।
- **But they will fail financially, not in terms of technology**.
लेकिन वे **वित्तीय रूप से** असफल होंगी, **तकनीक** के स्तर पर नहीं।
- **Technology will continue to get better**.
तकनीक लगातार **बेहतर** होती जाएगी।
- Out of so many **startups**, maybe only a **handful** will survive.
इतने सारे **स्टार्टअप्स** में से शायद केवल **कुछ ही** टिक पाएँगे।
- So, it may look like a **failure** from that point of view.
इस दृष्टि से यह एक **असफलता** जैसा दिख सकता है।
- **But the ones that do survive are going to change the world**.
लेकिन जो **बचेंगे**, वही **दुनिया बदलेंगे**।
- This **genie is out of the bottle** and we are not going to **put it back**.
यह **जिन्न बोतल से बाहर आ चुका है** और अब इसे **वापस नहीं डाला जा सकता**।
- It was very **ambitious to say that you could index the whole web** and in **microseconds** fetch an answer to a **query**.
यह कहना बहुत **महत्वाकांक्षी** था कि आप पूरे **वेब को इंडेक्स** कर सकते हैं और **माइक्रोसेकंड्स** में किसी **प्रश्न** का उत्तर दे सकते हैं।
- **But it was done over time**.
लेकिन यह काम **समय के साथ** पूरा हुआ।
- **Multiple search engine companies** invested and built the **technology** that made this possible.
- **When lay people think about AI**, they only think about AI that is going to **benefit them immediately**.
जब **सामान्य लोग AI** के बारे में सोचते हैं, तो वे केवल उसी AI को देखते हैं जो उन्हें **तुरंत लाभ** पहुँचाए।
- The **biggest gains** are going to come from how AI handles **science** — in **biology, chemistry, 3D modelling, or the discovery of proteins and drugs**.
- **Even mathematical research** is going to change in a **fundamental way**.
What we have to worry about is whether this will lead to any **systemic crisis**.
हमें इस बात की चिंता करनी चाहिए कि क्या यह किसी **प्रणालीगत संकट** को जन्म देगा।
- **Will it cause a sequence of banks failing or the economy going down**.
क्या इससे **बैंकों की श्रृंखलाबद्ध विफलता** होगी या **अर्थव्यवस्था गिरावट** में जाएगी।
- That is what we have to **focus on**.
हमें इसी पर **ध्यान केंद्रित** करना चाहिए।



- But the nature of the game of speculation is that some people will lose money and some people won't.
- **Investment in chip making and data centres amounts to roughly 0.5% of global GDP.**
चिप निर्माण और डेटा सेंटरों में निवेश लगभग वैश्विक GDP का 0.5% है।
- ChatGPT was a moment of inflection that has led to this boom.
- In the process, there might be failures, but the overall trend is forward looking.
इस प्रक्रिया में असफलताएँ हो सकती हैं, लेकिन समग्र प्रवृत्ति भविष्य की ओर उन्मुख है।

Inside the DHRUV64 microprocessor

Who developed the DHRUV64 chip? What are the other chips within India's ecosystem of processors? What aspects have the Ministry of Electronics and Information Technology not revealed about DHRUV64? What are some schemes started by the government to advance indigenous fab technologies?

GS III: S&T

EXPLAINER

Vasudevan Mukunth

The story so far:

In December 15, the Ministry of Electronics and Information Technology (MEITY) announced the launch of DHRUV64, an indigenous microprocessor that it said would strengthen the national indigenous processor pipeline. Its purported applications span the breadth of electronics to industrial automation.

What is DHRUV64?

The DHRUV64 chip is a fully indigenous microprocessor developed by the Centre for Development of Advanced Computing (C-DAC) under MEITY's Microprocessor Development Programme.

The microprocessor is a general-purpose "brain" for electronics – a 64-bit, dual-core processor that runs at 1 GHz. These specifications could mean the processor is fast enough to run operating systems while also being efficient enough for embedded deployment.

India is a major market for processors yet continues to depend on imported designs and supply chains. To this end the Indian government has pitched for a "homegrown processor technology". Such processors sit at the base of everything from telecom networks to industrial control. So whoever controls their design, toolchain, and update pathways will also control security assumptions and resilience during export controls or supply shocks.

What do DHRUV64's specs mean?

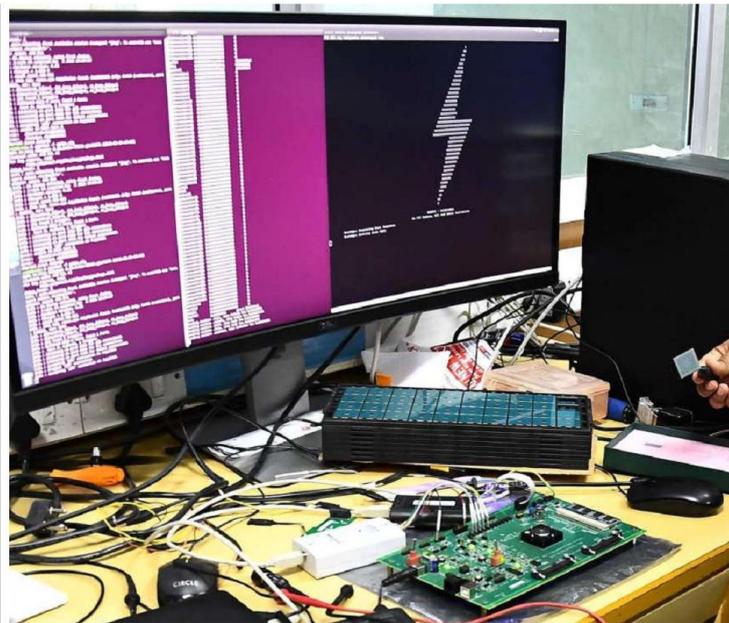
DHRUV64 is not a chip meant only for simple sensing or appliance logic. In general, 64-bit designs are used when users want modern operating systems and contemporary software.

The specified performance is low compared to top-tier consumer standards. Today's state-of-the-art smartphone and laptop processors tend to combine many more CPU cores with higher peak clock speeds. They also include specialised blocks like Graphic Processing Units (GPUs), which can efficiently handle machine-learning workloads.

This said, a lot of contemporary computing in the modern economy doesn't demand topline CPUs. These applications include base station subsystems in telecommunications, industrial controllers, routers, and many automotive modules. They prize reliability and better hardware-software integration. At the same time, as the technology publication *The Register* wrote, "Those are fields in which established chipmakers already offer mature products, and accompanying software and hardware development ecosystems. Even the most patriotic Indian electronics manufacturer would surely find it hard to put the DHRUV64 at the top of their bill of materials shopping list. India therefore has plenty left to do if DHRUV64 is going to win customers."

What processors is India working on?

According to MEITY, DHRUV64 is part of India's ecosystem of processors, including SHAKTI from IIT-Madras, AIJT from IIT-Bombay, VIKRAM from the ISRO-Semiconductor Lab, and THEJAS64 from C-DAC (2025). The needs these processors address include strategic operations, control systems in factories, spacecraft systems, and industrial automation. MEITY has also pitched DHRUV64 as a platform on which



Another breakthrough: Team Shakti at work on the microprocessor project RISECREEK at IIT-Madras in Chennai in 2018. FILE PHOTO

startups, academia, and industry can build and test products on, "without relying on foreign processors", and can develop prototypes for new system architectures at lower cost. This is commendable because all processors everywhere, from the Intel Core series to the Espressif processors in DIY electronics, only succeed when they have an ecosystem around them.

What is DIR-V?

RISCV (pronounced "risk five") is a set of basic instructions that a processor understands. A processor is like a cook who can only make the dishes written down in a recipe book. This book is the instruction set: it lists commands like "add two numbers", "move data from memory", "compare two values", "jump to another step in a program", etc.

RISCV is an open instruction set, which means its core rules are publicly available and anyone can design a chip that follows them without paying a license fee for the instruction set itself. This is different from instruction sets that are controlled by a company and licensed to others. There the chip designers will need to purchase licences, sign contracts, etc. This is why governments and research groups sometimes prefer RISCV.

RISCV is also modular: designers can start with a small, standard core, then add extra features like faster arithmetics or security features depending on what the chip is meant for. Put differently, different chips can speak the same base language while still being fine-tuned for different tasks. DHRUV64 is tied to the Digital India RISCV (DIR-V) programme, which aims to build a portfolio of RISCV-based microprocessors for industry, military, and consumer technologies. THEJAS32 was the first India-designed chip DIR-V chip to be fabricated (in Malaysia) and

THEJAS64 was the second, made at SCL Mohali. DHRUV64 is the third on this list. However, MEITY hasn't said where DHRUV64 was fabricated, which leaves doubts about the supply chain.

What is not known about DHRUV64?

MEITY's announcement of DHRUV64 is thin on the engineering information required to judge the chip's readiness. There are five issues in particular.

First, the claim about the chip's performance hasn't been contextualised in measurable terms. The headline specs, that is, 1 GHz, 64-bit, dual-core, are not accompanied by benchmarks, details of the memory subsystem (for example, cache sizes and memory controller features), input/output capabilities, and the performance per watt. The MEITY statement also says the design includes "modern architectural features" and "enhanced multitasking capability" but doesn't specify what they entail.

Second, the statement claims the processor's "modern fabrication leverages technologies used for high-performance chips" but doesn't specify the foundry, packaging, yields or reliability targets. Applications in the telecommunications and automotive sectors require these details because they're used to determine the chip's lifecycle availability and failure rates.

Third, MEITY's claim that the chip is "fully indigenous" is ambiguous. The note highlights RISCV's open architecture and "no licence costs". However, "indigenous" can also mean an indigenous instruction set, indigenous core microarchitecture, indigenous system-on-chip integration, indigenous toolchain, indigenous fabrication or indigenous ownership of critical IP blocks.

Fourth, the announcement doesn't address questions relevant to an Original

Equipment Manufacturer (OEM), for example, when developer boards will ship, which operating systems are supported, what security features and audit mechanisms the chip has, and whether the government plans to use them in anchor scenarios (where by using them it will reduce the risks associated with adoption).

Fifth, the development roadmap is not clear. The statement says C-DAC's next indigenous chip will be 'DHANUSH' and 'DHANUSH+'; they appear to currently be in the engineering or design stage.

The MEITY statement indicated DHANUSH will be a 1.2-GHz quad-core processor and that DHANUSH+ will be a 2-GHz quad-core processor. One 2023 C-DAC document also reported that DHANUSH will have a process node – a figure denoting the transistors' size – of 28 nm. *The Register* reported that DHANUSH+'s would be 14 or 16 nm.

What comes next?

India has been focusing on schemes to widen talent and the scope for start-ups. The 'Chips to Startup' programme, with an outlay of ₹250 crore over five years; the Design Linked Incentive scheme; and the INUP-12i initiative are intended to improve access to nanofabrication facilities and training. As of 2025, the India Semiconductor Mission has also approved 10 projects in six States with investments of ₹1.6 lakh crore.

Against this backdrop, the government's plan for DHRUV64 seems to be a move towards system-on-chip families, more reference designs, better software support, and sufficient manufacturing and testing capacity for domestic products. The end goal is for Indian consumers to choose an Indian chip without assuming unacceptable costs or risk.

THE GIST

The DHRUV64 chip is a fully indigenous microprocessor developed by the Centre for Development of Advanced Computing (C-DAC) under MEITY's Microprocessor Development Programme.

DHRUV64 is tied to the Digital India RISCV (DIR-V) programme, which aims to build a portfolio of RISCV-based microprocessors for industry, military, and consumer technologies.

The 'Chips to Startup' programme, with an outlay of ₹250 crore over five years; the Design Linked Incentive scheme; and the INUP-12i initiative are intended to improve access to nanofabrication facilities and training.



Inside the DHRUV64 microprocessor

DHRUV 64 माइक्रोप्रोसेसर के भीतर

- On December 15, the Ministry of Electronics and Information Technology (MEITY) announced the launch of **DHRUV64**, an **indigenous microprocessor** that it said would strengthen the **national indigenous processor pipeline**.
15 दिसंबर को इलेक्ट्रॉनिक्स और सूचना प्रौद्योगिकी मंत्रालय (MEITY) ने DHRUV64 नामक एक स्वदेशी माइक्रोप्रोसेसर के लॉन्च की घोषणा की, जिसे राष्ट्रीय स्वदेशी प्रोसेसर पाइपलाइन को मज़बूत करने वाला बताया गया।
- Its purported applications span the **breadth of electronics to industrial automation**.
इसके संभावित उपयोग इलेक्ट्रॉनिक्स से लेकर औद्योगिक स्वचालन तक फैले हुए हैं।

What is DHRUV64?

DHRUV64 क्या है?

- The **DHRUV64 chip** is a **fully indigenous microprocessor** developed by the **Centre for Development of Advanced Computing (C-DAC)** under **MEITY's Microprocessor Development Programme**.
DHRUV64 चिप एक पूरी तरह स्वदेशी माइक्रोप्रोसेसर है, जिसे MEITY के माइक्रोप्रोसेसर डेवलपमेंट प्रोग्राम के तहत सी-डैक (C-DAC) द्वारा विकसित किया गया है।
- The microprocessor is a **general-purpose 'brain' for electronics** — a **64-bit, dual-core processor that runs at 1 GHz**.
यह माइक्रोप्रोसेसर इलेक्ट्रॉनिक्स के लिए एक सामान्य-उद्देश्य 'ब्रेन' है — एक 64-बिट, डुअल-कोर प्रोसेसर जो 1 GHz पर चलता है।
- These **specifications** could mean the processor is **fast enough to run operating systems while also being efficient enough for embedded deployment**.
ये विशेषताएँ संकेत देती हैं कि यह प्रोसेसर ऑपरेटिंग सिस्टम चलाने के लिए पर्याप्त तेज़ है और साथ ही एम्बेडेड उपयोग के लिए भी कुशल है।
- India is a major market for processors** yet continues to depend on **imported designs and supply chains**.
भारत प्रोसेसरों का एक बड़ा बाज़ार है, फिर भी वह आयातित डिज़ाइनों और सप्लाय चैन पर निर्भर बना हुआ है।
- To this end the **Indian government** has pitched for a **"homegrown processor technology"**.
इसी उद्देश्य से भारत सरकार ने "होमग्रोन प्रोसेसर तकनीक" पर ज़ोर दिया है।
- Such processors sit at the **base of everything from telecom networks to industrial control**.
ऐसे प्रोसेसर टेलीकॉम नेटवर्क से लेकर औद्योगिक नियंत्रण प्रणालियों तक हर चीज़ की नींव में होते हैं।
- So whoever controls their design, toolchain, and update pathways will also control security assumptions and resilience during export controls or supply shocks**.
इसलिए जो कोई उनके डिज़ाइन, टूलचेन और अपडेट पाथवे को नियंत्रित करता है, वही निर्यात नियंत्रण या सप्लाय शॉक के समय सुरक्षा और लचीलापन भी नियंत्रित करेगा।

What do DHRUV64's specs mean?

DHRUV64 की स्पेसिफिकेशन का क्या अर्थ है?

- DHRUV64** is not a chip meant only for **simple sensing or appliance logic**.
DHRUV64 केवल सरल सेंसिंग या उपकरण लॉजिक के लिए बना चिप नहीं है।
- In general, **64-bit designs** are used when users want **modern operating systems and contemporary software**.
आमतौर पर 64-बिट डिज़ाइन तब उपयोग किए जाते हैं जब उपयोगकर्ताओं को आधुनिक ऑपरेटिंग सिस्टम और समकालीन सॉफ्टवेयर चाहिए होते हैं।
- The **specified performance** is **low compared to top-tier consumer standards**.
निर्धारित प्रदर्शन स्तर, शीर्ष-स्तरीय उपभोक्ता मानकों की तुलना में कम है।
- Today's **state-of-the-art smartphone and laptop processors** tend to combine **many more CPU cores with higher peak clock speeds**.



आज के अत्याधुनिक स्मार्टफोन और लैपटॉप प्रोसेसर आमतौर पर अधिक CPU कोर और उँची क्लॉक स्पीड के साथ आते हैं।

- They also include **specialised blocks like Graphic Processing Units (GPUs)**, which can **efficiently handle machine-learning workloads**.
इनमें ग्राफिक प्रोसेसिंग यूनिट (GPU) जैसे विशेषीकृत ब्लॉक भी होते हैं, जो मशीन लर्निंग वर्कलोड को कुशलता से संभालते हैं।
- This said, a lot of **contemporary computing in the modern economy doesn't demand topline CPUs**.
इसके बावजूद, आधुनिक अर्थव्यवस्था में होने वाली बहुत सी समकालीन कंप्यूटिंग को शीर्ष स्तर के CPU की आवश्यकता नहीं होती।
- These applications include **base station subsystems in telecommunications, industrial controllers, routers, and many automotive modules**.
इन अनुप्रयोगों में टेलीकॉम के बेस स्टेशन सबसिस्टम, औद्योगिक कंट्रोलर, राउटर, और कई ऑटोमोटिव मॉड्यूल शामिल हैं।
- They prize **reliability and better hardware-software integration**.
इनमें विश्वसनीयता और बेहतर हार्डवेयर-सॉफ्टवेयर एकीकरण को प्राथमिकता दी जाती है।
- At the same time, as the technology publication **The Register** wrote, "Those are fields in which **established chipmakers already offer mature products**, and accompanying **software and hardware development ecosystems**."
इसी दौरान, तकनीकी प्रकाशन **The Register** ने लिखा कि ये ऐसे क्षेत्र हैं जहाँ स्थापित चिप निर्माता पहले से परिपक्व उत्पाद और उनके साथ सॉफ्टवेयर व हार्डवेयर डेवलपमेंट इकोसिस्टम प्रदान करते हैं।
- "Even the most **patriotic Indian electronics manufacturer would surely find it hard to put the DHRUV64 at the top of their bill of materials shopping list**."
"यहाँ तक कि सबसे देशभक्त भारतीय इलेक्ट्रॉनिक्स निर्माता के लिए भी DHRUV64 को अपनी बिल ऑफ़ मैटीरियल्स शॉपिंग लिस्ट में सबसे ऊपर रखना मुश्किल होगा।"
- **India therefore has plenty left to do if DHRUV64 is going to win customers**.
इसलिए, यदि DHRUV64 को ग्राहक जीतने हैं, तो भारत को अभी बहुत कुछ करना बाकी है।

What processors is India working on? भारत किन प्रोसेसरों पर काम कर रहा है?

- According to **MEITY**, **DHRUV64 is part of India's ecosystem of processors, including SHAKTI from IIT-Madras, AJIT from IIT-Bombay, VIKRAM from the ISRO-Semiconductor Lab, and THEJAS64 from C-DAC (2025)**.
MEITY के अनुसार, DHRUV64, भारत के प्रोसेसर इकोसिस्टम का हिस्सा है, जिसमें IIT-मद्रास का SHAKTI, IIT-बॉम्बे का AJIT, ISRO-सेमीकंडक्टर लैब का VIKRAM, और C-DAC का THEJAS64 (2025) शामिल हैं।
- **The needs these processors address include strategic operations, control systems in factories, spaceflight systems, and industrial automation**.
ये प्रोसेसर रणनीतिक संचालन, फैक्ट्रियों के नियंत्रण तंत्र, अंतरिक्ष उड़ान प्रणालियाँ, और औद्योगिक स्वचालन जैसी आवश्यकताओं को पूरा करते हैं।
- **MEITY has also pitched DHRUV64 as a platform on which startups, academia, and industry can build and test products on, "without relying on foreign processors", and can develop prototypes for new system architectures at lower cost**.
MEITY ने DHRUV64 को एक ऐसे प्लेटफॉर्म के रूप में भी प्रस्तुत किया है, जिस पर स्टार्टअप, अकादमिक जगत और उद्योग "विदेशी प्रोसेसरों पर निर्भर हुए बिना" उत्पाद विकसित और परीक्षण कर सकते हैं, तथा नई सिस्टम आर्किटेक्चर के लिए कम लागत में प्रोटोटाइप बना सकते हैं।
- **This is commendable because all processors everywhere, from the Intel Core series to the Espressif processors in DIY electronics, only succeed when they have an ecosystem around them**.
यह प्रशंसनीय है क्योंकि दुनिया भर में सभी प्रोसेसर, Intel Core सीरीज़ से लेकर DIY इलेक्ट्रॉनिक्स में उपयोग होने वाले Espressif प्रोसेसरों तक, तभी सफल होते हैं जब उनके चारों ओर एक इकोसिस्टम होता है।



What is DIR-V?

DIR-V क्या है?

- **RISC-V** (pronounced "risk five") is a set of **basic instructions** that a processor understands. **RISC-V** (उच्चारण "रिस्क फाइव") मूल निर्देशों का एक सेट है, जिसे कोई प्रोसेसर समझता है।
- A processor is like a **cook** who can only make the dishes written down in a **recipe book**. एक प्रोसेसर रसोइए की तरह होता है, जो केवल वही व्यंजन बना सकता है जो रेसिपी बुक में लिखे हों।
- This book is the **instruction set**: it lists commands like "**add two numbers**", "**move data from memory**", "**compare two values**", "**jump to another step in a program**", etc. यह पुस्तक ही इंस्ट्रक्शन सेट होती है, जिसमें "दो संख्याएँ जोड़ना", "मेमोरी से डेटा स्थानांतरित करना", "दो मानों की तुलना करना", "प्रोग्राम के दूसरे चरण पर जाना" जैसे आदेश सूचीबद्ध होते हैं।
- **RISC-V** is an **open instruction set**, which means its core rules are **publicly available** and anyone can design a chip that follows them **without paying a licence fee** for the instruction set itself. **RISC-V** एक ओपन इंस्ट्रक्शन सेट है, यानी इसके मूल नियम सार्वजनिक रूप से उपलब्ध हैं और कोई भी व्यक्ति लाइसेंस शुल्क चुकाए बिना इसके अनुसार चिप डिज़ाइन कर सकता है।
- This is **different** from instruction sets that are **controlled by a company and licensed to others**. यह उन इंस्ट्रक्शन सेट्स से अलग है, जिन्हें कोई कंपनी नियंत्रित करती है और दूसरों को लाइसेंस पर देती है।
- There the chip designers will need to **purchase licences, sign contracts, etc.** ऐसे मामलों में चिप डिज़ाइनरों को लाइसेंस खरीदने, अनुबंधों पर हस्ताक्षर करने आदि की आवश्यकता होती है।
- This is why **governments and research groups** sometimes prefer **RISC-V**. इसी कारण सरकारें और अनुसंधान समूह कई बार **RISC-V** को प्राथमिकता देते हैं।
- **RISC-V** is also **modular**: designers can start with a **small, standard core**, then add **extra features** like **faster arithmetics** or **security features** depending on what the chip is meant for. **RISC-V** मॉड्यूलर भी है, यानी डिज़ाइनर एक छोटे, मानक कोर से शुरुआत कर सकते हैं और आवश्यकता के अनुसार तेज़ गणना या सुरक्षा विशेषताएँ जोड़ सकते हैं।
- Put differently, **different chips can speak the same base language** while still being **fine-tuned for different tasks**. दूसरे शब्दों में, अलग-अलग चिप्स एक ही मूल भाषा बोल सकते हैं, लेकिन फिर भी अलग-अलग कार्यों के लिए अनुकूलित किए जा सकते हैं।
- **DHRUV64** is tied to the **Digital India RISC-V (DIR-V) programme**, which aims to build a **portfolio of RISC-V-based microprocessors for industry, military, and consumer technologies**. **DHRUV64**, डिजिटल इंडिया RISC-V (DIR-V) कार्यक्रम से जुड़ा है, जिसका उद्देश्य उद्योग, सैन्य और उपभोक्ता तकनीकों के लिए RISC-V आधारित माइक्रोप्रोसेसरों का पोर्टफोलियो तैयार करना है।
- **THEJAS32** was the **first India-designed DIR-V chip to be fabricated (in Malaysia)** and **THEJAS64** was the **second, made at SCL Mohali**. **THEJAS32**, भारत में डिज़ाइन किया गया पहला DIR-V चिप था जिसे मलेशिया में फ़ैब्रिकेट किया गया, और **THEJAS64** दूसरा था, जिसे **SCL मोहाली** में बनाया गया।
- **DHRUV64** is the **third on this list**. **DHRUV64**, इस सूची में तीसरा है।
- However, **MEITY hasn't said where DHRUV64 was fabricated, which leaves doubts about the supply chain**. हालाँकि, **MEITY** ने यह नहीं बताया है कि **DHRUV64** कहाँ फ़ैब्रिकेट किया गया, जिससे सप्लाई चेन को लेकर संदेह बने रहते हैं।

What is not known about DHRUV64?

DHRUV64 के बारे में क्या ज्ञात नहीं है?

- MEITY's announcement of **DHRUV64** is thin on the **engineering information** required to judge the chip's **readiness**.



MEITY द्वारा DHRUV64 की घोषणा में चिप की तैयारी का आकलन करने हेतु आवश्यक इंजीनियरिंग जानकारी की कमी है।

- There are **five issues** in particular. विशेष रूप से पाँच मुद्दे हैं।
- First, the **claim about the chip's performance** hasn't been contextualised in **measurable terms**.
पहला, चिप के प्रदर्शन से जुड़ा दावा मापनीय मानकों में प्रस्तुत नहीं किया गया है।
- The **headline specs**, that is, **1 GHz, 64-bit, dual-core**, are not accompanied by **benchmarks**, details of the **memory subsystem** (for example, **cache sizes** and **memory controller features**), **input/output capabilities**, and the **performance per watt**.
मुख्य विनिर्देश जैसे 1 GHz, 64-बिट, डुअल-कोर, के साथ बेंचमार्क, मेमोरी सबसिस्टम (जैसे कैश आकार और मेमोरी कंट्रोलर विशेषताएँ), इनपुट/आउटपुट क्षमताएँ, और प्रति वाट प्रदर्शन का विवरण नहीं दिया गया है।
- The MEITY statement also says the design includes “**modern architectural features**” and “**enhanced multitasking capability**” but doesn't specify what they entail.
MEITY के बयान में “आधुनिक आर्किटेक्चरल फीचर्स” और “बेहतर मल्टीटास्किंग क्षमता” का उल्लेख है, लेकिन यह स्पष्ट नहीं किया गया कि इनमें क्या शामिल है।
- Second, the **statement claims the processor's “modern fabrication leverages technologies used for high-performance chips”** but doesn't specify the **foundry, packaging, yields, or reliability targets**.

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