

Daily Current Affairs





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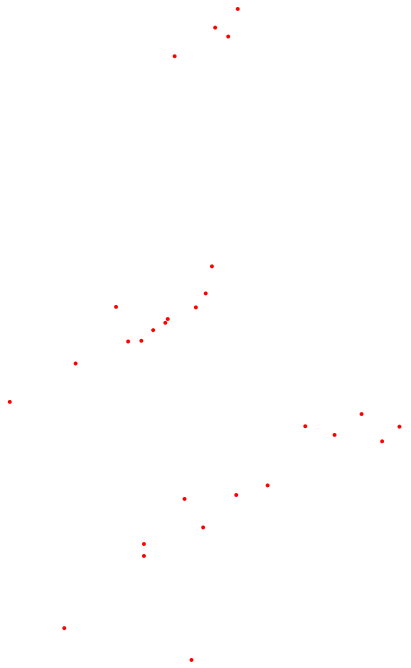
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10 MCQ QUIZ

“In a time of deceit
telling the truth is a
revolutionary act.”

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INSIDE



Trump hints at Vance for 2028 presidential run

WASHINGTON
U.S. President Donald Trump said on Tuesday Vice President J.D. Vance is "most likely" to secure the Republican early nomination for the President in 2028. **• PAGE 14**

Karol Nawrocki inaugurated as Polish President

WARSAW
Conservative Karol Nawrocki was inaugurated on Wednesday as Poland's new President, which could set the country on a more nationalist course. **• PAGE 18**

Trump hikes levy on Indian imports to 50%

U.S. President signs order for additional 25% tariff on Indian goods, doubling July 31 rate

One part takes effect today and the rest after 21 days; decision 'extremely unfortunate', says MEA

This is a 'severe setback', says FIEO chief, noting that 55% of Indian exports to U.S. market will be affected

T.G.A. Sharad Raghavan

NEW DELHI

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threatened additional tariffs on India as a "penalty" for its oil imports from Russia.

India's clear position

In response to one such threat, the MEA on Monday pointed out that, not only did the U.S. encourage such trade previously,

both the European Union and the U.S. actively trade other items with Russia in exchange of the amount that India pays for Russian oil.

"We have already made clear our position on these issues, including the fact that our imports are based on market forces and are done with the overall ob-

jective of ensuring the energy security of 1.4 billion people of India," the MEA statement said on Wednesday. "It is therefore extremely unfortunate that the U.S. should choose to impose additional tariffs on Indian exports, which several other countries are also taking in their own na-

tional interest."

"We reiterate that these actions are unfair, unjustified and unreasonable," the MEA added, "India will take all actions necessary to protect its national interests."

This latest escalation by Mr. Trump is a "severe setback" for Indian exports, said S.C. Rathin, president of the Federation of Indian Export Organisations (FIEO), noting that nearly 55% of Indian exports to the U.S. market will be directly affected.

The 50% reciprocal tariff effectively imposes a cost burden, placing our exporters at a 40% to 30% competitive disadvantage compared to peers from countries with a lower reciprocal tariff," Mr. Rathin added.

Negotiators from the U.S. and India are current-

ly engaged in finalising the final tranche of a Bilateral Trade Agreement (BTA) by fall of this year. The next physical meeting between the two sides is expected to start on August 25 in New Delhi.

"India should remain calm, avoid retaliation for at least six months, and recognise that meaningful trade negotiations with the U.S. cannot proceed under threats or mistreat," said Ajay Krivastava, founder of the Global Trade Research Initiative and a former Director General of Foreign Trade.

He added that India should consider arguing its purchases of Russian oil only if it was economically viable, and not under the res from Washington.

RELATED REPORTS

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190 rescued in Uttarkashi after flash floods

The Hindu Bureau
NEW DELHI

Around 190 people were rescued from Dharali town in Uttarkashi district of Uttarakhand on Wednesday, a day after devastating flash floods wreaked havoc, leaving scores missing and the town covered in mud and debris. Rescue teams also recovered two bodies from the site.

Bad weather continued to hamper rescue efforts, with roads to the area blocked by mud and boulders following landslides triggered by heavy rainfall. Rivers across the State remained above danger levels after continuous downpour over the past 90 hours.

Uttarakhand's Disaster Management and Rehabilitation Secretary Vinod Kumar Suman said "prima facie, around 18 people were missing from the disaster spot". Efforts were under

way to ensure that the rescue teams were able to work continuously, he added.

Tireless efforts

Mr. Suman said, "As many as 180 Army personnel from Rajgurunagar and 12 jawans from Garhak battalion are working tirelessly in the rescue operations in Dharali while 100 personnel of the Indo-Tibetan Border Police (ITBP) are also assisting. Around 40 Army personnel are working to the disaster site from Nainital valley where a 50-member team of the Army's medical wing has reached till today. Around 80 jawans of the State Disaster Response Force were stuck in Jagadkash due to landslides, he added.

Additionally, 100 ITBP personnel are expected to reach the site on Thursday.

EDITORIAL

• PAGE 18



War footing: Army personnel search through debris at Dharali in Uttarkashi on Wednesday following the flash floods. PTI

Petrol lobbies behind E20 fuel fear campaign: Gadkari

The Hindu Bureau
NEW DELHI

Tests show that older vehicles are not damaged in any way by using a new petrol blend with a higher 20% of ethanol, Union Minister for Road Transport and Highways Nitin Gadkari said on Wednesday, blaming the social media outrage against the new E20 blend on a "political conspiracy", possibly fuelled by petrol lobbies.

Speaking at The Hindu Mind event, a conversation series in the national capital, Mr. Gadkari emphasised that making the switch to biofuels helped put the country on the path to self-reliance by cutting oil imports, and also reduces pollution and saves farmers' lives by ensuring they received a

higher value for their crops.

While new E20-blended vehicles have started rolling out from April 2020, concerns about the impact on the country's fleet of one lakh kilometres and a surge in maintenance costs.

"Pure-based Automotive Research Association of India has tested old vehicles on a total of one lakh kilometres and found no problems," he said.

Asked whether the cheaper ethanol, valued at 10% of the total cost of the fuel, would result in lower prices, he said that it was given that there is also a 5% to 6% drop in mileage, Mr. Gadkari said that determining petrol prices was under his domain. While he acknowledged an impact on vehicle mileage,



Hindu Minister, political editor at The Hindu, presents a book to Union Minister Nitin Gadkari on Wednesday, who visited Uttarakhand.

he enumerated several benefits that accrued to the country due to the transition to E20, a fuel blend that comprises 20% ethanol produced from plant products such as sugarcane, rice, and maize, and 80% gasoline.

He said the transition to blended fuel started in

2001, when Atal Behari Vajpayee was the Prime Minister. The then Petroleum Minister sent a delegation to Brazil, of which Mr. Gadkari was a part.

"From an economic point of view, the country saved \$22 billion in refined fuel imports and the automotive industry is growing and imports are too. There are also concerns over rising levels of pollution. Thirdly, our push for alternative fuels and biofuels places the country on the path to *Atmanirbhara* [self-reliance]."

"No vested interest"

Allegations have also been made on social media about the Minister's "vested interest" in promoting ethanol blending because of his family's ownership of sugarcane companies such as the Puri Group.

"This is a deliberate misinformation campaign. We have identified an organisation that is shilling phones and talking to people to sow seeds on S.I. It is possible that this is a political conspiracy. It is common in politics," Mr. Gadkari said emphatically.

SC sets aside order limiting the names for State schemes

Krishnakumar Balasagopal

NEW DELHI

The Supreme Court on Wednesday dismissed as "misconceived" and an "abuse of law" a challenge raised by All India Anna Dravida Munnetra Kazhagam MP C. Ve. Shanmugam to naming a Tamil Nadu government outreach programme, "Ungathudai Nal".

A Bench headed by CJI R.N. Gavai set aside a Madras High Court order, passed in Mr. Shanmugam's petition, imposing "strict restrictions" on the Tamil Nadu government from naming State schemes after "any living personality".

FOU REPORT

• PAGE 4

SC asks EC for a detailed response on voter deletion

Krishnakumar Balasagopal

NEW DELHI

The Supreme Court on Wednesday asked the Election Commission (EC) to give a detailed response to an application seeking the particulars and reason for each of the 66 lakh voters deleted from the Bihar draft electoral roll.

The draft roll was published on August 1 as part of the special intensive revision (SIR) in the poll-bound State.

A Bench headed by Justice Surya Kant told the poll body to file the particulars by Saturday. A hearing has already been scheduled for August 12. The application, orally intervened by advocate Pradeep Kumar Bhattacharya and Neha Khatun for urgent hearing, said the reasons for deletion of the voters were various, including deaths, permanent shifting out of the State, duplication of names, and untraceability.

However, the reason for removing each name is not individually shown, either as a list of names who had been deceased, or as a list of names who had been deceased.

Adding to this, the local of each voter had not yet submitted their enumeration forms.

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While the initial 25% tariff will come into effect from Thursday, the additional 25% tariff will come into effect after 21 days.

The Ministry of External Affairs (MEA), in response, said it has made its stand clear – through an earlier statement following Mr. Trump's threat of additional tariffs – that these actions were "unfair, unjusti-

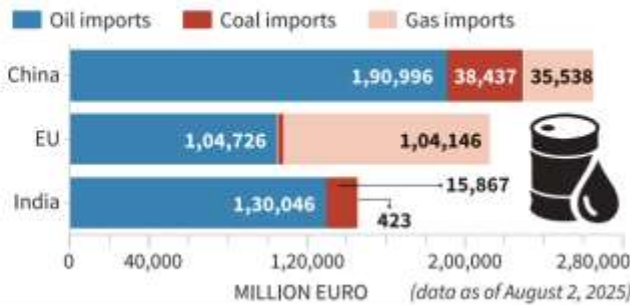
fied and unreasonable". It was "extremely unfortunate" that the U.S. has chosen this course of action, the MEA said.

"To deal with the national emergency described in Executive Order 14066 [relating to Russia's actions in Ukraine], I determine that it is necessary and appropriate to impose an additional *ad valorem* duty on imports of articles of India, which is directly or indirectly importing Russian Federation oil," Mr. Trump's executive order said.

"Accordingly, and as consistent with applicable law, articles of India imported into the customs territory of the United States shall be subject to an additional *ad valorem* rate of duty of 25%," it added. Over the last few days, Mr. Trump has repeatedly

Singling out India

Trump's rationale for tariffs on India for its oil trade with Moscow overlooks a key fact: all goods combined, China and EU have imported more from Russia since its invasion of Ukraine



threatened additional tariffs on India as a "penalty" for its oil imports from Russia.

India's clear position

In response to one such threat, the MEA on Monday pointed out that, not only did the U.S. encourage such trade previously,

both the European Union and the U.S. actively trade other items with Russia in excess of the amount that India pays for Russian oil.

"We have already made clear our position on these issues, including the fact that our imports are based on market factors and done with the overall ob-

Tariff imposition is an economic blackmail: Rahul

NEW DELHI

The Leader of the Opposition in the Lok Sabha, Rahul Gandhi, said the second round of tariff imposed on India was "economic blackmail" aimed at securing an unfair trade deal. PM Narendra Modi should not let his "weakness" override the interests of the Indian people, he said. » PAGE 4

jective of ensuring the energy security of 1.4 billion people of India," the MEA statement said on Wednesday. "It is therefore extremely unfortunate that the U.S. should choose to impose additional tariffs on India for actions that several other countries are also taking in their own na-

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"We reiterate that these actions are unfair, unjustified and unreasonable," the MEA added. "India will take all actions necessary to protect its national interests."

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"The 50% reciprocal tariff effectively imposes a cost burden, placing our exporters at a 30% to 35% competitive disadvantage compared to peers from countries with a lower reciprocal tariff," Mr. Ralhan added.

Negotiators from the U.S. and India are current-

ly engaged in finalising the first tranche of a Bilateral Trade Agreement (BTA) by fall of this year. The next physical meeting between the two sides is expected to start on August 25 in New Delhi.

"India should remain calm, avoid retaliation for at least six months, and recognise that meaningful trade negotiations with the U.S. cannot proceed under threats or mistrust," said Ajay Srivastava, founder of the Global Trade Research Initiative and a former Director General of Foreign Trade.

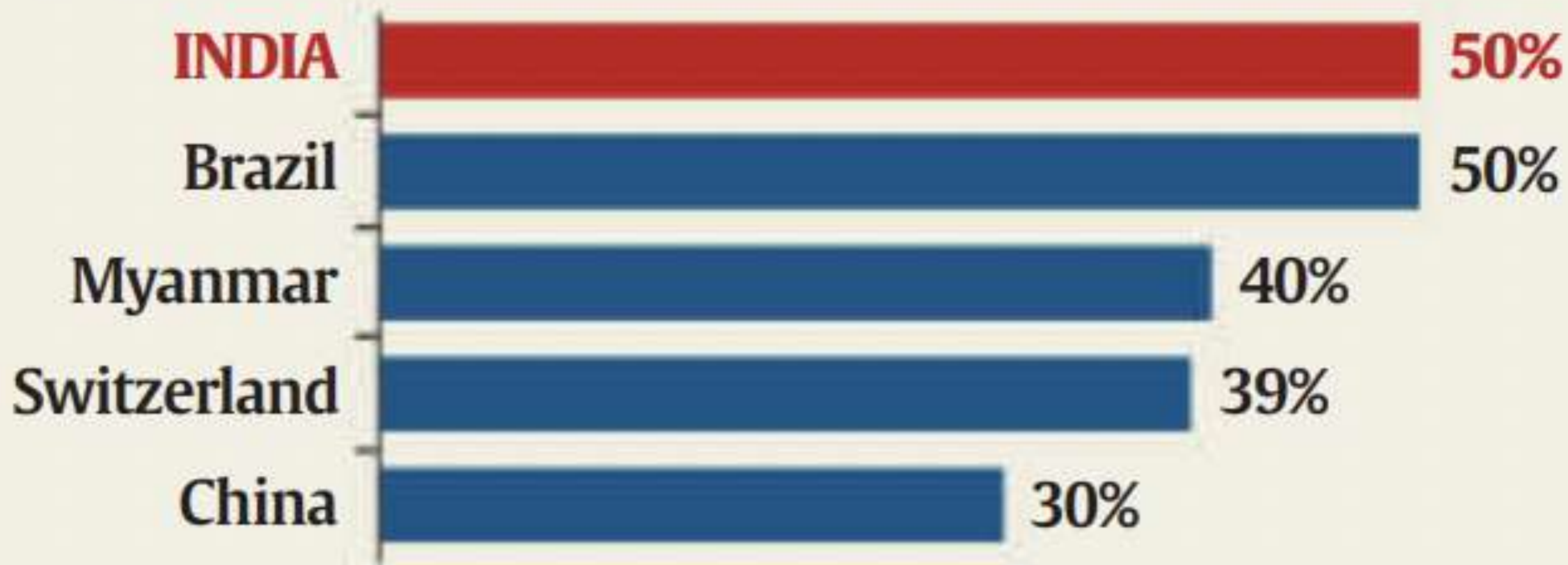
He added that India could consider stopping its purchases of Russian oil only if it was economically viable, and not under duress from Washington.

RELATED REPORTS

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INDIA, BRAZIL HEAD U.S. TARIFF LIST

COUNTRIES RATES



Source: White House

Topic	Details
Action Taken	U.S. President Donald Trump signed an executive order to impose an additional 25% tariff on Indian imports , making the total tariff 50%
Reason Cited	India's direct or indirect purchase of Russian oil after Russia's invasion of Ukraine
Effective Dates	First 25% from July 31; second 25% will take effect after 21 days
India's Response (MEA)	Called the move " unjustified and unreasonable "; vowed to protect national interests
India's Trade Facts	55% of Indian exports to the U.S. likely to be affected

Comparison with Others

China and EU import **more Russian oil** than India but weren't penalized similarly

Tariff Impact

Severe blow to Indian exporters; raises cost burden by 30–35% compared to countries with lower reciprocal tariffs

Rahul Gandhi's Statement

Called it "**economic blackmail**" to gain unfair trade advantage

India's Trade Strategy

Advised to **avoid retaliation for 6 months**, and aim to finalize **Bilateral Trade Agreement (BTA)** by end of 2025

India-Russia Oil Trade	India is the second-largest buyer of Russian crude after China since 2022
Agenda	Includes S-400 missile delivery, supply of Russian oil, and broader strategic cooperation
India's Stand	India has refused to submit to U.S. or EU trade sanctions over oil trade with Russia
Russia's Stand	Asserts " sovereign right " to trade with any nation, including India
Other Attendees	Doval to meet Russia's Deputy Security Council Secretary Aleksandr Venediktov
Geopolitical Implications	Meeting expected to discuss Ukraine crisis, U.S. actions, and Taliban regime recognition

INDIA AGRICULTURE EXPORTS TO U.S.

	2022	2023	2024	Jan-Jun 2024	Jan-Jun 2025	% Growth
Seafood	3016.5	2545.1	2483.8	1062.5	1407.9	32.5
Spices	333.9	359.3	410.2	194.7	206.9	6.3
Rice	301	347.4	391.2	176.8	199.6	12.9
Processed F&V	206.5	202.5	227.6	102.8	134.6	30.9
Baked Goods*	190.3	219.4	247.5	115.4	123.5	7.1
Essential Oils	228.9	180	212.1	109	114.2	4.8
Sugars**	218.5	174.6	171	84.6	119	40.8
Vegetable Oils	208.2	151.3	174.8	76.4	77.9	2
Food Preparations	81.1	105.2	137.9	62.5	58.7	-6
TOTAL	6,658.8	5,811.5	6,211.9	2,798.9	3,472.7	24.1

Exports in millions of dollars *Includes Cereals & Pasta; **Includes Sweeteners & Beverage Bases.
Source: US Department of Agriculture

U.S. AGRICULTURE EXPORTS TO INDIA

	2022	2023	2024	Jan-Jun 2024	Jan-Jun 2025	Growth in %
Tree Nuts	1,001.4	1,095.5	1,116.1	532	759.6	42.8
Ethanol	182.7	245.9	420.9	213.7	246	15.1
Soyabean Oil	207.6	0.2	37.5	0.1	212.4	1,42,997.6
Cotton	491.2	223.7	209	86.9	181.5	108.8
TOTAL	2,348.5	2,040.7	2,378.8	1,135.8	1,693.2	49.1

Exports in millions of dollars

Source: US Department of Agriculture

Petrol lobbies behind E20 fuel fear campaign: Gadkari

The Hindu Bureau
NEW DELHI

Tests show that older vehicles are not damaged in any way by using a new petrol blend with a higher 20% of ethanol, Union Minister for Road Transport and Highways Nitin Gadkari said on Wednesday, blaming the social media outrage against the new E20 blend on a “political conspiracy”, possibly fuelled by petrol lobbies.

Speaking at *The Hindu* Mind event, a conversation series in the national capital, Mr. Gadkari emphasised that making the switch to biofuels helped put the country on the path to self-reliance by cutting oil imports, and also reduces pollution and saves farmers’ lives by ensuring they received a

higher value for their crops.

While new E20-tuned vehicles have started rolling out from April 2025, existing owners are concerned about the impact on their older vehicles and a surge in maintenance costs.

“Pune-based Automotive Research Association of India has tested old vehicles on a total distance of one lakh kilometres and not found any problems,” the Minister said.

Asked whether the cheaper ethanol variant would result in lower petrol costs for the end user, given that there is also a 5% to 6% drop in mileage, Mr. Gadkari said that determining petrol prices was not under his domain. While he acknowledged an impact on vehicle mileage,



Nistula Hebbar, political editor at *The Hindu*, presents a book to Union Minister Nitin Gadkari on Wednesday. SHIV KUMAR PUSHPAKAR

he enumerated several benefits that accrued to the country due to the transition to E20, a fuel blend that comprises 20% ethanol produced from plant products such as sugarcane, rice, and maize, and 80% gasoline.

He said the transition to blended fuel started in

2001, when Atal Behari Vajpayee was the Prime Minister. The then Petroleum Minister sent a delegation to Brazil, of which Mr. Gadkari was a part.

“From an economic point of view, the country spends ₹22 lakh crore on fossil fuel imports and the automotive industry is gro-

wing and imports are too. There are also concerns over rising levels of pollution. Thirdly, our push for alternative fuels and bio fuels places the country on the path to *Atmanirbharta* [self-reliance].”

‘No vested interest’

Allegations have also been made on social media about the Minister’s “vested interest” in promoting ethanol blending because of his family’s ownership of sugarcane companies such as the Purti Group.

“This is a deliberate misinformation campaign. We have identified an organisation that is dialing phones and talking to people [to write posts on X]. It is possible that this is a political conspiracy. It is common in politics,” Mr. Gadkari said emphatically.

“Vajpayee ji started ethanol blending in 2001. Did he do it at my behest?” he asked.

He said that his family-owned companies are running at an annual loss of ₹30 crore, claiming that despite advice to shut them down, he continues to remain invested because of his own passion. These firms only generate a mere 1.3 lakh litres of ethanol, which is too small a quantity, he said.

“If I promote electric or hydrogen or flex engine car, does it mean I manufacture those? I promote various alternative and bio fuels so that import and pollution goes down, farmers don’t commit suicide, and we fulfil the dream of the Prime Minister of *atmanirbharta* [self-reliance],” Mr. Gadkari said.



Topic

Details

What is E20?

E20 is a fuel blend containing **20% ethanol and 80% gasoline**

Implementation

E20-tuned vehicles started rolling out from **April 2025**

Purpose


Reduce oil imports, cut pollution, increase farmer income, promote **Atmanirbhar Bharat**

Accusation

Nitin Gadkari alleged a **“political conspiracy”** behind social media criticism, allegedly fueled by **petrol lobbies**

Testing

Pune-based ARAI tested older vehicles over **1 lakh km** with E20 and found **no damage**





Concern Raised

Users fear **higher maintenance** and **5-6% mileage drop** in older vehicles

Gadkari's Response

Acknowledged mileage drop, but said **pricing not in his control**

No Vested Interest Claim


Refuted allegations of promoting E20 due to **family-owned sugar firms**, which generate only **1.3 lakh litres/year**

History

Ethanol blending began under PM **Atal Bihari Vajpayee in 2001**; Gadkari was part of a delegation to Brazil

Economic Impact

India saved **₹22 lakh crore** on oil imports due to ethanol blending



Composition of ethanol containing fuels

Code	E5	E10	E15	E25	E85	E100
Composition	<div>max 5% anhydrous ethanol</div> <div>min 95% gasoline</div>	<div>max 10% anhydrous ethanol</div> <div>min 90% gasoline</div>	<div>max 15% anhydrous ethanol</div> <div>min 85% gasoline</div>	<div>max 25% anhydrous ethanol</div> <div>min 75% gasoline</div>	<div>max 85% anhydrous ethanol</div> <div>min 15% gasoline</div>	<div>~7% water</div> <div>100% hydrous ethanol (contains about 7% water)</div>
Countries	Western Europe today	USA today (Western Europe in near future)	USA in near future	Brazil	USA / Europe	Brazil

Gasoline blends for use in regular cars

Flex Fuel Vehicles





Biofuels



- » Biofuels are the fuel derived from the biomass of plants or animal wastes. It is commonly produced from corn, sugarcane and animal waste like cow dung.

» Generation of biofuels

1st Generation Biofuel	Produced from edible items like sugar, corn, starch.	Higher carbon content and emit greenhouse gases.
2nd Generation biofuel	Produced from leftover food crops like rice husk, wood chips	Greenhouse content less than 1st generation biofuel
3rd Generation biofuel	Produced from microorganisms like algae.	Carbon Neutral (CO ₂ emitted=CO ₂ sequestered)
4th Generation biofuel	Produced from genetically engineered crops like GM crops	Carbon Negative

» Common biofuels used

Bioethanol	Produced from corn and sugarcane using fermentation process. E10 is the most common blend in which 10 per cent composition is Ethanol
Biodiesel	Produced from vegetable oils like soybean oil or palm oil, vegetable waste oils and animal fats using transesterification process.
Biogas	Produced from organic matter like sewage from animals and humans by anaerobic decomposition.

GOVERNMENT SCHEMES

PROMOTING ETHANOL PRODUCTION

NATIONAL POLICY ON
BIOFUELS (2018)



Boosts ethanol blending
using diverse feedstocks.

REPURPOSE USED COOKING
OIL (RUCO) INITIATIVE



Promotes biodiesel from
used cooking oil.

ETHANOL BLENDED PETROL
(EBP) PROGRAMME



Aims for E20 fuel by 2025-26,
cutting fossil fuel reliance.

INTEREST SUBVENTION
SCHEME



Aids sugar mills/distilleries
in ethanol expansion.

PM JI-VAN
YOJANA (2019)



Supports 2G ethanol
from agri-waste.

TARGET:

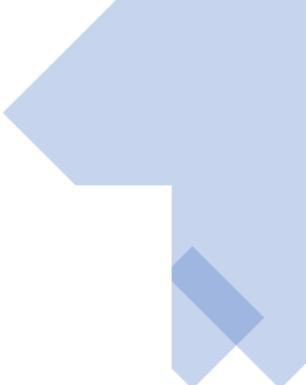
The government set an ambitious target of achieving
20% blending by 2025 (from existing 15 %)

Global Biofuels Alliance (GBA)

- The GBA is one of the priorities under India's G20 Presidency.
- The USA and Brazil, which are working with India to build the GBA, are seen as global leaders in biofuels and account for 55 percent and 27 percent of global ethanol production, respectively.
- The GBA is also being supported by major international organizations like the World Economic Forum, the International Energy Forum, and the International Energy Agency, among others.
- The Alliance is expected to be launched on July 22 during the G20 Clean Energy Ministerial in Goa.

About Biofuel


- Biofuel is a fuel that is produced over a short time span from biomass, rather than by the very slow natural processes involved in the formation of fossil fuels, such as petroleum.
- However, the word biofuel is usually reserved for liquid or gaseous fuels, used for transportation.
- Most of biofuel consumption occurs as a blend with refined petroleum products such as gasoline, diesel fuel, heating oil, and kerosene-type jet fuel.
- The most common biofuels now are – Bioalcohols such as ethanol, propanol, and butanol; Biodiesel; Bio-oils.



Q1. Consider the following statements regarding E20 fuel in India:

1. E20 fuel consists of 80% ethanol and 20% gasoline.
2. Ethanol used in E20 fuel can be derived from crops such as rice and maize.
3. E20-tuned vehicles started rolling out in India from April 2025.

Which of the statements given above is/are correct?

- A. 1 and 2 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 2 only
- 

'It's like writing a poem': maths prize winner Rajula Srivastava

Rajula Srivastava has won the Maryam Mirzakhani New Frontiers Prize for her work in harmonic analysis and analytic number theory. She discovered her love of maths in school, and then went on to major at the National Institute of Science Education and Research, Bhubaneswar

By Anil Subrahmanyan

Vhen Rajula Srivastava was first notified about a prestigious prize, she was quick to dismiss it. All she got was a cryptic email from the personal email address of mathematician Terence Tao asking if she was free for a chat. Tao, a professor at the University of California, Los Angeles, is widely considered one of the most gifted mathematicians of our time. Srivastava couldn't think of a reason why he would want to talk to her.

"I obviously thought it was a scam," she said. But then she got a second email from him ten minutes later, asking to Zoom. After ascertaining that the email was not fake, she proceeded to cautiously respond. During their chat, Tao broke the news that she had won the Maryam Mirzakhani New Frontiers Prize, an initiative of the Breakthrough Prize in Mathematics, for her work in harmonic analysis and analytic number theory. She couldn't believe it.

"I told him I thought it was a scam, and he found that very funny, [saying] 'maybe I want to scam a thousand out of you or something,'" she said with a laugh. "It was surreal, the way [he] call me."

A fondness for puzzles
Srivastava, a Harvard Research Instructor at the University of Bonn and the Max Planck Institute for Mathematics in Germany, grew up in a science-loving family.

In school, mathematics happened to be the subject she enjoyed the most among all the sciences because it involved the least amount of memorisation. "Once you understand the logic behind things, you don't have to memorise a lot of things — beyond the multiplication tables in kindergarten," she said.

She also realised she didn't like doing lab work, but she did enjoy solving puzzles. At the age of 12, she decided she wanted to be a mathematician and went on to do an integrated master's degree at the National Institute of Science Education and Research (NISER), Bhubaneswar, where she majored in maths.

She then wrote her master's thesis in harmonic analysis, the study of functions and how they can be represented in terms of their frequencies — a topic she had begun to like. For her PhD, she chose to go to the University of Wisconsin-Madison mainly because of its big harmonic analysis group.

Just like music can be broken down into harmonies, signals can be broken down into the frequencies that make them up. "But you need to be able to do it in a sensible way, so that the information you have in this breakdown should be rich that you should be able to reconstruct your complicated signal once more from these pieces," Srivastava explained.

That's the basic idea of harmonic analysis, where one breaks down functions in terms of their frequencies or "harmonics" using a method called the Fourier transformation. One can imagine these frequencies lie on a line, but you can also ask these questions in higher dimensions, Srivastava said. "Then it's also about geometry, about the patterns and the shapes in which these waves are arranged."

To imagine a three-dimensional wave, picture a sound wave travelling in all directions via the molecules in air, or the ripples from an earthquake as it reverberates through the ground. In each case, there is a point at which the vibration originates, and the emanating waves then form the shape of a sphere. The vibrations travel radially outwards, perpendicular to the expanding wave. Her work mostly focused on waves in three or even higher dimensions.



Rajula Srivastava is grateful for her early education in India and to the many Indian universities, including hers, that invest a lot in their students with scholarships and low fees. anil.subrahmanyan@hindu.com

new use them to count things?

She offered a simple example. While positioning integers on the number line, we learn that rational numbers have an exact address on the line. Even if it is a fraction, the say $\frac{1}{2}$, the number line can be chopped up into smaller and smaller parts until we have an exact location for it. Irrational numbers don't have an exact address, but one can still make a well-educated guess.

"We can say that it's between 1/1,000,000 and 2/1,000,000, [for example], which is a very tiny part and use those fractions to approximate your point," she explained. "You're saying up to this error, it is between these two fractions."

But she worked on a similar question in higher dimensions. Instead of a line, imagine a three-dimensional shape like a sphere. Now if the point you want to map is somewhere on the manifold of this shape, what can you say about its approximate location? "That's how the geometry comes in," she said.

In higher dimensions, the fractions lie on a grid or lattice instead of being equally spaced on a one-dimensional number line. "So I have a lattice, and I have a shape inside the lattice. And then I'm asking how close can points of this lattice get to points on the manifold?" That's how the two ideas — of having points in 3D space — converge. "If you know that your waves live on a nice shape, then you know something about those waves or [their] frequencies," she said. As both the wave frequencies and lattices are periodic, she worked on using the waves' periodicity to count points on a shape within a lattice. Working on these problems eventually went on to win her



In math, you pretty much just need pen and paper. You can be anywhere, and you can just start thinking about the problem

RAJULA SRIVASTAVA
RESEARCHER IN HARMONIC ANALYSIS AT THE UNIVERSITY OF BONN AND THE MAX PLANCK INSTITUTE FOR MATHEMATICS

the Maryam Mirzakhani New Frontiers Prize

More conferences in India
Even as one of only two women out of the 25 students doing maths in her department at NISER, she didn't feel any specific barriers to her progress during her integrated master's program in India. She was confident, doing well in her exams, and didn't have the need to constantly prove herself to others, that that changed when she went abroad: now she was not only a woman, but she was also non-white. She eventually formed a community and received support from her doctoral students and mentors, but she still felt some alienation at the start when she moved out of India.

"You feel that you need to prove yourself more. You have less of a community to fall back on because there's just less of you," Srivastava said. "Sometimes if you're the only brown woman in the room, you also somehow feel that you're scrutinised more. Like, if you're asking a question, then it better be a good question, not something stupid." She thinks things are changing now, though, with more women of colour doing maths.



Rajula will soon move back to the University of Wisconsin-Madison and continue working on the intersection of harmonic analysis and number theory. anil.subrahmanyan@hindu.com

Srivastava is coming full circle in her own career. Currently a visiting research fellow at the University of Edinburgh, she will soon move back to the University of Wisconsin-Madison and continue working on the intersection of harmonic analysis and number theory. She decided to move abroad long term because her husband is German, and it was logistically easier to move to the US than to India for both of them.

Another reason was more exposure to people and resources and being updated on new research developments, since many of the big conferences don't happen in India. "I feel like they should do more [conferences] in developing countries, not just India, but also other countries of the Global South," she said. Srivastava enjoys being part of a broader community: friends and associates who all speak the common language of maths and whom she was able to meet and collaborate with on problems once she moved out of India. But she's also grateful for her early education in India and to the many Indian universities, including hers, that invest a lot in their students with scholarships and low fees.

Like writing a poem

But doing maths can also be very frustrating at times, she said. Like when one spends most of the time coming up with answers to a problem instead of being able to just sit down and solve it. "Sometimes you have the broad outline, that this is how it should work. But when you're trying to write all the steps might take time," she said.

"Sometimes the ideas might come in a week, but just to write things might take months." The rewards from small victories, like proving down one small theorem as part of a larger proof, keep her going. She also greatly values the independence of not having immediate deadlines and not needing to rely on expensive resources to work on her research questions. The latter is often the case in other fields like biology. "In math, you pretty much just need pen and paper. You can be anywhere, and you can just start thinking about the problem," she said. "Maybe you need a board and chalk, and that's it."

On a day-to-day basis, if she's really focused on a problem, maths is almost like meditation for Srivastava. She described how some think of it like a cross between art and science. "There's something which is just in your brain and then somehow you prove [it], and then it's true. Once it's true, it will always stay," she said.

"In some ways, it's like writing a story or a poem. I like the fact that you can create something which lasts in that way."

(Anil Subrahmanyan is a freelance journalist in Bengaluru. anil.subrahmanyan@hindu.com)



Plant flowers are surprisingly monogamous. anil.subrahmanyan@hindu.com

Most flowers usually pick one father and stick with him

Vasudevan Mukunth

Conflict lurks inside every flower with multiple seeds. The embryo jostle for food, the maternal and paternal genomes bargain over control, and pollen grains compete to be fertilised. Scientists have therefore wondered whether natural selection encourages one-parent broods that keep such squabbles to a minimum and, in so doing, make plant flowers unexpectedly monogamous, much like many animal families.

Scientists have also long believed that most large fruits mix the genes of several parents, a view already under fire from smaller case-studies that hinted at widespread single paternity.

In challenging that orthodoxy, a new study — including scientists from the Ashoka Trust for Research in Ecology and the Environment, Bengaluru and the Nature Conservancy — and the recent initiative in New Delhi — provides a satisfying picture of how kin conflict, pollinator behaviour, and flower design shape reproduction across the plant kingdom.

The scientists searched the research literature, focusing on papers published between 1964 and 2024, and selected 112 candidate studies. They finally shortlisted 63 species representing many flowering plant families. For each of these species, they tracked down genetic studies that compared the DNA fingerprints of sibling seeds and converted the resulting "correlated paternity" values into a number of pollen donors per fruit.

Upon analysis, the scientists found that the headline numbers overturned the textbook story. Among the 63 species, 15 (or 24%) had strictly single paternity, and another 18 (28%) averaged fewer than 1.5 fathers per fruit. Taken together, 52% of the sample displayed de facto monogamy at the flower level. The remaining 46% did allow multiple fathers, yet even here most fruits harboured only two or three donors, a far cry from the genetic

The plant world may resemble animals more closely than once thought. Single fathers dominate, with true asexual polyandry, the exception rather than the rule

free-for-all that scientists once assumed was the case. The pattern became clearer when the scientists split the species by mating system. In plants that couldn't be mated with others of the same species, i.e. which must receive pollen from other individuals, 85% of fruits were sired by a single donor, to self-compatible plants, on the other hand, fruits had a single donor in only 4% of instances. Statistical tests also confirmed that the self-incompatible group consistently hosted fewer fathers per fruit.

The seed number also mattered less than expected. Although very large fruits sometimes had several donors, no overall rise in pollen parents accompanied an increase from less than a handful of seeds. Indeed, across all species, the link between seed count and paternity vanished after the scientists controlled for evolutionary relatedness.

The team also found that the breeding system, not the ancestry, best predicted paternity patterns, implying that kin conflict and pollinator precision evolve quickly when selection demands it. As a result, the plant world may resemble animals more closely than once thought: single fathers dominate, with true genetic polyandry the exception rather than the rule.

In their paper, published in *Proceedings of the National Academy of Sciences* on August 5, the scientists have urged more fieldwork, especially measurements of how many individual pollinators contribute to a single pollen load, to reveal exactly where and how plants shift from monogamy to polyandry, but for now their message is clear: most flowers, even crowded ones, usually pick one father and stick with him.

mukunth.v@hindu.co.in

For feedback and suggestions for Science, please write to science@hindu.co.in with the subject 'Daily page'

It's like writing a poem': maths prize winner Rajula Srivastava

Rajula Srivastava has won the Maryam Mirzakhani New Frontiers Prize for her work in harmonic analysis and analytic number theory. She discovered her love of maths in school, and then went on to major at the National Institute of Science Education and Research, Bhubaneswar

Rohini Subrahmanyam

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A fondness for puzzles

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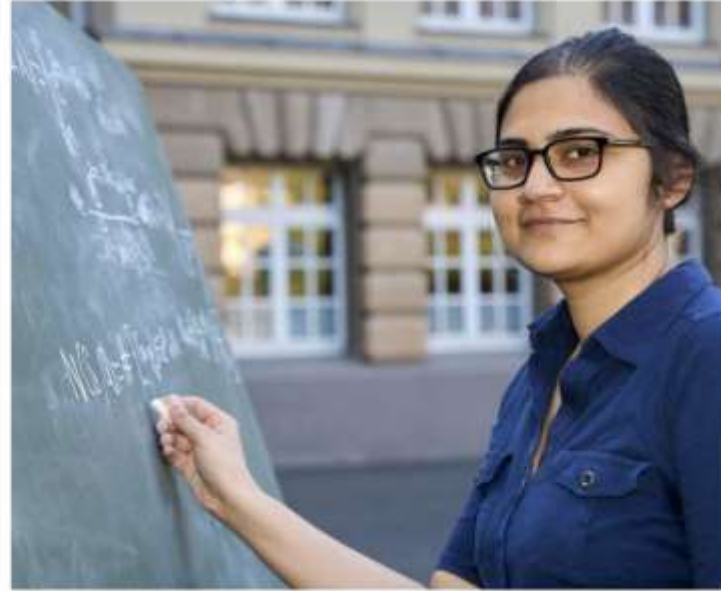
In school, mathematics happened to be the subject she enjoyed the most among all the sciences because it involved the least amount of memorisation. "Once you understand the logic behind things, you don't have to memorize a lot of things ... beyond the multiplication tables in kindergarten," she said.

She also realised she didn't like doing lab work, but she did enjoy solving puzzles. At the age of 15, she decided she wanted to be a mathematician and went on to do an integrated master's degree at the National Institute of Science Education and Research (NISER), Bhubaneswar, where she majored in maths.

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Just like music can be broken down into harmonies, signals can be broken down into the frequencies that make them up. "But you need to be able to do it in a sensible way, so that the information you have in this breakdown should be such that you should be able to reconstruct your complicated signal once more from these pieces," Srivastava explained.

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Rajula Srivastava is grateful for her early education in India and to the many Indian universities, including hers, that invest a lot in their students with scholarships and low fees. ©STEVE HUI, VIA BONN SPECIAL ARRANGEMENT

now use them to count things?

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Winner	Rajula Srivastava, Indian mathematician
Award	Maryam Mirzakhani New Frontiers Prize for work in harmonic analysis and analytic number theory
Early Education	Majored in mathematics at NISER, Bhubaneswar ; grew up in science-loving family
Master's Thesis	Focused on harmonic analysis — how functions are represented using their frequencies
PhD	University of Wisconsin-Madison
Current Position	Visiting research fellow at the University of Edinburgh , soon to join University of Wisconsin-Madison
Research Areas	Harmonic analysis, number theory, approximation of irrational numbers, geometry of shapes

Maryam Mirzakhani New Frontiers Prize – Overview

Aspect	Details
Purpose	Honors outstanding early-career women mathematicians
Eligibility	Must have completed PhD within the past 2 years breakthroughprize.org +14
Organizer	Breakthrough Prize Foundation (part of the Breakthrough Prize in Mathematics series) Wikipedia breakthroughprize.org
Prize Amount	US \$50,000 simons.berkeley.edu mpim-bonn.mpg.de breakthroughprize.org
Frequency	Awarded annually , up to three recipients per year breakthroughprize.org +1

Wikipedia +4

- **2025 Laureates** include:
 - **Ewin Tang** – Awarded for *classical analogs of quantum algorithms* and advances in *quantum machine learning* humsci.stanford.edu +3 simons.berkeley.edu
 - **Si Ying Lee** – Recognized for work on the *theory of Shimura varieties* math.harvard.edu +1
 - **Rajula Srivastava** – Honored for her research at the intersection of *harmonic analysis and number theory* mpim-bonn.mpg.de +3

Finland-based thinktank exposes US double standard

Sanjay Dutta & Sachin Parashar | TNN

New Delhi: European Union countries account for 23% of Russia's revenues from fossil fuel exports against India's 13% since the beginning of the Ukraine conflict, while G7+ tankers are currently transporting more than half of those barrels, data published by CREA (Centre for Research on Energy and Clean Air) shows.

Indian govt sources here said this further spotlighted Western hypocrisy in targeting India for securing its energy interests, while ignoring similar action by other countries. European Union has been procuring not just energy but also fertilizers, chemicals, iron, steel and transport equipment from Russia.

"These figures only vindicate India's emphasis on ensuring for its citizens regular and affordable energy supplies," said a source on condition of anonymity.

Seen in the backdrop of the US on Wednesday doubling tariff on India to 50% for "fuelling the Russian war machine" by buying its oil and last month's EU sanction on Indian refining entity Nayara Energy, the Finland-based independent think-tank's latest report exposes what New Delhi describes as West's "double standard" in singling out India.

The report says Moscow has raked in EUR 923 billion (92,300 crore) so far from fossil fuel exports such as oil, natural gas, coal, refined fuels and intermediaries. Of this, EUR 212 billion (21,200 crore) came from EU countries compared with EUR 121 billion (12,100 crore) from India. China remained the top buyer of Russian

WHO BOUGHT HOW MUCH



energy with a tab of over EUR 200 billion (20,000 crore).

The report points out the growing role of G7 tankers in transporting Russian oil since the EU's June sanctions. This underlines the disconnect between western policy and practice pointed out by New Delhi. "Since Jan, the G7+ share in Russian oil transport has increased from 36% to 56%," it says. More than half of Russian seaborne oil exports were transported in G7+ tankers in June, reflecting a six percentage point increase over May.


Use of western tanker fleet means those shipments were com-


pliant with the price cap and other terms of the sanctions. India argues it has helped prevent a flare-up in oil prices by buying Russian oil, accounting for about 9% of daily global supply. That is also the key consideration that led the US and the EU to opt for a price cap—rather than choking off the flow with sanctions—for curbing funding for Moscow's war efforts without spooking the oil markets.

Overall, however, the report does say that "Russian fossil fuel revenues in second quarter of 2025 dropped by 18% year-on-year—lowest in a quarter since the invasion of Ukraine."




Aspect	Details
Think Tank	CREA (Centre for Research on Energy and Clean Air), Finland-based
Core Finding	Western countries, especially the EU , continue importing Russian fossil fuels despite criticizing India
India's Share	India accounts for 13% of Russia's fossil fuel revenues since the Ukraine war began
EU Share	EU accounts for 23% , despite sanctions
U.S. Hypocrisy	U.S. doubled tariffs on Indian imports citing Indian purchase of Russian oil, but ignored larger buyers like EU and China





Top Importer	China: EUR 2,00,439 million
India's Import	EUR 1,21,714 million (2nd highest)
Transport Mode	Over 50% of Russian fossil fuel exports were transported using G7+ tankers in June 2025
Western Tactics	Opted for price cap on Russian oil rather than a full ban, ensuring continued flow
India's Stand	Prioritized energy security and affordable energy for its citizens
Q2 2025 Result	Russia's fossil fuel revenues dropped 18% YoY , the lowest since war began






Q1. With reference to India's energy imports from Russia, consider the following statements:


1. India is the largest importer of fossil fuels from Russia since the Ukraine war began.
2. India's imports account for a higher share of Russian fossil fuel revenue than the EU.
3. The EU has imported not only fossil fuels but also fertilizers and chemicals from Russia.

Which of the above is/are correct?

- A. 1 and 3 only
 - B. 2 and 3 only
 - C. 3 only
 - D. 1, 2 and 3
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RBI Holds Repo
Rate and Lowers
Inflation Forecast



- 
- The Reserve Bank of India's (RBI) in its **Monetary Policy Committee (MPC)** meeting decided to keep the **repo rate unchanged at 5.50%**.
 - **What is the Repo Rate?**
 - The repo rate is the **rate at which the RBI lends short-term money** to commercial banks. **It is the key policy tool** used by the RBI to control liquidity, inflation, and economic growth.
 - **A lower repo rate** means banks can borrow from the RBI at cheaper rates. This encourages banks to lower lending rates, leading to:
 - Easier access to credit for consumers and businesses
 - Boost in investment, consumption, and economic activity
 - Increased liquidity and money supply
 - This can stimulate growth, especially during economic slowdowns

Policy Rates

Policy Repo Rate : 5.50%

Standing Deposit
Facility Rate : 5.25%

Marginal Standing
Facility Rate : 5.75%

Bank Rate : 5.75%

Fixed Reverse
Repo Rate : 3.35%

Exchange Rates

INR / 1 USD : 87.7000

INR / 1 GBP : 116.6948

INR / 1 EUR : 101.6022

INR / 100 JPY : 59.4700

(As at 1.00pm of August 06, 2025)

(Source : FBIL)

Lending / Deposit Rates

Base Rate : 8.50% - 10.30%

MCLR (Overnight) : 7.95% - 8.20%

Savings Deposit
Rate : 2.50%

Term Deposit Rate
> 1 Year : 5.85% - 6.70%

What is the Monetary Policy Committee (MPC)?

The MPC is a **statutory body** established under the **RBI Act, 1934** (amended in 2016).

It is responsible for **fixing the benchmark interest rate** (repo rate) to maintain price stability while keeping growth in mind.

It consists of 6 members:

- 3 from the RBI (including the Governor as Chairperson),
- 3 external members appointed by the Government.

Decisions are made by majority, and each member has one vote. In case of a tie, the **RBI Governor has the casting vote.**

Flexible Inflation Targeting Framework (FITF)

India adopted a Flexible Inflation Targeting Framework (FITF) in **2016**. Under this, the government, in consultation with the RBI, **sets an inflation target every five years**.

Under this framework, the Government sets the inflation **target every five years** in consultation with the RBI. The current mandate, effective until **March 31, 2026**, specifies a CPI inflation target of **4%**, with a tolerance band of **±2%**, i.e. between 2% and 6%

Reasons Behind the Policy Decisions

Sharp Decline in Inflation: CPI inflation fell to **2.1%** in June 2025, a six-year low.

- Food prices, especially vegetables and cereals, have shown deflationary trends. This led to the downward revision of FY26 inflation forecast to 3.1%.

Global Uncertainties: Rising trade tensions like US tariffs and volatile oil prices create external risks.

RBI had already cut the repo rate by 100 basis points earlier in 2025. The committee wants to observe the full impact of these cuts on the economy.



District Flood Severity Index

Researchers from IIT Delhi and IIT Gandhinagar have developed a **District Flood Severity Index (DFSI)** to comprehensively assess the severity of floods across Indian districts.

District Flood Severity Index (DFSI)

DFSI is a data-driven tool designed to assess and categorize flood severity at the district level, India's primary administrative unit for planning and disaster management.

The index is used to identify districts most at risk and guide resource allocation for mitigation and response.

TDM	725.89	915.51	185.62	▲25.43%	FLR	660.27	745.28	85.01	▲12.88%
KDM	748.73	924.29	174.56	▲23.28%	DVD	155.59	181.57	25.98	▲16.70%
DMW	533.72	1004.01	170.29	▲20.43%	QUV	440.55	540.21	99.66	▲22.62%
YZJ	903.49	1127.46	223.97	▲24.79%	HZT	285.51	344.90	59.47	▲20.83%
OLY	582.07	1219.39	237.32	▲24.17%	PCW	811.44	1029.66	218.22	▲26.89%
VDA	113.74	143.41	29.67	▲26.09%	AIK	361.77	451.39	89.62	▲24.77%
UVV	468.08	535.41	67.33	▲14.38%	ZJJ	858.36	994.57	136.21	▲15.87%
BJS	545.45	858.05	113.59	▲20.82%	RHJ	804.79	1046.60	151.80	▲18.97%

PPJ	877.97	1001.36	123.39	▲13.79%	DEA	591.20	491.48	99.72	▲25.31%
WAO	1200.55	1075.80	124.75	▲25.47%	GRY	559.21	570.05	110.84	▲15.56%
UOL	1200.17	1041.89	158.28	▲21.25%	SDM	728.44	913.38	177.94	▲24.20%
WAB	854.35	775.84	78.51	▲15.97%	TOU	1222.91	1042.82	180.09	▲24.10%
					STY	1016.42	1077.74	161.32	▲15.71%

- **Key Parameters Considered:**

- **Mean duration (in days)** of all flooding events in a district.
- **Percentage of district area** historically affected by floods.
- **Total deaths** and number of people injured due to floods.
- **Population size** of the district.

- **Data Used:** Sourced mainly from the **Indian Meteorological Department (IMD)**, which has been collecting flood-related data since **1967**.

- Custom 40-year spatial datasets developed at IIT Delhi.

Key Insights from the DFSI

Thiruvananthapuram District: Recorded highest number of flood events.

- However, it is absent from the **top 30** most severely affected districts, indicating lower severity per DFSI criteria.

Top Districts in Flood Severity: Patna ranks one on DFSI.

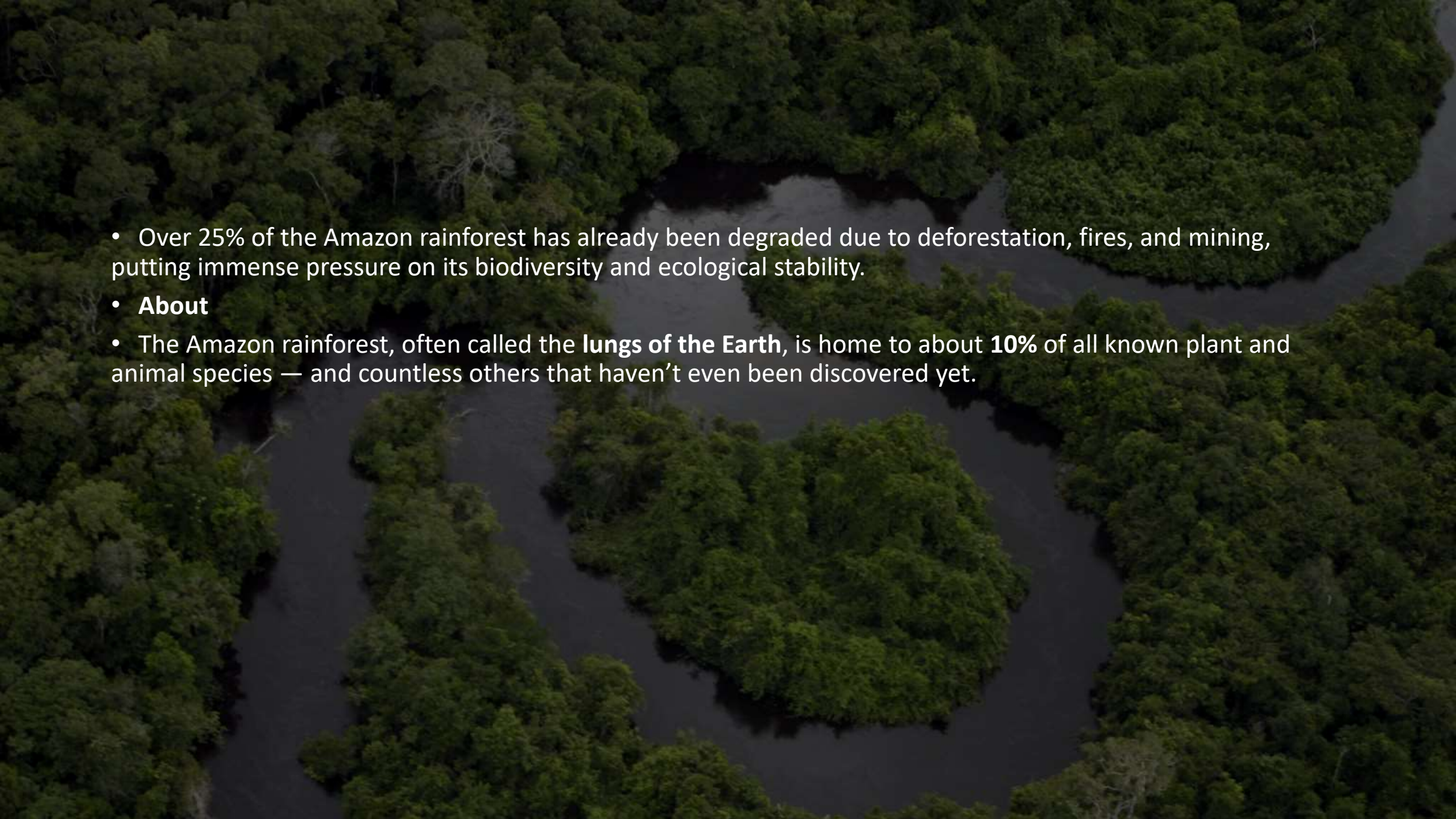
- **Districts in Assam** (Dhemaji, Kamrup, Nagaon) and along the Indo-Gangetic Plain dominate the top rankings.

Necropolitics

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- Necropolitics is highlighting how states expose marginalised groups to violence and neglect, normalising their suffering.
 - **Concept of necropolitics**
 - It explores how political power determines whose lives are protected and whose deaths are normalized or even orchestrated.
 - It was coined by **Cameroonian scholar Achille Mbembe** .
 - It was built on **Michel Foucault's idea of biopolitics** — which manages life through institutions and public health .
 - It focuses on the governance of death, exposing how certain populations, such as refugees, the poor, racialized groups, and queer communities, are systematically abandoned or targeted.

A dark, atmospheric photograph of an Amazon rainforest. The scene is filled with dense, dark green foliage. In the center, a single tree stands out as a dark silhouette against a lighter, misty background. The sky is overcast and grey, contributing to a somber and mysterious mood. The text "Amazon Rainforest" is centered in a white, sans-serif font.

Amazon Rainforest

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- An aerial photograph of a dense Amazon rainforest. A dark, winding river flows through the lush green canopy, creating a complex network of channels and islands. The forest appears thick and uninterrupted, with varying shades of green indicating different tree species and canopy heights.
- Over 25% of the Amazon rainforest has already been degraded due to deforestation, fires, and mining, putting immense pressure on its biodiversity and ecological stability.
 - **About**
 - The Amazon rainforest, often called the **lungs of the Earth**, is home to about **10%** of all known plant and animal species — and countless others that haven't even been discovered yet.

The Amazon spans **8 countries and one overseas territory: Brazil, Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela, and French Guiana** (a French overseas territory).

It stores around **250–300 billion tonnes of carbon**, equivalent to **15–20 years of global greenhouse gas emissions**, and generates rainfall that supports some of the world's largest cities and most vital agricultural regions.

It is home to over **47 million people**, including **2.2 million Indigenous and traditional communities**, whose cultures and livelihoods are deeply tied to the forest.



A black and white photograph showing three hands of different sizes stacked together. The largest hand is at the bottom, a medium-sized hand is in the middle, and a smaller hand is on top. The hands are cupped together, suggesting care and support. The text "Child Adoption in India" is overlaid in the center in a white, sans-serif font.

Child Adoption in India

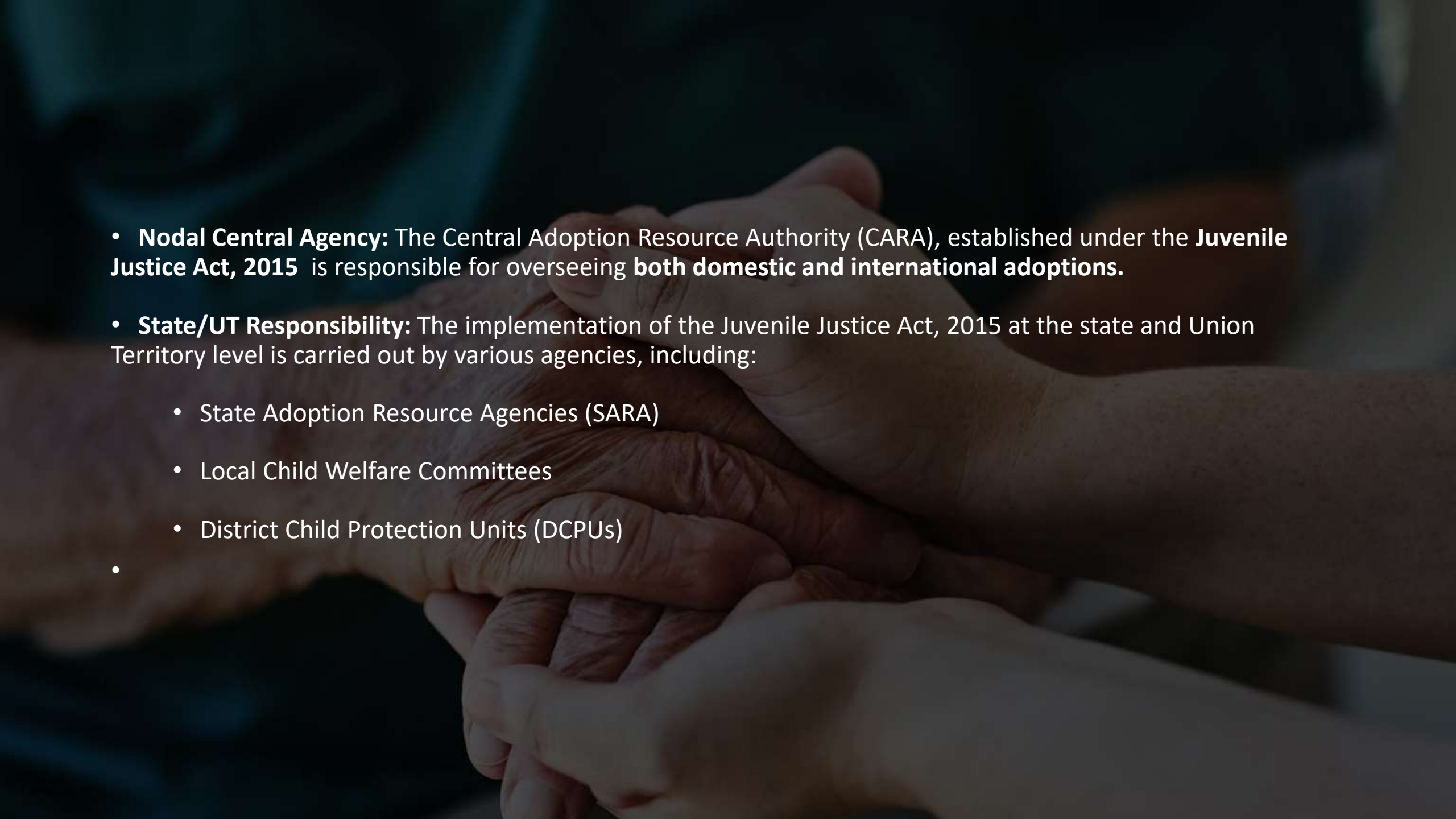
The **Central Adoption Resource Authority (CARA)** has been unable to **bridge this gap between the number of children available for adoption** and the number of **prospective parents**, resulting in prolonged delays in the adoption process.

The waiting period for parents to receive an adoption referral has risen from **3 years in 2022** to **approximately 3.5 years in 2025**.

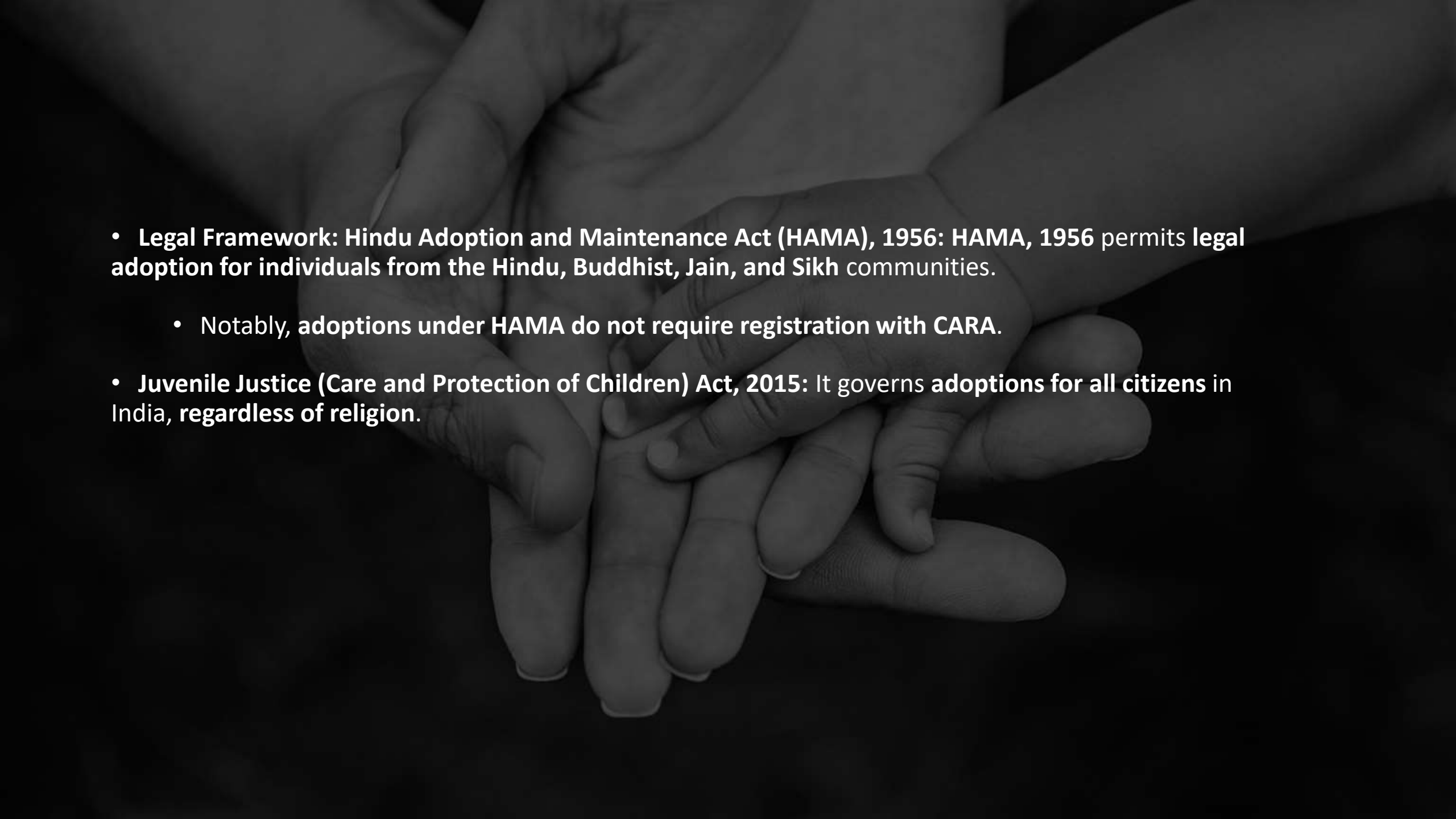
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- What is the Status of Child Adoption in India?
 - **State of Child Adoption in India:** In 2024–25, **4,515 children were adopted**, the highest since 2015.
 - Of these, **4,155 were domestic adoptions**, reflecting a growing acceptance of legal adoption in the country.
 -

Child Adoption Statistics



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- **Nodal Central Agency:** The Central Adoption Resource Authority (CARA), established under the **Juvenile Justice Act, 2015** is responsible for overseeing **both domestic and international adoptions**.
 - **State/UT Responsibility:** The implementation of the Juvenile Justice Act, 2015 at the state and Union Territory level is carried out by various agencies, including:
 - State Adoption Resource Agencies (SARA)
 - Local Child Welfare Committees
 - District Child Protection Units (DCPUs)

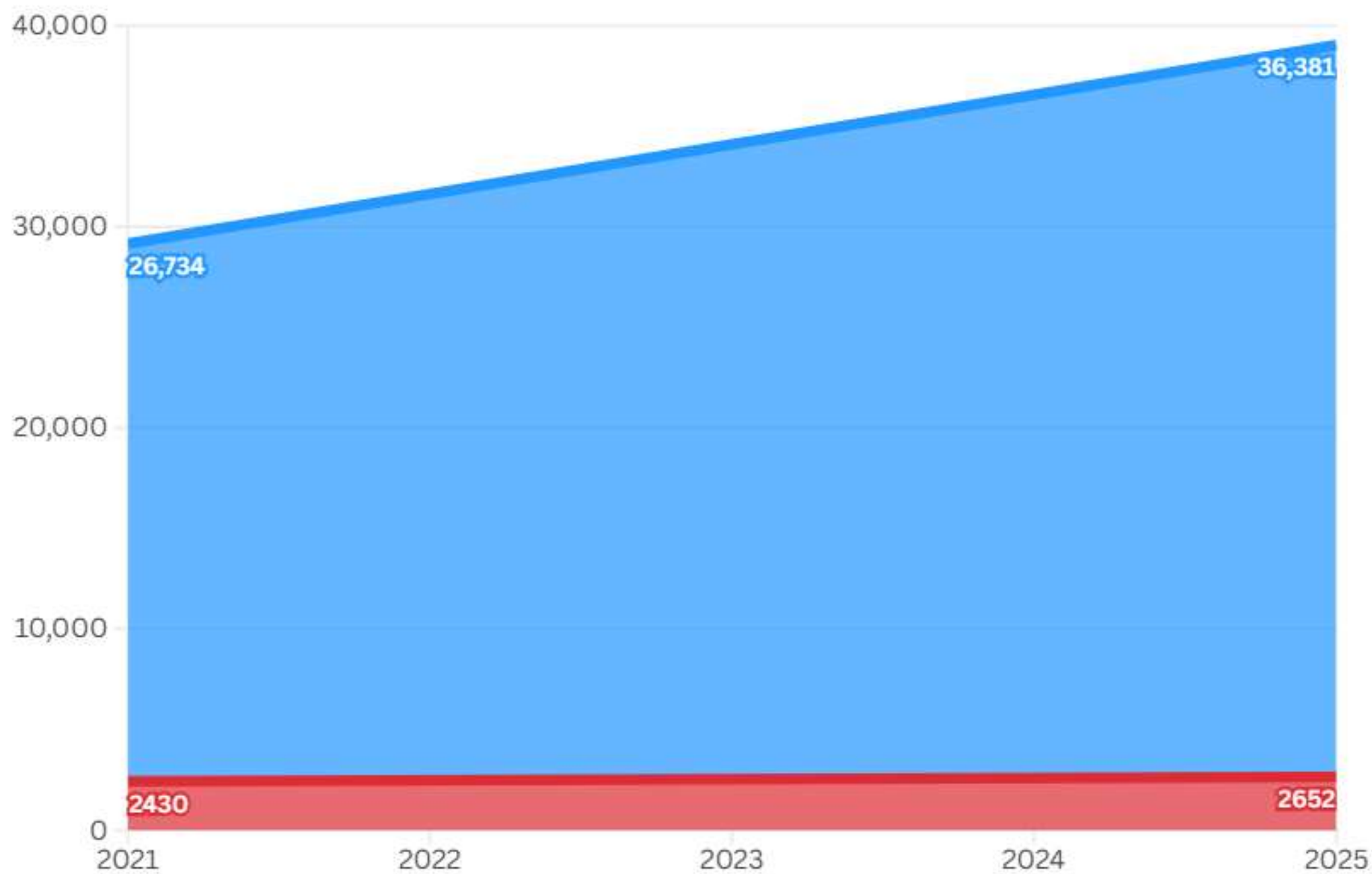
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- **Legal Framework: Hindu Adoption and Maintenance Act (HAMA), 1956:** HAMA, 1956 permits legal adoption for individuals from the Hindu, Buddhist, Jain, and Sikh communities.
 - Notably, adoptions under HAMA do not require registration with CARA.
 - **Juvenile Justice (Care and Protection of Children) Act, 2015:** It governs adoptions for all citizens in India, regardless of religion.

-
- Under this Act, prospective adoptive parents are required to **register on CARA's portal**, following which a **Specialised Adoption Agency (SAA)** conducts a **Home Study Report (HSR)**.
 - If found eligible, they are **matched with a child** who has been **declared legally free for adoption**.
 - **International Framework: The Hague Convention on Protection of Children and Cooperation in Respect of Intercountry Adoption (1993)** ensures that international adoptions are carried out in an ethical, legal, and transparent manner.

-
- What are the Key Challenges Hindering the Child Adoption Process in India?
 - **Widening Demand–Supply Gap:** There is a **significant gap** between **Prospective Adoptive Parents (PAPs)** and **adoptable children (13:1)**, with only a small fraction of children eligible for adoption due to issues like **intact parental rights and lack of legal free status**.
 - Adoption delays have increased from **1 year in 2017 to 3.5 years in 2025**, leading to concerns over **illegal or informal adoptions**, as highlighted by a Parliamentary Committee.
 -

Prospective Parents registered Children legally free for adoption



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- **Mismatch in Age & Parental Preference:** Around **34% of adoptable children are above 14 years**, while most Indian parents prefer **infants (0–2 years)**. This **preference bias** results in older and special needs children being overlooked.
 - As per **CARA data (2024)**, **60% of adopted children are female**, and **80% belong to the 0–2 age group**, reflecting a strong parental preference for younger children.
 - **High Rate of Child Returns:** Between 2017–2019, there was a **rise in adoptive parents returning children**, **60% were girls**, **24% had special needs**, and many were **over 6 years old**.
 - This reflects **challenges in adjusting to adoptive homes** due to **inadequate counselling and preparation**.

Adoption Eligibility Criteria in India

Who Can Adopt

Married Couples:

- Must be married and living together for at least two years.
- Age difference with the child should not exceed 45 years.
- Should not have more than two living biological children.

Single Parents:

- Must be above 30 years of age.

General Eligibility:

- Anyone, regardless of gender or marital status, can adopt.
- Must meet other criteria like age, financial stability, and ability to provide a supportive home.

Who Cannot Adopt

- Convicted of an offense involving moral turpitude or punishable under IPC or other laws.
- Found guilty of child abuse or cruelty towards a child.
- Found guilty of abandoning or neglecting a child.
- Undergoing treatment for any life-threatening or infectious disease.
- Declared of unsound mind by a competent court.
- If one spouse in a couple has been declared of unsound mind or is undergoing treatment for any life-threatening or infectious disease.
- Divorced or legally separated couples.
- Individuals under 21 years of age, married or single
- Single male cannot adopt a girl child.

Skill Impact Bond (SIB)

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- What is the Skill Impact Bond (SIB)?
 - **About:** SIB is India's first **Development Impact Bond (DIB)**, launched in **2021** focused on **skills training and job placement**.
 - It shifts focus from **enrollment to outcomes** like placement and retention. It uses **private-sector funding** to address social and development challenges.
 - **Objective:** To skill **50,000 youth**, with **60% women**, especially from **marginalised and rural backgrounds**, and ensure **at least 30,150 retain jobs for 3+ months**.

- **Key Highlights of the SIB Report 2025:**

- **Top States:** Jharkhand (27%), UP, Maharashtra, Odisha, and Telangana had highest enrollments.

- **Popular Sectors:**

- **Women:** Mainly trained in apparel, with rising numbers in retail, **IT-enabled services (ITeS)**, and **BFSI (banking, financial services, and insurance)**
- **Men:** Moving from construction to sectors like automotive and telecom.

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- **Women-Led Skilling:** Over 72% of 23,700+ trainees were women from vulnerable backgrounds. Female certification rate reached 92%, and job placement was 81%. Self-employment among women rose from 6% to 14%.
 - **Better Job Outcomes:** 75% of all trainees got jobs, and 60% stayed employed for over 3 months—above national average. Female employment increased from 35% to 48%.
 - **Gender Pay Gap:** Men earned more (Rs 12,400–15,700) than women (Rs 11,500–13,000) despite similar job outcomes.

HOW IT WORKS



The Skill Impact Bond links funding to achievement of outcomes, inverting the process of conventional grant-making which often funds activities and inputs. The initial financing to training providers is supported by risk investors, who are repaid by outcome funders on the achievement of predetermined, independently verified outcomes achieved by training partners.

This results in maximum impact for money spent, aligned incentives between partners, thus creating measurable social impact that spur social change

FROM SKILLS TO STRENGTH

State-wise enrolment data for SIB



Skilling programme need to work harder, especially for women

Out of 100 enrolled

99 get trained	84 get certified	~46 get placed
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~26 accept job offers	10 retain a job for 3 months
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NOTE: 90% of women enrolled in large skilling schemes do not reach 3-month retention in jobs

SIB status since November 2021

- > The Skill Impact Bond aims to empower 50,000 young adults, with at least 30,150 retained in jobs for 3 months (at least 60% of whom will be women)
- > SIB programme has completed enrolment for 7 cohorts of implementation (out of a total 8 planned cohorts) & enrolled 42,285

candidates (85% of the 50,000 target)

- > Of the 23,766 candidates enrolled and trained in first four cohorts (17,177 women and 6,589 men)
- > 75% (17,886 candidates) have joined jobs, and 60% (14,153 candidates) have remain employed for at least three months

Work rate amongst population in the age group 15-59 years who received formal vocational/technical training



Even among formally skilled population, worklessness remains a challenge, with ~30% people not in paid work

- What is the Status of Skill Development in India?
 - **Low Employability:** As per **India Skills Report 2024**, only **51.25%** of assessed young people in India possessed the **necessary skills to be employable**.
 - **Low Formal Training:** As per the **Economic Survey 2023–24**, only **4.4% of youth** are formally skilled, and **16.6%** are informally trained.
 - **Skill Gaps in Industry:** According to ManpowerGroup's (US-based MNC) 2025 Global Talent Shortage Survey, **75% of global employers** are struggling to **find skilled workers**.
 - India has a **60%-73% demand-supply gap** in key roles such as **ML engineer, data scientist, DevOps engineer, and data architect**.

Underemployment: As per Economic Survey 2024–25, over 50% of graduates and 44% of postgraduates are in low-skill jobs, indicating inefficient workforce utilisation.

Limited Women Participation: In India, women constitute 40% of STEM students but only 14-27% of STEM professionals, according to the Ministry of Science and Technology.

Word of the day

Tapestry:

a heavy textile with a woven design, used for curtains and upholstery; a wall hanging of heavy handwoven fabric often with pictorial designs

Synonyms: tapis, arras

Usage: *The artist made a beautiful tapestry.*

Pronunciation: newsth.live/tapestrypro

International Phonetic

Alphabet: /'tæpəstʃi/



Thank you 😊

