

UPSC ESSENTIALS

May 2026 Issue



LETTER TO ASPIRANTS

Dear Aspirants,

Whenever you have queries on how to cover a topic for your basic understanding and exam purposes, UPSC Essentials of The Indian Express adds value by helping you move beyond scattered reading towards meaningful clarity. Through the best from The Indian Express and value-added content curated in this magazine for aspirants, we span across all major subjects relevant to your UPSC preparation.

That idea shapes every section of this month's magazine. Our Cover Story, *Women in Parliament: Representation, Reservation, and the Road Ahead*, explores one of the most significant debates in Indian polity, history, and society. In Express Edge, we explore how colonial rule shaped India's education system, what Tantra and Bhakti poems reveal about medieval India, lessons from past oil shocks amid the Iran conflict, and the widening divide at the WTO. The section also examines India's informal workforce, the social and gender dimensions of the water crisis, and the socio-ecological costs of disappearing lakes, wars, and conflicts.

Alongside these, UPSC Focus brings exam-oriented guidance through Expert Talk on tackling CSAT comprehension passages, Ethics Simplified on understanding ethics in everyday life, Current Affairs Pointers featuring Prelims Tidbits from May 2026, and Practice Quiz sections to strengthen revision.

Aspirants, by the time the next edition of this magazine reaches you, Prelims 2026 would already be over. Until then, stay consistent, stay calm, trust your preparation, and keep reading UPSC Essentials of The Indian Express.

Please share your thoughts at manas.srivastava@indianexpress.com.

*Until next month,
Manas Srivastava*

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COVER STORY

Women in Parliament: Representation, reservation, and road ahead

Written by **Roshni Yadav**



*An analysis of past numbers shows that in terms of representation, the share of women has rarely breached the 15% mark across legislatures.
(Image: AI-generated)*

INTRODUCTION

The month of April witnessed significant legislative activity in Parliament. During the recent session, the Lok Sabha took up three key bills for consideration and passage, namely the Constitution (131st Amendment) Bill, 2026, the Delimitation Bill, 2026, and the Union Territories Laws (Amendment) Bill, 2026. However, the Constitution (131st Amendment) Bill, 2026, failed to get 2/3rd majority in the Lok Sabha. Following the defeat, Union Minister for Parliamentary Affairs Kiren Rijiju requested the Speaker not to take up the other two Bills, as they were closely linked to the Amendment Bill.

The Constitutional (131st Amendment) Bill, 2026, sought to increase the strength of the Lok Sabha from 543 to 850 seats, with 815 seats allocated to the states and 35 to the union territories.

The objective of the bill was said to implement one-third reservation for women in the Lok Sabha as well as in the assemblies of states and union territories. The Bill aimed to amend the Nari Shakti Vandan Adhiniyam, 2023, to expedite women’s reservation; a Delimitation Bill to set up a Delimitation Commission based on the latest available population figures; and a Bill to extend women’s reservation to Union Territories with Legislative Assemblies.

Against this backdrop, the developments in Parliament have once again brought the issue of women’s reservation into the spotlight. It is thus essential to understand women’s representation and reservation in India from a broader perspective—cutting through the noise and focusing on clarity.

What do the trends show about women’s representation in Parliament?

The demand for increasing women’s representation in Parliament has been part of political and academic discourse for a long time, but the trends show mixed signals. In terms of women’s representation in lower houses of Parliament, India was ranked at 147 out of some 190 countries according to April 2026 data by Parline, a tracker on national parliaments maintained by the Inter-Parliamentary Union (IPU).

An analysis of past numbers shows that in terms of representation, the share of women has rarely breached the 15% mark across legislatures. In Lok Sabha, the Lower House of India’s Parliament, the figure has never exceeded even that. From the first Lok Sabha (1951-52), when there were 24 women MPs out of a total 489 (4.9%), the figure for the incumbent House — the 18th Lok Sabha (2024-29) — stands at 75 out of a total 543 (13.6%).

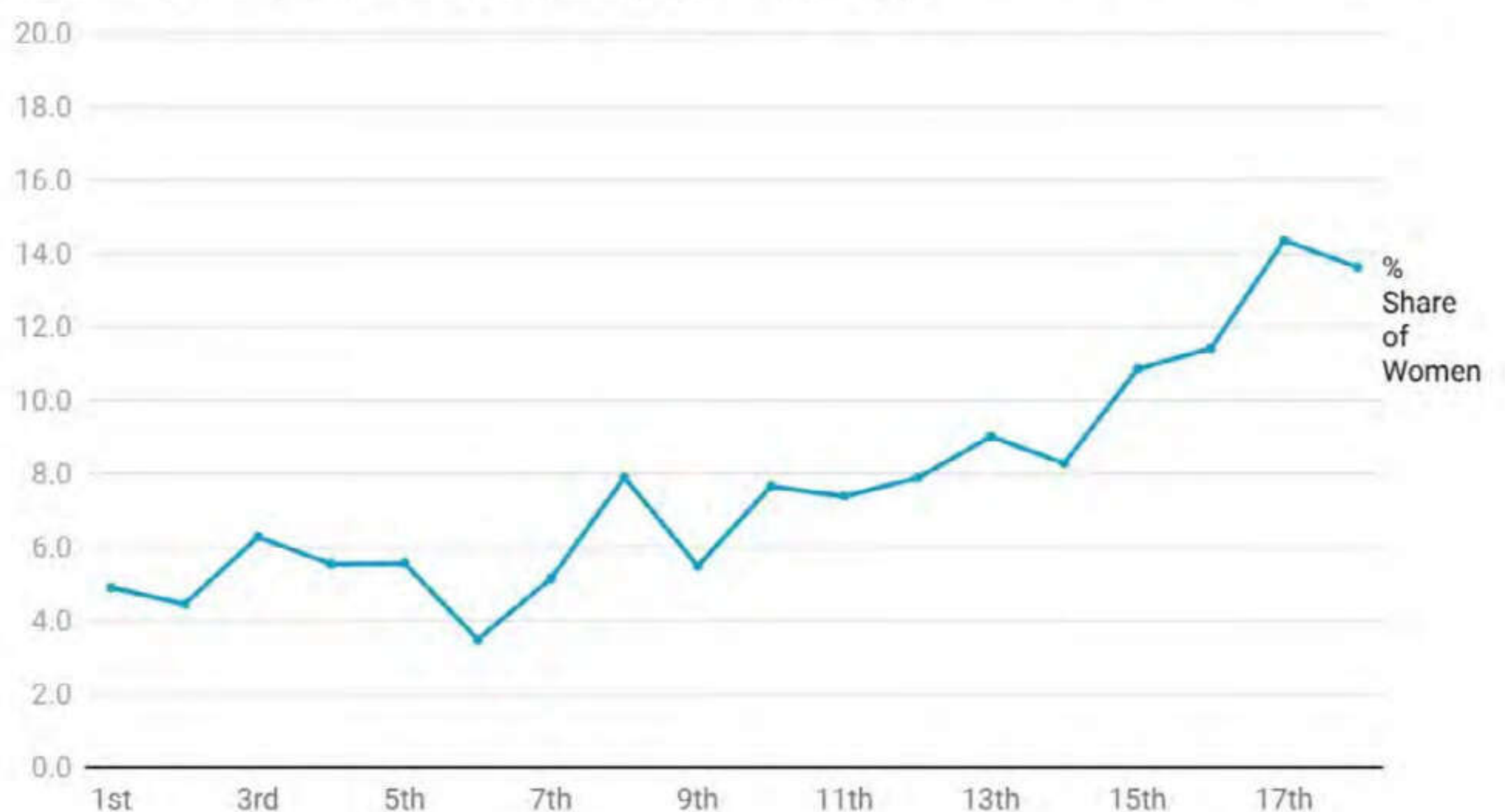
The highest figure in this regard was in the previous Lok Sabha (2019-24), when women comprised 14.36% — 78 out of 543 — of the House’s membership. On the other hand, India’s lowest figure of 3.5% came during the 6th Lok Sabha (1977-79): the 1977 general election was held right after the Emergency (1975-77) imposed by then Prime Minister Indira Gandhi. Gandhi, India’s first woman PM (and the only one to date), lost that election after 11 years at the helm.

As *Chart 1* indicates, the percentage share of women in Lok Sabha has seen a gradual upward trend over time. But it took India 15 general elections to reach a double-digit percentage figure (10.9% in 2009), which underlines the fact that women still have some way to go to reach the 33% mark if reservation is not implemented.

Rajya Sabha, or the Upper House, though not directly elected by the people, presently has 39 women MPs out of a total of 245—about 16%.

Chart 1 | Lok Sabha: % share of women

The share of women in Lok Sabha has seen a gradual upward trend over time. But it took India 15 general elections to reach a double-digit percentage figure.



The number for the 18th Lok Sabha does not include women MPs elected in subsequent bypolls.

Source: PRS Legislative Research, ECI - Created with Datawrapper

The share of women in Lok Sabha has seen a gradual upward trend over time.

What was the Constituent Assembly debate on women’s reservation?

The history of legislation regarding women’s reservation in India is complex. Although the idea of women’s reservation is today viewed as a contemporary breakthrough, its inception can be traced back to the debates held in the Constituent Assembly between 1946 and 1950. In these debates, two out of the 15 women who were part of the Assembly argued unrelentingly against the implementation of reservation for women. Surprisingly, the only one in favour was a man: **R K Chaudhari**.

The women who opposed the idea in Constituent Assembly

During the Constituent Assembly debates, **Hansa Mehta** and **Renuka Ray** emerged as prominent voices against the reservation of seats for women. Both were activists for India’s independence, having participated in the non-cooperation and swadeshi movements, besides serving in the All India Women’s Conference — a non-governmental organisation dedicated to promote women’s welfare.

During the debate on December 19, 1946, Mehta expressed her gratitude to Mahatma Gandhi for extending the freedom struggle towards women. Mehta, herself a general category candidate in the 1937 Bombay Legislative Council, insisted that women had never asked for privileges.

Mehta’s reluctance towards the demand for reserved seats, separate electorates, or quotas arguably stemmed from a unitarian spirit that bound the women of the Constituent Assembly.

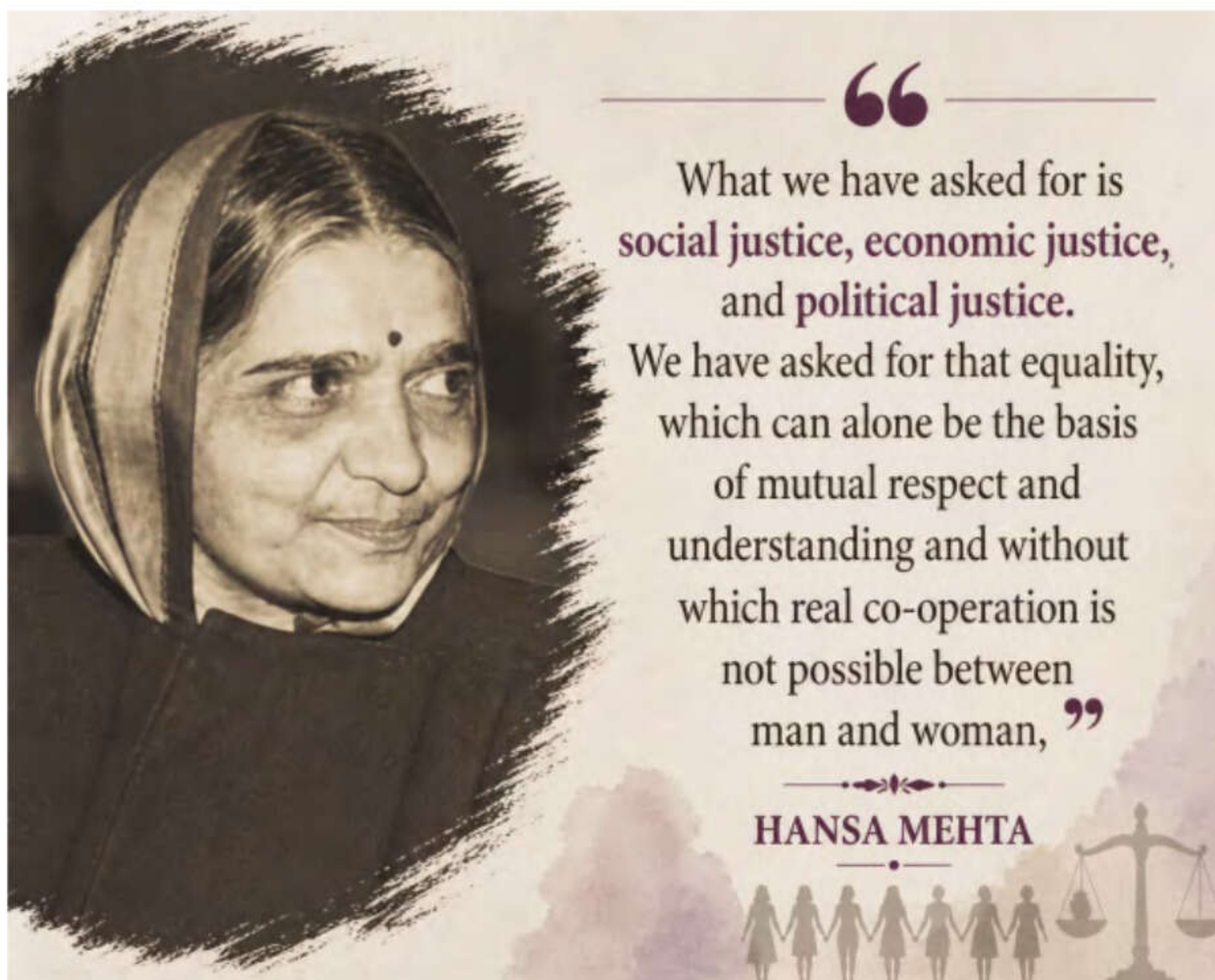
In 1947, Renuka Ray echoed Mehta’s argument strongly. She recalled her opposition to the 1935 Government of India Act, which ensured reservation for women in the legislature.

According to her, women should advance by merit — or as she termed “ability” alone — and added that reservation would “impediment to our growth and an insult to our very intelligence and capacity.”

The counter argument

R K Chaudhari offered a distinct perspective. “When a woman asks for something, as we know, it is easy to get it and give it to her,” he said, in the debate held on November 9, 1948. “But when she does not ask for anything in particular it becomes very difficult to find out what she wants.”

He claimed to be speaking from his experience as a “parliamentarian and a man of the world”, his argument based on what he perceived as the everyday callousness in men that enabled a systemic discrimination against women.



He criticised the composition of the Drafting Committee, which, according to him “consisted of people who have no domestic relations with women” and thus showed nervousness regarding the subject. Later, he lamented the death of male chivalry outside of the House, and in the streets of India: “Women generally have lost faith in the chivalry of men. The young men of to-day do not show respect to them even in the trams and buses.”

Ray immediately rebutted Chaudhari’s argument — even as she ironically referred to him as a “champion and defender of women” — and reiterated her stance.

Interestingly, Chaudhari’s argument seemed to arise from the legislature’s inability to transcend the gap between theoretical and practical equality. Chaudhari recognised this gap as a form of “systemic exclusion”, which reservations could help bridge.

In 1949, the **Assembly’s women members placed their faith in the idea of merit and formal equality** that could be realised through initiatives such as universal adult franchise. Numbers, however, show how a different reality unfolded over time.

What has been the legislative journey of women’s reservation in India?

In independent India, the principle of gender equality was enshrined in the Constitution through the Preamble, Fundamental Rights, Fundamental Duties, and Directive Principles of State Policy. The Constitution not only guarantees equality to women but also empowers the state to adopt measures of positive discrimination to address the cumulative social, economic, educational, and political disadvantages they face.

However, it did not originally provide for the reservation of seats for women in Parliament and state legislatures. Consequently, several attempts were made to amend the Constitution, with bills introduced in 1996, 1998, 1999, and 2008 to provide such reservation.

The first three bills lapsed with the dissolution of the respective Lok Sabhas. The 2008 bill was introduced in the Rajya Sabha and passed by the Upper House. However, it also lapsed with the dissolution of the 15th Lok Sabha.

In 2021, a public interest litigation was filed before the Supreme Court by the National Federation of Indian Women, seeking the reintroduction of the Women’s Reservation Bill to reserve 33 per cent of seats for women in the Lok Sabha and legislative assemblies.



From Preamble to Panchayat

CONSTITUTIONAL LAW – WOMEN'S RIGHTS

How India's Constitution enshrines gender equality – from founding ideals to grassroots governance – and its landmark international commitments.

CONSTITUTIONAL BACKBONE

The Articles that Protect Women

The Constitution grants women equality before law while empowering the State to create special provisions to counter historical disadvantages in social, economic, and political spheres.

- Article 14 – Equality Before Law**
Guarantees equal protection of law for all women without discrimination.
- Article 15(3) – Positive Discrimination**
Empowers the State to make special provisions in favour of women and children.
- Article 16 – Equal Opportunity**
Ensures equality of opportunity in matters of employment and public office.
- Article 39(d) – Equal Pay**
Directs the State to secure equal pay for equal work for men and women.
- Article 42 – Maternity Relief**
Mandates humane working conditions and maternity relief as a state duty.

THE FULL ARC

Preamble to Panchayat – A Continuous Promise

India's constitutional commitment to women flows from its founding ideals in the Preamble – justice, equality, fraternity – through Fundamental Rights, Directive Principles, and Fundamental Duties, all the way down to elected seats in village councils.

FUNDAMENTAL DUTY

Article 51A(e) – Dignity as a Duty

Every citizen is constitutionally bound to renounce practices derogatory to the dignity of women – making gender respect not just a right but a civic obligation.

LOCAL GOVERNANCE

One-Third of Seats Belong to Women

Articles 243D and 243T guarantee women a minimum one-third share of directly elected seats and Chairperson offices across all Panchayats and Municipalities in India.

1/3

Seats in every Panchayat (Art. 243D)

1/3

Chairperson offices at each Panchayat level

1/3

Seats in every Municipality (Art. 243T)

- Rotation Across Constituencies**
Reserved seats are rotated across different constituencies to ensure wider representation.
- SC/ST Women Included**
The one-third quota includes seats reserved for women from Scheduled Castes and Scheduled Tribes.

INTERNATIONAL COMMITMENT

CEDAW – India's Global Pledge for Women

India ratified the Convention on Elimination of All Forms of Discrimination Against Women (CEDAW) in 1993, binding itself to international standards on women's equal rights – complementing its domestic constitutional framework.

1993

Year India ratified CEDAW

30+

Years of international gender equality commitment

- What CEDAW Does**
Commits India to eliminate all forms of discrimination against women in political, economic, social, and cultural life.
- Domestic + Global Framework**
CEDAW works alongside India's constitutional provisions to create a dual-layer legal protection for women's rights.

Sources: Constitution of India - Ministry of Women & Child Development - United Nations CEDAW

In 2023, Parliament unanimously passed the Nari Shakti Vandan Adhiniyam (Women's Reservation Bill, 2023), which later became the Constitution (One Hundred and Sixth Amendment) Act upon receiving presidential assent.

Reservation for Women in Local Self-Government

The 73rd Constitutional Amendment Acts passed in 1992 by Parliament ensure one-third of the total seats for women in all elected offices in local bodies whether in rural areas or urban areas

• DECADES-LONG ROAD TO RESERVATION

1987: The Rajiv Gandhi-led Congress govt constituted a committee that presented the National Perspective Plan for Women (1988-2000). Among its recommendations was women’s reservation in elected bodies.

1993: The Constitution 73rd and 74th Amendment Acts were enacted under PM P V Narasimha Rao. They mandated the reservation of one-third of seats for women in Panchayati Raj institutions (and offices of the chairperson at all levels of PRIs), and in urban local bodies, respectively.

1996: Under PM HD Deve Gowda’s United Front government, the first Bill seeking women’s reservation in the legislature was introduced — the 81st Constitutional Amendment Bill — with SC, ST quotas. Despite cross-party support, several MPs, especially those belonging to the OBCs, sought quotas for OBC women within it or rejected the Bill.



Before 2023, too, several attempts were made by governments to pass the women’s reservation bill. VISHAL SRIVASTAV

1998, 1999: Two failed attempts to introduce the Bill.

2010: Under the PM Manmohan Singh-led UPA government, Rajya Sabha passed The Constitution (108th Amendment) Bill, but due to differences within the UPA and even within the Cabinet, it was never brought to Lok Sabha.

2023: The Constitution (128th Amendment) Bill, 2023, was passed under the PM Modi-led NDA government for 33% women’s reservation. It stated that the implementation of reservation was dependent on the completion of the next Census and the delimitation process, but the ongoing session seeks to de-link these stages.

What are the key features of the Nari Shakti Vandan Act, 2023?

The Nari Shakti Vandan Adhinyam is seen as an effort that can enable equitable participation of women. It reflects India’s commitment to Article 15(3) of the Constitution, which allows the state to provide women and children with special legislation and welfare provisions. Key features of the Nari Shakti Vandan Adhinyam (Constitution (One Hundred and Sixth Amendment) Act are:

- 1. Reservation for women:** The Bill reserves, as nearly as may be, one-third of all seats for women in Lok Sabha, state legislative assemblies, and the Legislative Assembly of the National Capital Territory of Delhi. This will also apply to the seats reserved for SCs and STs in Lok Sabha and state legislatures.
- 2. Commencement of reservation:** The reservation will be effective after the census conducted after the commencement of this act has been published. Based on the census, delimitation will be undertaken to reserve seats for women. The reservation will be provided for a period of 15 years. However, it shall continue till such date as determined by a law made by Parliament.
- 3. Rotation of seats:** Seats reserved for women will be rotated after each delimitation, as determined by a law made by Parliament.

Although the Women’s Reservation Bill (Nari Shakti Vandan Adhinyam) was passed in September 2023, it is yet to be implemented. Beyond the question of implementation, a deeper debate persists on the nature and effectiveness of representation itself.

Rituparna Patgiri writes, “While mere representation is not enough, there’s also a need to move beyond distinctions of women’s issues (usually non-political) versus other issues (political ones). This can be made possible by not just increasing the numerical representation of women, but also giving voice to them on diverse issues. This will help make women’s presence in politics an ordinary rather than an extraordinary phenomenon.

Women's Reservation – 106th Constitutional Amendment

CONSTITUTION – LANDMARK LEGISLATION

India's 106th Constitutional Amendment mandates one-third of seats in Parliament and State Assemblies for women – a historic step passed on September 28, 2023.

THE MANDATE

One-third of all seats reserved for women

The 106th Amendment reserves at least one-third of seats filled by direct election in the Lok Sabha and every State Legislative Assembly for women.

1/3

Of Lok Sabha seats for women

1/3

Of every State Assembly for women

CONSTITUTIONAL CHANGE

Three new articles inserted into the Constitution

The amendment adds Articles 330A, 332A, and 334A to the Constitution, creating an entirely new legal framework for women's political representation at every level of elected government.



Article 330A – Lok Sabha

Reserves one-third of House of the People seats for women, including one-third of SC/ST reserved seats for women from those communities.



Article 332A – State Assemblies

Mirrors 330A for every State Legislative Assembly – one-third of direct-election seats reserved for women across all states.



Article 334A – Commencement & Duration

Sets out when reservation takes effect (post-census + delimitation), fixes a 15-year duration, and governs seat rotation after each delimitation exercise.

EQUITY WITHIN EQUITY

SC/ST women get a share within existing reserved seats

The amendment ensures women from Scheduled Castes and Scheduled Tribes are not excluded from the new quota. One-third of all SC/ST reserved seats in both Lok Sabha and State Assemblies must go to women from those communities.

- One-third of SC seats for SC women**
 Within the total SC reserved seats in Lok Sabha and State Assemblies, at least one-third must be allocated to women from the Scheduled Castes.
- One-third of ST seats for ST women**
 The same one-third sub-quota applies to Scheduled Tribe reserved seats — ensuring tribal women gain guaranteed political representation.
- Counted within overall 1/3 women's quota**
 SC/ST women's reserved seats are included in — not additional to — the overall one-third women's reservation figure.

TERRITORIAL SCOPE

NCT of Delhi Assembly brought under the mandate

While Delhi is not a full state, its Legislative Assembly is explicitly covered by this amendment via changes to Article 239AA. Delhi women legislators — including SC women — are included under identical one-third reservation rules.

STATES

Covered under new Article 332A — one-third of direct-election seats for women

DELHI (NCT)

Covered under amended Article 239AA — same one-third rule, including SC sub-quota

Moreover, institutional support in the form of training, mentoring, and leadership development, particularly for first-generation women politicians from socially marginalised backgrounds, remains insufficient. The lack of financial resources, high election campaign costs, and limited access to funding networks further make it harder for women to contest elections equitably.

Politics continues to be considered a male bastion. Deep-rooted gender biases affect intra-party dynamics as well as voter perception. Therefore, if the Women's Reservation Bill has to bring about meaningful constitutional transformation, then it has to go beyond the mere politics of women's presence. It requires party-level restructuring and collaboration between political parties.”

Post Read Questions

(1) During the debates of the Constituent Assembly, some members opposed the idea of reservation of seats for women. With reference to this, consider the following:

1. Hansa Mehta
2. Renuka Ray
3. R. K. Chaudhary

Who among the above emerged as prominent voices against the reservation of seats for women?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

(2) Which of the following articles of the Constitution of India provides for the reservation of seats for women in the Legislative Assemblies of the States?

- (a) Article 331
- (b) Article 332

(c) Article 332-A

(d) Article 333

(3) Consider the following:

1. Ammu Swaminathan
2. Begum Qudsia Aizaz Rasul
3. Annie Mascarene
4. Dakshayani Velayudhan
5. Durgabai Deshmukh
6. Matangini Hazra
7. Kanaklata Barua

Which of the above were members of the Constituent Assembly of India?

- (a) 1, 2, 3, 4 and 5 only
- (b) 1, 2, 4 and 5 only
- (c) 3, 4, 6 and 7 only
- (d) 1, 2, 3, 5, 6 and 7 only

Prelims Answer Key

1. (a) 2. (c) 3. (a)

(Source: Women’s representation in Parliament and state assemblies, explained in 4 charts, As Bill on women’s reservation in Houses is defeated, remembering the women who opposed it in Constituent Assembly, Women’s Reservation Bill: Beyond the politics of presence, egazette.gov.in)

EXPRESS EDGE

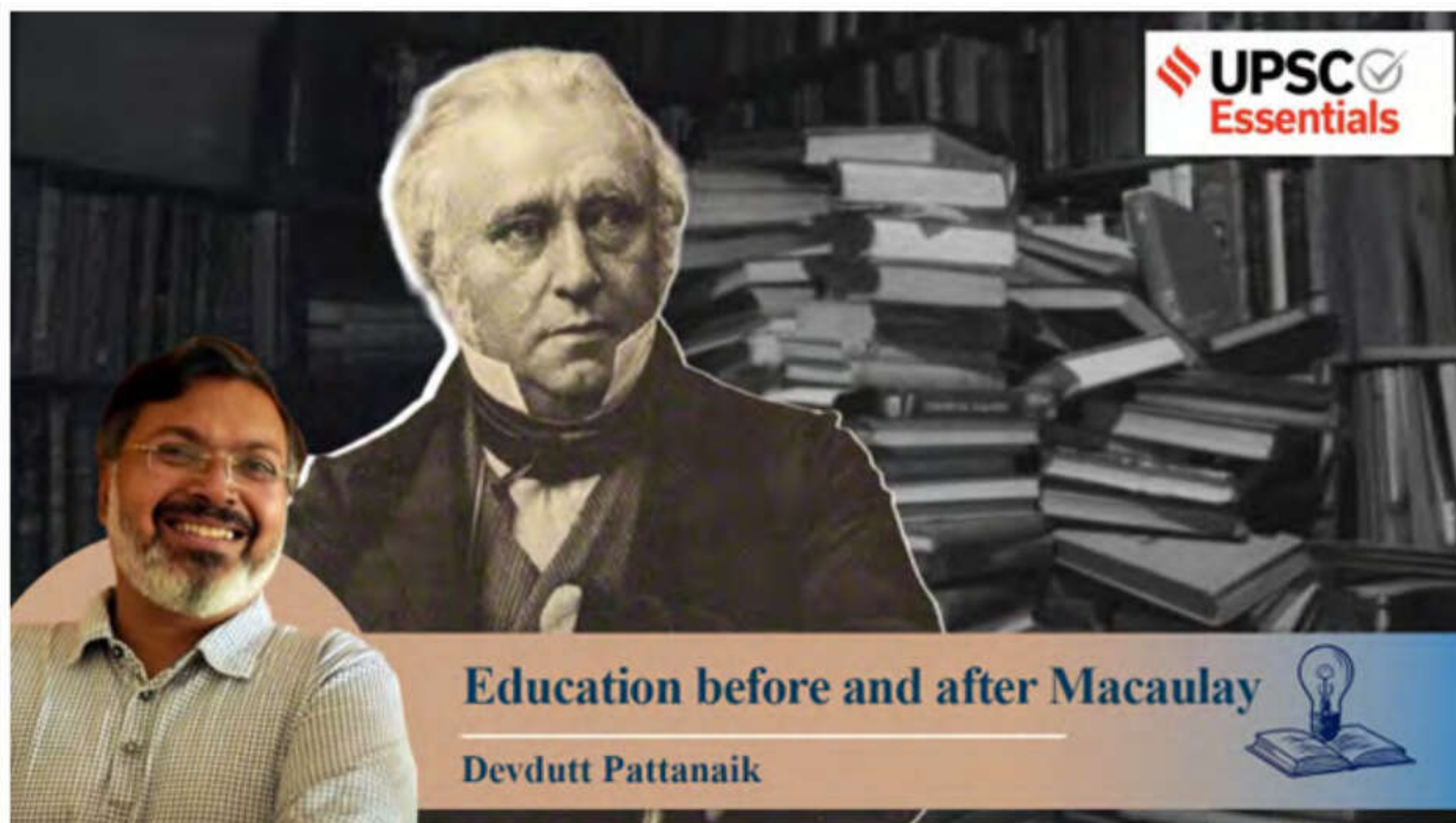
History & Culture

How the British shaped India's education system

The shift from pre-colonial village education to the colonial English education system in India created both losses and new opportunities. How did this transition shape curricula, access to education across communities, and indigenous knowledge?

Written by **Devdutt**

Education in India underwent a major transformation in the nineteenth century during British rule, particularly after the intervention of Thomas Babington Macaulay in 1835. To understand the impact of Macaulay's policies, it is important to first look at the nature of education in India before colonial reforms, and then examine what changed afterwards.



The shift from pre-colonial village education to the colonial English education system created both losses and new opportunities in India. (Image: Wikipedia)

Before the British introduced their new education system,

India already had a widespread network of local schools. These schools were known by different names in different regions. In North India, they were often called *pathshalas*, while in Bengal they were also called pathshalas or tols. In South India, similar institutions existed in villages and temple towns. These schools were usually small and locally supported. Teachers were paid by the community, sometimes through small fees from families or through donations of grain and services.

The curriculum in these schools was practical. Students learned reading, writing, and arithmetic. Arithmetic was particularly important because many students came from merchant, artisan, or farming communities that needed accounting skills. In trading regions, students learned methods of bookkeeping, calculation of interest, and record keeping.

In some schools, religious texts were also taught. For example, the madrasa attached to mosques, and sponsored by Muslim rulers, and the gurukuls attached to mathas or Hindu monastic orders, and sponsored by Hindu rulers, imparted religious teachings.

Caste and pre-colonial education

Early British surveys provide valuable information about this system. One important report was prepared in the 1820s in the Madras Presidency under Governor Thomas Munro. The survey documented thousands of village schools and recorded the caste background of students. Interestingly, many of the students were from communities classified by the British as Shudras, including cultivators and artisans. Brahmins were present but often formed a minority in several districts.

But the British understanding of the caste system in India was simplistic. While there was a clear four-fold division of varna in North India, South India had only two varna: the Brahmin and Shudra. The Shudra were classified into left-handed (lower status) and right-handed (higher status), and it was the elite right-handed castes who attended these schools.

Another important source is the set of reports prepared by William Adam between 1835 and 1838 in Bengal and Bihar. Adam found that many students came from farming and working communities rather than from priestly groups alone. These reports suggest that education in village schools was not limited only to Brahmins.

Many non-Brahmin communities participated in basic education, especially where literacy was needed for trade, agriculture, and administration. These communities included the Kayasthas and Baidyas of the Ganga river basin, traditionally involved in bureaucratic and accounting activities. These were all elite groups.

Limitations of indigenous education system

However, this system also had limitations. Education was not equally available to everyone. Communities considered “untouchable” often remained excluded from formal schooling. Women’s education was also very limited.

Furthermore, advanced scholarship in subjects such as Sanskrit grammar, philosophy, ritual studies, and theology remained largely concentrated in Brahmin institutions such as Sanskrit colleges and traditional gurukulas. Subjects like science and art were not formal subjects. In other words, basic literacy was somewhat spread across social groups, but higher learning remained restricted.

This was the educational environment when Thomas Babington Macaulay arrived in India in 1834 as the Law Member of the Governor-General’s Council. Macaulay was a British historian and politician educated at Cambridge. He came from a reform-minded British family and believed strongly in the superiority of European knowledge and literature.

Shift to English education under Macaulay

In 1835, Macaulay wrote the famous ‘Minute on Indian Education’. At that time, the British administration was debating whether government funds should support traditional Indian learning in Sanskrit and Persian or promote Western education in English. Macaulay strongly supported English education. He argued that European knowledge was far superior and that the government should not spend money promoting classical Indian learning.

Macaulay’s goal was also practical. The British ruled India with a very small number of European officials. They needed educated Indians who could assist in administration, law, and communication. Macaulay, therefore, proposed creating a class of Indians who would learn English and help the colonial government. He famously wrote that the aim was to create people who were “Indian in blood and colour, but English in taste, opinions, morals, and intellect.”

The British government accepted this recommendation. English gradually became the language of higher education and administration. New schools and colleges teaching subjects such as science, law, philosophy, and history began to appear in cities.

Advantages and disadvantages of British education system

This new system had important benefits. English education opened the door to global knowledge. Indians gained access to modern science, new political ideas, and developments taking place in Europe. Ideas such as liberty, democracy, and nationalism spread through English education. Many leaders of the Indian freedom movement were products of this system. In an unexpected way, the colonial education system helped create the intellectual foundations of Indian nationalism.

English also became a link language across India. People from different linguistic regions could communicate with each other in a common language. This helped create a wider national conversation among educated Indians.

However, the new system also had negative effects. Macaulay dismissed Indian intellectual traditions as inferior. As a result, traditional institutions such as Sanskrit colleges and Persian schools gradually lost support and prestige. Many indigenous systems of learning declined. Many communities like Brahmins and Kayasthas who were hereditary bureaucrats in royal courts lost their privileged position.

The colonial education system also mainly benefited a small urban elite. English education required resources and access to city schools, which most rural Indians lacked. A small English-educated class emerged that was often socially distant from the majority of the population.

Another consequence was that Indian history and culture began to be studied through European academic frameworks. Colonial scholarship often portrayed India as backward until Western influence arrived. This shaped intellectual debates and educational narratives for many years.

How Indians used the new system creatively

Despite these problems, Indians also used the new system creatively. English-educated scholars translated Sanskrit texts, reinterpreted classical traditions, and introduced Indian philosophy to the world. Reform movements emerged that combined Western ideas with reinterpretations of Indian traditions.

Thus, the shift from pre-colonial village education to the colonial English education system created both losses and new opportunities. The earlier system provided local, practical literacy but was socially limited and uneven. The new system opened access to global knowledge but weakened indigenous traditions and served mainly a small elite.

Post read questions

- 1. Examine the features of the indigenous education system in pre-colonial India. How far was it socially inclusive?**
- 2. Discuss the significance of Thomas Babington Macaulay's Minute on Indian Education (1835). What were its long-term consequences?**
- 3. Discuss the relationship between education, social hierarchy, and access to knowledge in colonial India.**
- 4. How did the colonial education system help create the intellectual foundations of Indian nationalism?**
- 5. The shift from pre-colonial village education to the colonial English education system created both losses and new opportunities in India. Illustrate.**

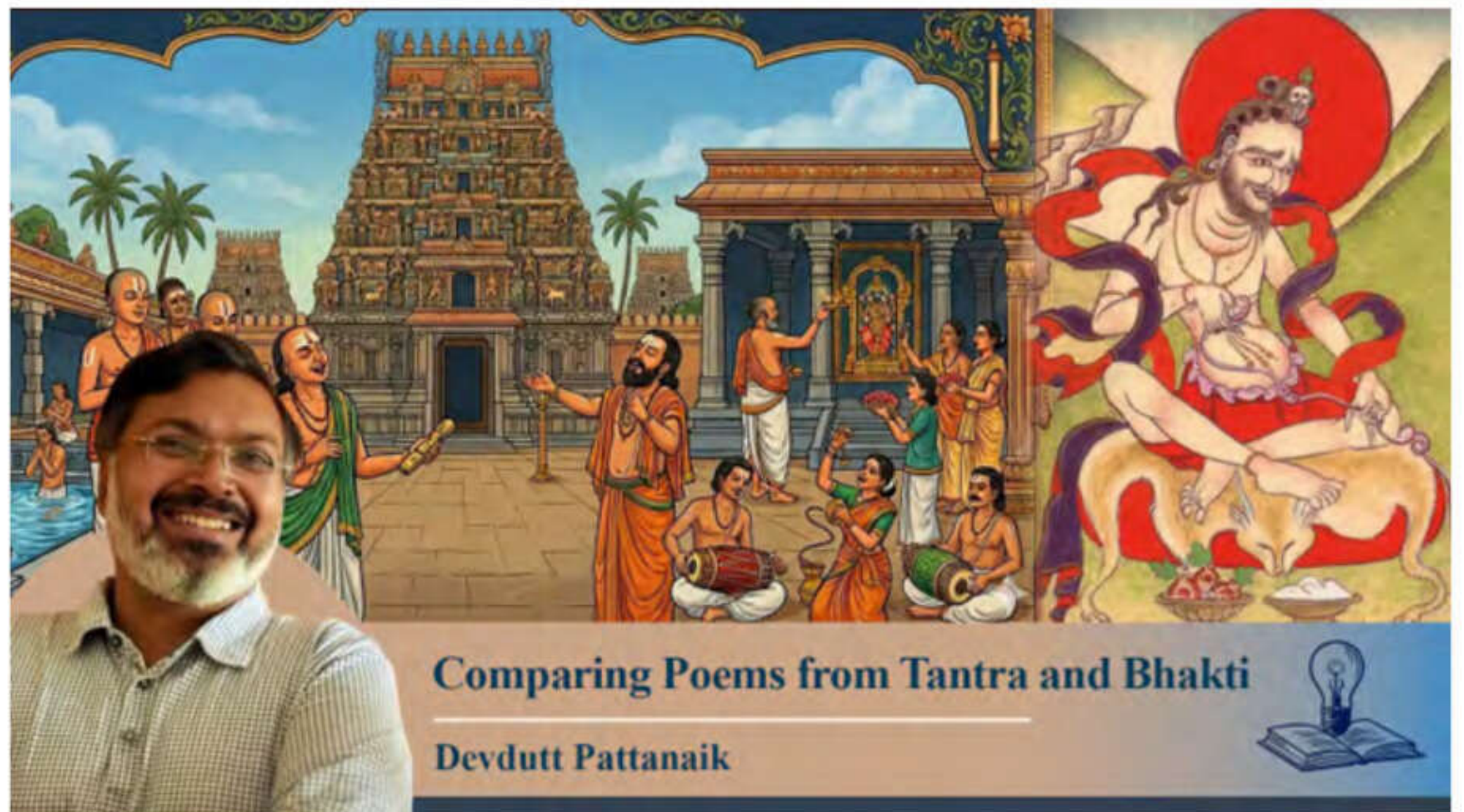
(Devdutt is a renowned mythologist who writes on art, culture and heritage.)

What Tantra and Bhakti poems tell us about medieval India

In medieval times, two kinds of poetry emerged: the Tantric Charyapada of eastern India and the Bhakti Alvar–Nayanar poetry of South India. How does the contrast between the two traditions reveal two different pathways of religious vernacularisation in India?

Written by **Devdutt**

A tiny fragment of the Indian population was literate in medieval times. But a large portion knew poetry, composed poetry and transmitted poetry. These poems are thus major cultural outputs. In medieval times, about 1000 years ago, two kinds of poetry emerged: the Tantric Charyapada of eastern India and the Bhakti Alvar–Nayanar poetry of South India.



Tamil bhakti poetry often celebrates temple worship, whereas the Charyapada rarely refers to temples. Luipa, the author of the first poem of Charyapada, is shown on the left. (Left image AI-generated; right image from Wikimedia Commons)

The Charyapada was composed roughly between the 8th and 12th centuries by Buddhist tantric teachers known as siddhas. The Tamil bhakti poets mostly belong to the 6th–9th centuries. Their hymns were later compiled into canonical collections such as the Nalayira Divya Prabandham and the Tevaram. The Charyapada, by comparison, is not a devotional canon in the same institutional sense but a scattered set of mystical songs preserved in a later manuscript.

This Charyapada verse by Luipada emphasises controlling the restless mind.

“The body is like the finest tree, with five branches.

Darkness enters the restless mind.

Strengthen the quantity of Great Bliss, says Luyi...

Learn from asking the Guru.

Embrace the wings of the Void.”

Here is an example of Tamil Alvar poetry where the poetess Andal reveals her passionate longing for Lord Vishnu.

“If there is even mere talk of offering this,

my body to mortal men,

then I cannot live.

It is equal in violence to a forest jackal

stealthily entering and sniffing at the

sacrificial food.”

Language and literary structure

The most striking difference lies in language structure. Tamil bhakti poetry uses a mature Dravidian literary language with established grammar, poetic conventions, and metres. Tamil literature had already developed sophisticated forms during the earlier Sangam period. The Alvar and Nayanar poets therefore write within a recognisable literary framework even when their tone is emotional and devotional.

The language of the Charyapada, by contrast, is linguistically unstable. It belongs to the transitional stage between Apabhramsha and early eastern Indo-Aryan languages. Grammar is simpler and less standardised. Many forms look like early Bengali or Assamese, but they are not yet fixed. In linguistic terms, the Charyapada reflects the birth of new regional languages, whereas Tamil bhakti poetry represents the continuity of an already established literary culture.

Clarity versus concealment

Another major contrast lies in clarity versus concealment. The Tamil bhakti poets speak openly and passionately about their devotion to Shiva or Vishnu. The hymns describe temples, rituals, sacred geography, and emotional surrender to a personal deity. Their language is meant to be heard and understood by a wide audience.

The Charyapada works very differently. Its poets deliberately use Sandhya-bhasha, or twilight language. Every day images conceal tantric teachings. A boat may symbolise spiritual practice, a woman may represent wisdom, and a house with nine doors may refer to the human body. This coded style reflects the secretive nature of tantric traditions, where knowledge was often transmitted only to initiated disciples.

Thus, the Tamil bhakti poets are communicative and public, while the Charyapada poets are cryptic and esoteric.

Social worlds and imagery

The social worlds reflected in the languages also differ. Tamil bhakti poetry often celebrates temple worship. The poets praise specific temples across Tamil Nadu and describe the deity residing there. Their songs helped create a sacred geography linking shrines such as Srirangam, Chidambaram, Madurai, and Tirupati. Over time, these hymns became part of the temple liturgy.

The Charyapada rarely refers to temples. Its imagery is drawn instead from village life – fishermen, hunters, farmers, boats, rivers, craftsmen, and wandering yogis. The language reflects a more marginal world of tantric practitioners moving between monasteries, forests, and rural communities.

Religious orientation

The religious tone also differs. The Alvars and Nayanars emphasise devotion, surrender, and emotional intimacy with God. Their poems are filled with love, longing, and ecstatic praise. The deity is personal and present in temple images.

In the Charyapada, the focus is not devotional worship but inner realisation. The language speaks of the body, the mind, and the transformation of consciousness. Even when the imagery involves men and women, food, or household activities, the meaning often relates to yogic processes or mystical insight.

The contrast between the two traditions therefore reveals two different pathways of religious vernacularisation in India. In the South, a mature regional language became the vehicle for public devotional religion centred on temples. In the East, a transitional vernacular became the medium for mystical poetry that circulated among small tantric communities.

Both movements demonstrate that by the early medieval period, the religious imagination of India was no longer confined to Sanskrit alone.

Post read questions

- 1. The Tantric Charyapada of eastern India and the Bhakti Alvar–Nayanar poetry of South India demonstrate that by the early medieval period, the religious imagination of India was no longer confined to Sanskrit alone. Comment.**
- 2. The contrast between the Charyapada and the Bhakti poetry of the Alvars and Nayanars reflects two distinct pathways of religious vernacularisation in India. Discuss.**
- 3. While Bhakti poetry was public and devotional, Tantric poetry remained esoteric and symbolic. Analyse.**
- 4. Examine the linguistic and thematic differences between Tantric and Bhakti poetic traditions in early medieval India.**
- 5. How did vernacular poetry contribute to the transformation of religious expression in early medieval India? Illustrate with examples.**

(Devdutt is a renowned mythologist who writes on art, culture and heritage.)

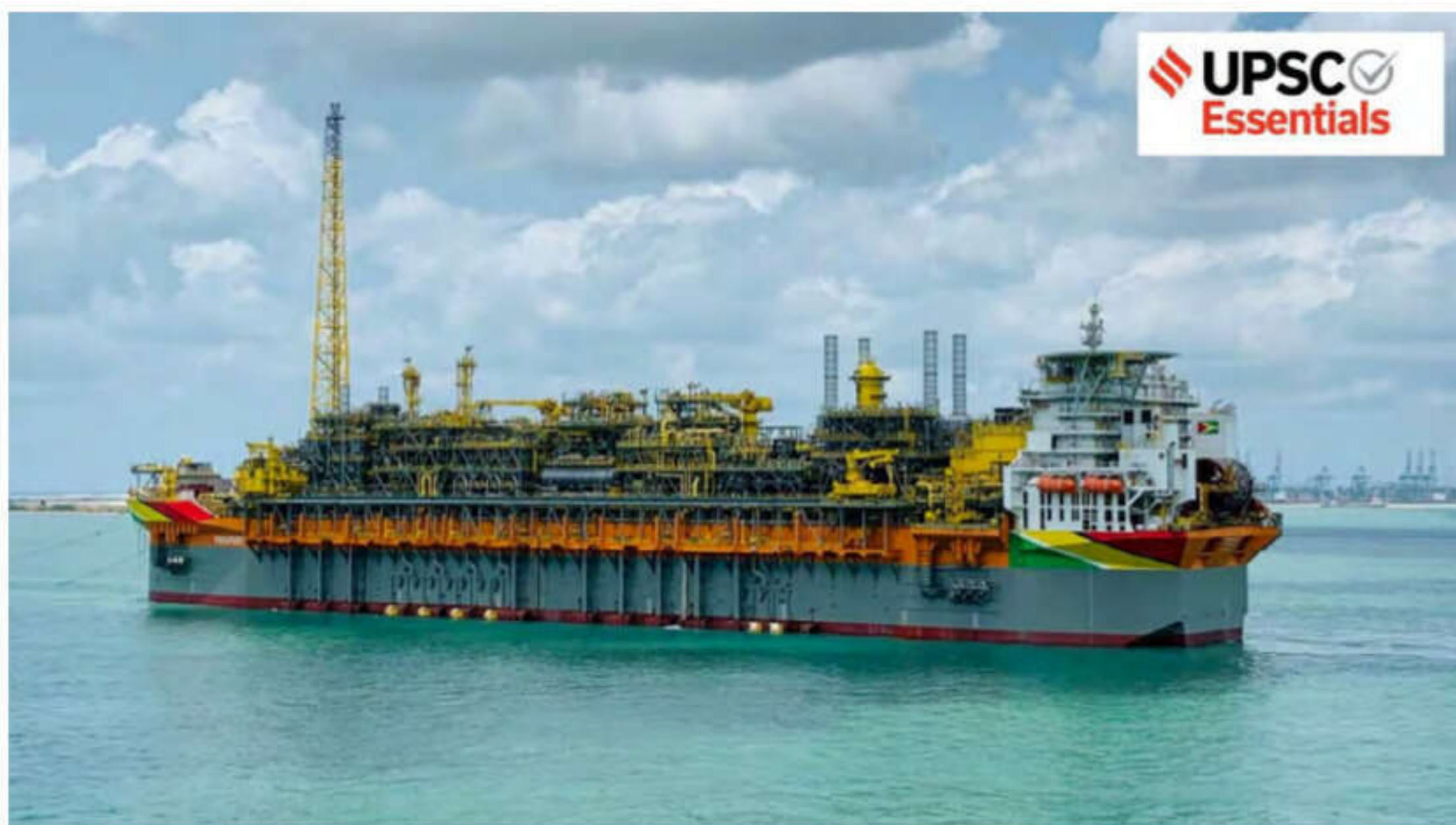
International Relations

How India managed oil embargo and energy crises of 1973 and 1979

As the US-Israel war against Iran continues to shape global energy security, what lessons do past oil shocks offer for navigating the current situation?

Written by **Stuti Gogoi**

The largest-ever disruption of energy supplies caused by the US-Israel war against Iran has left major global economies struggling with energy shortages. Amid the possibility of a new round of negotiations between Iran and the US, concerns over supply disruptions appear to cool down with oil prices dropping in early trade on occasions last month.



India is the world's third-largest consumer of crude oil and depends on imports to meet over 85 per cent of its requirement. (Credit: Pexels)

However, the Iran war has damaged as much as \$58 billion worth of energy infrastructure, according to an estimate by Rystad Energy. This does not bode well for economies like India, as its dependence on imported crude oil grew to over 88.5 per cent in the first 10 months of the current financial year FY26.

India's Oil Vulnerability – Five Key Numbers

ENERGY SECURITY – WEST ASIA CRISIS 2026

As the US-Israel war against Iran disrupts global energy supplies, how exposed is India – and where are the fault lines?

OIL IMPORT DEPENDENCE

India meets barely 1 in 8 barrels from domestic soil

India's crude oil import dependence climbed to 88.5% in the first 10 months of FY26 – a record high. Domestic output of roughly 700,000 barrels per day covers only about 13% of total demand. Total crude imports in FY25 stood at 244.5 million metric tonnes, making India the world's second-largest crude importer.

88.5%

Import dependence in FY26 (Apr–Jan)

~13%

Demand met by domestic production

244.5

Million MT crude imported in FY25

THE HORMUZ CHOKEPOINT

Nearly half of India's crude passes through a single strait

The Strait of Hormuz – the narrow waterway between the Persian Gulf and the Gulf of Oman – is the single most critical node in India's energy supply chain. Any closure or disruption here would halt 40–50% of India's crude oil imports almost immediately, with no short-term alternative route available at scale.

2.5–2.7

Million barrels/day transiting Hormuz (recent months)

~40%

Long-term average share of imports via Hormuz

Share of crude imports at risk if Hormuz closes

Recent months (peak exposure)~50%

Long-term average~40%

IRAN ENERGY INFRASTRUCTURE

\$58 billion in damage – the largest-ever energy supply disruption

The US-Israel war against Iran has caused an estimated \$58 billion in damage to energy infrastructure, according to Rystad Energy – the single largest disruption of energy supplies ever recorded. West Asia still accounts for roughly 60% of India's import basket, with Saudi Arabia, Iraq, UAE and Iran among its key historic suppliers.

\$58B

Estimated Iran energy infrastructure damage (Rystad Energy)

~60%

India's import basket still sourced from West Asia

What this means for India



Supply shortfall risk

Damaged Iranian infrastructure reduces regional export capacity, tightening supply for buyers across Asia including India.



Price pressure

Any prolonged disruption in West Asian output drives up global crude prices, raising India's import bill significantly.



Diversification urgency

India diversified sourcing since 2005 to include Africa and Americas, but West Asia's 60% share means no quick substitute exists at scale.

SUPPLIER CONCENTRATION

Top 5 suppliers now account for 82.7% of India's crude – up from 75.2%

India's crude import basket has become more concentrated, not less. The combined share of the top five suppliers – Russia, Iraq, Saudi Arabia, UAE and the US – rose from 75.23% in 2022-23 to 82.7% in 2024-25, indicating a counter-intuitive tightening of dependency even as India sought diversification.

Top 5 crude oil suppliers to India (2024-25)

RU Russia Top supplier

Became India's #1 supplier post-2022 Ukraine war sanctions

IQ Iraq #2

SA Saudi Arabia #3

AE UAE #4

us United States #5

Combined share: 75.23% (2022-23) → 82.7% (2024-25)

STRATEGIC PETROLEUM RESERVES

India's emergency buffer is only two-thirds full

India's Strategic Petroleum Reserves (SPR) – maintained in underground caverns – have a total capacity of 5.33 million tonnes. Current stocks stand at 3.37 million tonnes, or about 63% of total capacity, according to the Ministry of Petroleum and Natural Gas. A full reserve would provide a stronger cushion against supply shocks.

SPR fill level – current vs capacity

3.37 MT filled (63%)

Total capacity: 5.33 MT

5.33 MT

Total SPR storage capacity

1.96 MT

Unused capacity – buffer gap

Sources: Ministry of Petroleum and Natural Gas · International Energy Agency · Rystad Energy · Indian Express

As the crisis in West Asia continues to shape global energy security, what lessons do past oil shocks offer for navigating the current situation? Let's examine. But first, a brief overview of India's energy mix and import dependence.

India's energy basket

The unfolding crisis in West Asia has a profound impact on India's energy market, as the country is heavily dependent on West Asia for its energy imports.

Crucially, a huge chunk of those imports passes through the Strait of Hormuz – a waterway between the Persian Gulf and the Gulf of Oman. Around 2.5–2.7 million bpd of India's crude imports – accounting for almost half of the country's total oil imports – have transited the strait in recent months; the longer-term average is around 40 per cent.

With a population of 1.46 billion and a fast growing economy, India has seen a steady growth in its energy demand. This demand is met through various energy sources, with coal remaining the largest source of energy supply.

According to the International Energy Agency (IEA), around 48.4 per cent of India's total energy demand is met through coal and coal products as of 2023. Crude oil constitutes the second largest source, accounting for 24.7 per cent of total energy supply.

As coal is the mainstay of India's energy basket, its domestic production has registered a considerable growth, with 1047.5 million tonnes produced in 2024-2025 compared to 997.8 million tonnes in 2023-2024.

On the other hand, domestic oil production meets only about 13 per cent of total demand. In 2023, domestic oil production averaged around 700 thousand barrels per day. As a result, India remains heavily dependent on crude oil imports.

India's strategic petroleum reserves (SPRs), which have a capacity to store 5.33 million tonnes of crude oil, are currently holding 3.37 million tonnes of oil, or just about two-thirds of their total storage capacity, according to the Ministry of Petroleum and Natural Gas (MoPNG).

Energy import profile

India is the second largest importer of crude oil, with total crude oil imports standing at 244.5 million metric tonnes in 2024-2025. This means that nearly 90 per cent of India's energy demand is met through imports.

West Asia has traditionally been India's primary source of crude oil imports, with over 70 per cent of its crude oil coming from Saudi Arabia, Iran, Iraq, Kuwait and the United Arab Emirates.

Although India has sought to diversify its sources of oil supply since 2005 and included supplies from African countries like Nigeria and Angola as well as Venezuela, West Asia still constitutes about 60 per cent of the country's energy import basket.

Currently, Russia, Iraq, Saudi Arabia, the UAE and the US are the top five crude oil suppliers. The total share of imports from these countries increased from 75.23 per cent in 2022-23 to 82.7 per cent in 2024-25.

Oil shocks: What history tells us

But the ongoing crisis in West Asia once again highlights the vulnerability of energy supplies to geopolitical tensions. At the same time, global oil shocks are not a new phenomenon. Let's see how India navigated some of the major shocks in the past.

The 1973 oil crisis

During the 1973 Arab-Israeli war, Arab members of the Organization of Petroleum Exporting Countries (OAPEC) imposed an embargo on the US and other countries that were supporting Israel. The embargo reduced about 7 percent of the global supply, while embargoed countries faced a combined shortage of 4.5 million barrels of oil per day.

This was one of the first crises, when global economies were jolted by the strategic power of oil. As part of a coordinated move by Arab countries to cut production, oil prices surged by 70 per cent to \$5.11 per barrel. The impact was severe, pushing major economies like the US into recession that lasted until 1975. In the UK, this led to the fall of the Conservative government led by Ted Heath.

For India, the oil shock had a significant economic impact. Its import bill rose sharply from about \$500 million in 1973 to \$1.3 billion dollars in 1974. Rising petroleum prices and shortages of petroleum-based fertilisers even affected India's agricultural output.

The Five-Year Plan, launched in 1974, had estimated oil import expenditure at \$3.8 billion by 1978. However, the sharp increase in oil prices – reaching around \$8 per barrel – proved the estimate inadequate. Inflation surged by 20 per cent, while the demand for petroleum stagnated and imports declined.

The 1979 oil crisis

The next major shock followed in 1979 after the Iranian Revolution. Political instability led to a decline in Iran's oil production – around 7 per cent of world production at the time. This resulted in a rise of oil prices from \$13 per barrel in mid-1979 to \$34 per barrel in mid-1980. The crisis hit the global economy still recovering from the first oil shock just a few years earlier.

Amid these conditions, India was compelled to approach the International Monetary Fund (IMF) for assistance to address its balance of payment issue. This engagement is often seen as laying the foundation for the process of economic liberalisation, as the IMF support came in exchange for structural adjustments.

Post read questions

- 1. Geopolitical tensions in West Asia continue to shape global energy markets. Evaluate with reference to recent developments and their implications for India.**
- 2. What are strategic petroleum reserves? Evaluate their role in mitigating oil shocks in India.**
- 3. Global oil shocks expose the structural vulnerabilities of energy-importing economies like India. Discuss with examples.**
- 4. Examine the impact of the 1973 oil crisis on India's economy and policy direction.**
- 5. Discuss the role of the Strait of Hormuz in India's energy security. Why is it strategically significant?**

(Stuti Gogoi is a Doctoral Candidate at the Centre for West Asian Studies, JNU. The second part of the article will examine other major oil shocks around the 1990 Gulf war, the Russia-Ukraine war, and the ongoing Iran war, and analyse India's response.)

How WTO conference exposes deep divide between developed and developing nations

While developed countries are pushing for rules on digital trade and investment, developing countries, including India, are more focused on agriculture, food security and policy flexibility. Why do they view binding commitments on digital trade without a permanent solution to such issues as a non-starter?

Written by **Pushendra Singh and Archana Singh**

The 14th Ministerial Conference (MC14) of the World Trade Organization (WTO) ended without resolving the contentious issue of extending the moratorium on customs duties on electronic commerce, such as digital downloads and streaming.

More importantly, MC14 highlighted structural differences between developed and developing countries not only on e-commerce but also on agriculture, food security, and, above all, the future direction of WTO reforms.

But what are the key challenges in reconciling the priorities of developed and developing countries? Are WTO rules constraining India's food security policies? Does the shift towards plurilateral agreements signal a weakening of multilateralism in global trade?

First, let's briefly examine the key outcomes of the MC14, which concluded on Monday (March 30) in Yaounde, Cameroon.

Key takeaways from MC14

The official outcome of MC14 presents a mixed picture. It failed to reach a consensus on issuing a ministerial declaration, a ceremonial document that sums up what members achieved. But it produced a Yaoundé package, which comprises certain draft decisions.

So, what exactly was achieved:

First, members agreed on a set of decisions to improve the integration of small economies into global trade.



UPSC
Essentials

The 14th Ministerial Conference (MC14) of the World Trade Organization's (WTO) ended without resolving contentious issues. (File)

Second, they made some practical enhancements in the operationalisation of Special and Differential Treatment (S&DT) under Sanitary and Phytosanitary (SPS) and technical barriers to Trade (TBT) agreements. This means that developing countries now have slightly better access to technical assistance and longer transition periods for compliance.

Third, ministers agreed to continue negotiations on fisheries subsidies. Fourth, there was a commitment to carry forward discussions on WTO reform and digital trade.

Where consensus couldn't be achieved:

First, there was no agreement on extending the e-commerce moratorium. This moratorium prevents customs duties on digital transmission like software, streaming, and data flows.

Second, the China-backed Investment Facilitation for Development (IFD) Agreement was not adopted. Although the agreement gained the support of 128 countries, India opposed it for multiple reasons, including its incorporation through a plurilateral route.

While plurilateral deals only apply to participating countries, the WTO is traditionally based on multilateralism and consensus.

Third, there was no consensus on a comprehensive WTO reform package. While there's broad agreement on the need for reforms on issues including decision-making, dispute settlement, and development, member countries couldn't agree on how to proceed.

Structural divide

The failure at MC14 is rooted in structural divergence. A case in point is the difference between developing and developed countries on extending the existing moratoriums on customs duties for electronic transmissions.

E-commerce is defined as the production, distribution, marketing, sale or delivery of goods and services by electronic means. WTO members have agreed not to impose customs duties on electronic transmissions since 1998. It has been renewed every two years since then. At MC14, it expired because members could not agree on an extension.

The moratorium prevents the imposition of customs duties on electronic transmissions, including software, digital services, streaming content, and data flows. Notably, developing countries, including India, have opposed the extension on grounds, including:

1. Loss of revenue from digitally delivered services in the future, with UNCTAD estimating over USD 10 billion annually forgone.
2. Uncertainty about the scope of digital trade.
3. Lack of empirical data on its impact.

In contrast, developed countries are pushing for rules on digital trade and investment such as patents, services, and intellectual property rights. Their digital services exports depend on zero tariffs and predictable regulatory frameworks. For instance, the US alone exported over USD 500 billion in digital services in 2023.

But developing countries, including India, are more focused on agriculture, food security and policy flexibility. For them, binding commitments on digital trade without a permanent solution to such issues is a non-starter.

These differences are not easily reconcilable, and raise a broader question: who will shape the rules of the digital economy?

India's position

India's position is not anti-digital. Rather, it resists binding and permanent rules before understanding the consequences. Meanwhile, critics argue that the US is seeking to rewrite the rules in ways that align with its economic interests.

For instance, it is pushing for permanent tariff-free digital trade – a sector dominated by American companies like Google, Amazon, Apple, and Meta. At the same time, it is adopting protectionist measures like slapping tariffs on a range of goods, from Chinese steel to European cars.

This perceived inconsistency – advocating free trade in some areas while practicing protectionism in others – has not gone unnoticed. It further makes consensus increasingly difficult to achieve among WTO members.

The WTO is a consensus-based system, with each of the 166 members having a veto. Resultantly, some countries are moving towards plurilateral agreements, small coalitions that move ahead without full consensus.

Sixty-six countries moved ahead with their own e-commerce agreement, and another 120 plus backed a separate investment deal. In addition, over 350 regional trade agreements are now in force, many with deeper provisions than WTO agreements. It won't be wrong to say that this is how multilateral systems die. Not with a bang, but with everyone making other arrangements.

Why Delhi refuses to trade away policy space

India was one of the most vocal countries at MC14. On digital trade, India's position is straightforward: It is not ready to give up customs revenue and policy space permanently, not before it understands the full impact, and not when 40 percent of its population still does not have reliable internet access.

India's food programme feeds approximately 500 million people. The government buys grain from farmers, stores it, and distributes it. But WTO says that India is exceeding the subsidy limit because it measures subsidies based on prices from 1986 to 1988.

Today, if a farmer gets 25 rupees per kg for a commodity while the market price is 24, the real subsidy is 1 rupee. But when compared to prices from 1986 to 1988, the subsidy appears inflated.

Moreover, India has consistently demanded a permanent solution on public stockholding for food security, strong and effective Special and Differential Treatment (S&DT) provisions, the full restoration of the dispute settlement system, and no integration of plurilateral agreements into the WTO without consensus.

What needs to change

Three things stand out clearly. First, the dispute settlement system needs to be fixed. With successive American administrations blocking the appointment of judges to the WTO's dispute settlement body, its trade dispute settlement powers have been rendered dysfunctional.

Second, agricultural rules need to be updated. Using 1986 prices to calculate subsidies in 2026 is increasingly untenable.

Third, digital trade needs to be negotiated more equitably. The lapse of the e-commerce moratorium is not necessarily a setback. It may be seen as an opportunity to craft rules that reflect differing levels of digital development.

Fourth, making the decision-making process more flexible would be helpful. While consensus cannot be abandoned, it also cannot remain rigid to the point of paralysis. Plurilateral agreements, with safeguards for non-members, may be considered.

Can the WTO survive?

The WTO governs 98 per cent of world trade. But the governance works only if major players respect the system. When the most powerful members opt out of rules that do not suit them, the institution's credibility is undermined.

The WTO's one of the greatest achievements has been providing small countries with legal tools to challenge big economies – and sometimes win. That system is now at risk. For India, this matters beyond economics. The WTO, despite its flaws, remains one of the few platforms where a developing country prevails on the strength of its argument, rather than the size of its economy.

The MC14 did not break the system. It exposed its fractures. The WTO is no longer the primary forum for shaping new rules. The real risk is not sudden collapse, but gradual marginalisation.

The question is no longer whether the WTO can facilitate discussions, but whether it can still shape outcomes. For India, the situation seemingly calls for continuing to defend policy space, push for asymmetrical rules, and insist on a binding and effective dispute management system.

Post read questions

- 1. Discuss the significance of the e-commerce moratorium in global trade. Why has it become contentious among developing countries?**
- 2. What is Special and Differential Treatment (S&DT)? Evaluate its relevance in contemporary WTO negotiations.**
- 3. Why do developing countries like India emphasize food security and public stockholding in WTO negotiations? Analyze how the use of 1986–88 reference prices in WTO calculations affects India's agricultural subsidy limits.**
- 4. The failure of MC14 reflects deeper structural divide between developed and developing nations. Critically examine.**
- 5. The shift towards plurilateral agreements signals a weakening of multilateralism in global trade. Discuss.**

(Pushendra Singh is an Assistant Professor of Economics at Somaiya Vidyavihar University, Mumbai, and Archana Singh is an Assistant Professor of Gender and Economics at the International Institute for Population Sciences, Mumbai.)

Economy

Why India's informal workforce is trapped between survival and stagnation

India's unincorporated sector supports millions of livelihoods and contributes to the overall growth. But what does the Annual Survey of Unincorporated Sector Enterprises 2025 reveal about the nature of growth in this sector?

Written by **Pushendra Singh and Archana Singh**



ASUSE 2025 shows that trade and services together account for 80 per cent of GVA in the informal sector, both of which are highly sensitive to logistics and energy costs. (File photo)

India's economic growth is usually framed around large firms, expanding markets, and rising enterprises. But much of this growth also rests on a sector that largely remains unchanged: the unincorporated non-agricultural sector. It absorbs labour, sustains livelihoods, and supports local demand.

But this raises an important question: does expansion in this sector signal progress or mask the persistence of informality?

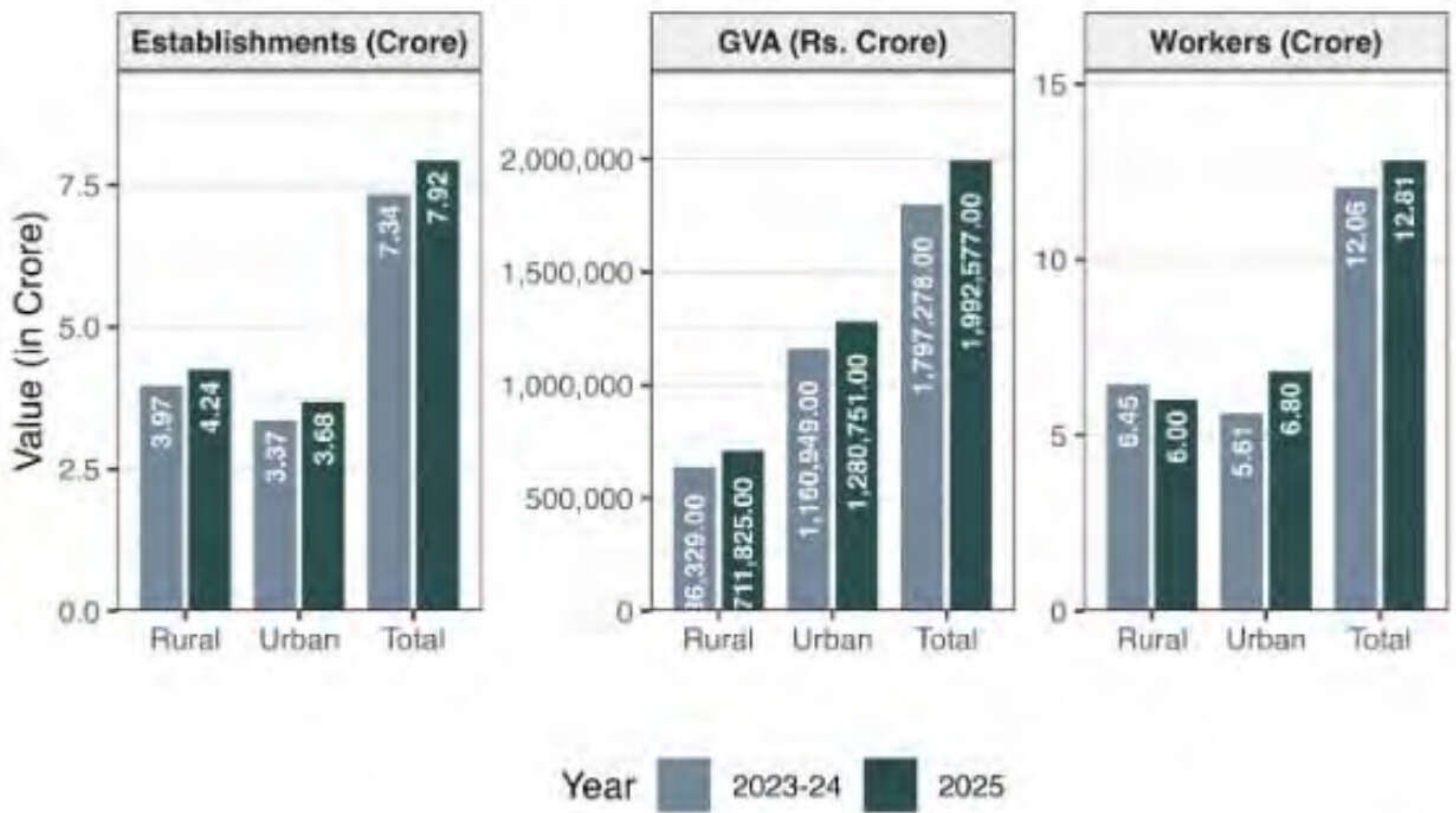
The latest findings from the Ministry of Statistics and Programme Implementation’s (MoSPI) Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025 bring this into focus. Beneath the visible economy lies a vast network of unincorporated, non-agricultural enterprises like small manufacturers, service providers, and trading units.

This sector supports millions of livelihoods and anchors local demand. According to ASUSE, this sector comprises 7.92 crore establishments and employs 12.81 crore workers, which makes it one of the largest sources of work in the country.

Arithmetic of expansion in scale and employment

The number of informal establishments has increased from 7.34 crore in 2023-24 to 7.92 crore in 2025, reflecting a growth of nearly 8 per cent. This rise reflects the steady entry and survival of small economic units. A closer look at these numbers also reveals that the distribution of this growth across sectors largely remains unchanged: 27 per cent in manufacturing, 31 per cent in trade, and 42 per cent in ‘services’.

Figure 1 : Expansion of India’s Unincorporated Sector: Establishments, GVA, and Employment (2023-24 to 2025)



Source: Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025

Further, employment has also expanded to 12.81 crore workers, registering a growth of 6.18 per cent. This confirms the sector’s role as a primary absorber of labour. But the nature of this employment remains unchanged. Around 62 per cent of workers are owner-operators, while only 24 per cent are hired workers. This reveals the nature of growth. Although employment is growing, it is largely driven by self-employment and family labour. The sector generates work, but not stable and wage-based jobs.

Rising output and value addition

Alongside the increase in establishments and employment, the sector has also recorded a rise in output. Gross Value Added (GVA) grew by 10.9 per cent between 2023-24 and 2025. The services account for the largest share in GVA (42%) followed by trade (37%) and manufacturing (21%). This indicates increasing activity in buying and selling goods, even without significant transformation.

While manufacturing is still important, it shows relatively moderate growth. This reflects the continued dominance of small-scale production units that operate with limited capital and technology. This shift toward services and trade suggest a changing structure within the informal economy. It points to the increasing importance of demand-driven, localised services in shaping economic activities.

Figure 2: Sectoral Growth in India's Unincorporated Economy: Establishments, GVA, and Employment (2023-24 to 2025)



Source: Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025

Productivity, wages, and earnings

One of the key indicators of economic progress is productivity. ASUSE 2025 data shows that the per worker GVA – or the difference in the value of inputs used and output produced – increased from 1.49 lakh to 1.56 lakh. Although it registers a growth of about 4.5 per cent, it is down from 5.6 per cent in 2023-24.

In addition, the scale of improvement remains modest. They do not suggest a major shift in technology, skills, or scale of operations. This pattern is consistent with the nature of the sector. Most enterprises operate with limited capital, rely on traditional methods, and serve local markets, without significant changes in factors of productivity.

The results show a rise in wages in the unincorporated non-agricultural sector, with average annual wage/emolument per hired worker increasing by 3.88 per cent – from 1,41,071 in 2023-24 to 1,46,550 in 2025. However, this increase

is relatively small when compared to the growth in GVA. This suggests that the benefits of higher output are not translating into higher earnings for workers. It also reflects the limited bargaining power of labour within informal settings.

Progress of women-owned enterprises

One of the notable trends in ASUSE 2025 is the increase in women-owned proprietary establishments. Their share has risen from 26 per cent to 27 per cent. While this marks progress, the change is modest, largely due to the persistence of some structural barriers.

Access to credit remains constrained, particularly for women entrepreneurs who lack collateral assets (like land, gold) or formal financial history (like previous loans, bank transactions). Market linkages are often weak, limiting the scale and reach of their enterprises. As a result, many women-led enterprises remain small, home-based, and concentrated in low-value activities.

How West Asia war poses risks to unorganised sector

Such structural factors also make the unorganised sector susceptible to external shocks. The ongoing war in West Asia poses a measurable risk to this sector through well-established transmission channels.

India imports over 80 per cent of its crude oil, with a significant portion sourced from West Asia, specifically via the Strait of Hormuz. The war has led to a sharp increase in fuel prices. The potential rise in transport and input costs is likely to have a corresponding effect on small, unincorporated enterprises operating on thin margins.

ASUSE 2025 shows that trade and services together account for 80 per cent of GVA in the informal sector, both of which are highly sensitive to logistics and energy costs. At the same time, remittances from West Asia support household demand in many regions. If these flows weaken, local consumption falls. For the informal sector, such shocks are not external, they are likely to be felt directly.

From counting enterprises to strengthening them

The most defining feature of the unincorporated sector is its informality. ASUSE data shows that nearly 95 per cent of establishments operate as proprietary or partnership units. This structure has both strengths and limitations.

On the one hand, it allows for flexibility, low entry barriers, and quick adaptation to changing conditions. On the other hand, it constrains access to formal finance, limits scalability, and reduces the availability of social security for workers.

The unincorporated sector remains central to India's economy. Nearly 8 crore enterprises and 12.8 crore workers reflect scale, not strength. The output is rising, but jobs remain informal. The productivity is improving, but at the margin. The women are entering, but not advancing. This is not a story of transformation. This is a story of persistence.

The question is no longer whether the sector is growing. It is whether it is changing. Until policy shifts from counting enterprises to strengthening them, India's largest workforce will remain trapped between survival and stagnation.

Post read questions

- 1. Growth in the unincorporated sector reflects scale but not structural transformation. Discuss in the context of recent ASUSE findings.**
- 2. Examine the structural constraints of India's unincorporated sector and their implications for employment quality and productivity.**
- 3. Examine the challenges faced by women entrepreneurs in the informal sector, particularly in accessing credit and scaling their enterprises.**
- 4. Discuss the vulnerability of small, informal enterprises to input cost shocks and suggest measures to enhance their resilience.**
- 5. Discuss the role of government policy in transitioning informal enterprises into formal and productive units.**

(Pushendra Singh is an Assistant Professor of Economics at Somaiya Vidyavihar University, Mumbai, and Archana Singh is an Assistant Professor of Gender and Economics at the International Institute for Population Sciences, Mumbai.)

Society

Water crisis in India: stories of distress, gender disparities, and complex societal responses

Water crisis reflects a complex interplay between environmental challenges, gender disparities, and societal responses, shaping how access to water is experienced and managed across communities. How do women bear the burden of water scarcity in different ways?

Written by **Ritwika Patgiri**

India holds 18 per cent of the world’s population but only 4 per cent of its freshwater, with per capita availability estimated to drop to the scarcity threshold of 1,000 cubic metres by 2050. The water crisis manifests itself in stories of distress, gender disparities, and complex societal responses.

For instance, studies show that in a drought-prone hamlet of Maharashtra, local communities have resorted to polygamy, believing more women – called “water wives” – can enhance the ability to procure drinking water. Similarly, sugarcane cultivation in the state reveals yet another gendered water struggle.

Alongside gender norms, inequality, poverty, rural-urban divide are some other factors that shape how access to water is experienced and managed across communities. These factors become important in the context of a new report titled “Global Water Bankruptcy: Living Beyond Our Hydrological Means in the Post-Crisis Era”.

Released by the United Nations University Institute for Water, Environment and Health (UNU-INWEH), the report notes that nearly three-quarters of the world’s population lives in countries classified as water-insecure or



Women aged 15 and above are responsible for water collection in around 71 per cent of rural households in India. (Source: Express Photo by Javed Raja)



Sources: UNU-INWEH Global Water Bankruptcy Report, NITI Aayog CWMI World Bank

critically water insecure. It also states that across the globe, around 2.2 billion people lack safely managed drinking water, while 4 billion people experience severe scarcity of water at least once a month every year.

Water crisis in India

In India, the reality of the water crisis varies across rural and urban areas. The World Bank defines water scarcity as a situation when annual per capita water availability drops below 1000 cubic metres and when safe and usable water falls short of the total demand.

The NITI Aayog's Composite Water Management Index (CWMI) report of 2019 states that the country is facing the most severe water crisis in its history. However, government policies like the Jal Jeevan Mission have played a significant role in targeting the provision of basic drinking water to all people.

According to the World Bank, access to basic drinking water refers to access to improved sources like piped water, boreholes, tubewells, protected dug wells, protected springs, and packaged or delivered water.

In terms of national-level data, India has made progress in increasing access to drinking water. In the early 2000s, only 80 per cent of Indians had access to safe drinking water. Now, almost 95 per cent of Indian households have access to basic drinking water.

However, the provision of tap water connections does not automatically mean that households get their drinking water from taps or that the water connection is functional. This is important to consider since, according to NITI Aayog data, nearly 600 million people face water crisis and 200,000 people die each year due to inadequate access to safe water.

Access to safe drinking water is also marked by inequalities. Access to basic drinking water is poorer in rural areas than urban areas. For instance, around 92 per cent of Indians in rural areas have access to basic drinking water, while it is close to 96 per cent in urban areas. It is also observed that low-income households spend a greater share of their monthly income to secure clean drinking water.

Further, water-borne diseases are more frequent in drought and flood-prone areas. Water scarcity also affects women and children in different ways. For instance, UNICEF reported a 22 per cent increase in school dropout rates in drought-affected areas, as children are sent to collect water instead of attending classes.

Gendered dimensions of water scarcity

Similarly, women also face the burden of water scarcity in different ways. According to the National Family Health Survey (NFHS-5) data, women aged 15 and above are responsible for water collection in around 71 per cent of rural

WOMEN & WATER IN INDIA

The Invisible Labour: How Water Scarcity Falls Hardest on Women

From "water wives" in Maharashtra to Dalit women reviving wells — the gendered burden of India's water crisis

71%

of rural households depend on women for water collection

National Family Health Survey (NFHS-5) — women aged 15 and above

THE DAILY COST

35 min

spent by 54% of rural women fetching water every single day

27 days

of lost wages per year — the hidden economic toll on women

MAHARASHTRA: WATER & PATRIARCHY

THE "WATER WIVES" OF DROUGHT-HIT VILLAGES

In drought-prone hamlets, men marry widows or unmarried women — called **water wives** — solely to manage water collection. These women have no inheritance rights, no conjugal life. Their role exposes how water duty is treated as degrading, feminised labour.

WOMEN FIGHTING BACK

COMMUNITY-LED WATER REVIVALS ACROSS INDIA

- | **Maharashtra:** Women farmers collectivised to demand a share in canal irrigation water
- | **North India:** Dalit women formed *jai sahelis* (water friends) to restore non-functional water bodies
- | **Western Himalayas:** Women led spring rejuvenation drives to fight drying natural sources

Sources: NFHS-5; UNICEF; field studies on Maharashtra water scarcity and gender

households in India. They also spend long hours collecting water from distant and faraway places. According to UNICEF, nearly 54 per cent of rural women spend an estimated 35 minutes getting water every day, equivalent to the loss of 27 days' wages over a year.

The case of Maharashtra can be used here to understand how gendered the question of water scarcity and accessibility remains. As mentioned earlier, studies suggest that in a drought-prone hamlet of the state, local communities have resorted to polygamy, believing that more women in the household can fully look after the availability, collection, and management of water.

Men usually marry widows or unmarried women without dowry to only fetch water. These women are called "water wives", and lack inheritance or conjugal life. The situation reflects how "water collection" is also seen as a degrading, tedious, and gendered role.

Sugarcane cultivation in drought-prone Maharashtra reveals yet another gendered water struggle. The stories of female migrant agricultural workers from water-stressed regions in sugarcane fields offer insights.

Sugarcane is a heavily water-absorbing crop. These female agricultural workers face a double burden of work as well as exploitation – long hours of work in the field, along with domestic work like cooking, cleaning, and fetching water.

The harsh working conditions often imply a lack of access to toilets and water, often leading to severe health conditions like delayed menstruation, with some women undergoing hysterectomy in extreme cases. This reflects poorly on the existing developmental model, where water for production of cash crops like sugarcane is seen as more important than local needs.

Access to water, thus, is more than geographical positions. Unequal systems, gendered norms, and prioritising profit and market make women more vulnerable.

Need for gender-responsive water governance

Water scarcity and poverty are a multidimensional phenomena, marked by both the physical availability of water as well as socio-economic factors. These factors make the role of policymakers significant. Issues around water scarcity and drought often see women as invisible or passive victims, whose primary role is to fetch water. This narrative, however, hides the importance of the woman farmer in irrigation.

Policies as well as projects around water, therefore, need to address women's concerns more effectively and contribute to gender equality. While current policies on agriculture and irrigation measure efficiency, productivity, and output, they often ignore women's unpaid labour in fetching water as well as the woman farmer.

There are examples across the country where women farmers have demanded their rightful share in irrigation. In Maharashtra, women farmers collectivised and asked for a share in the water from the canal irrigation to irrigate the land they collectively leased.

In North India, Dalit women formed *jal sahelis* or water friends to restore old and non-functional water bodies to ensure drinking water security in their villages. In the Western Himalayan region of the country, the drying of natural springs caused a severe water crisis. But women led the efforts to rejuvenate these springs. However, landownership and decision-making among these women remain low.

Therefore, a gendered understanding of environmental governance is crucial for effective and equitable policymaking. Accessibility of water must go hand-in-hand not only with physical infrastructure but also with institutional reforms that address gender inequalities in land ownership, decision-making, and the distribution of unpaid care work. Women

are active agents in water management and policies must incorporate women's knowledge, experiences, and leadership in local water governance systems.

Post read questions

- 1. Water scarcity in India is not merely an environmental issue but a deeply gendered social problem. Discuss with suitable examples.**
- 2. Examine the gendered division of labour in rural India in the context of water scarcity. How does it reinforce existing inequalities?**
- 3. Evaluate the effectiveness of government initiatives such as the Jal Jeevan Mission in ensuring equitable access to safe drinking water.**
- 4. Discuss the role of local communities and women-led initiatives in improving water governance in India.**
- 5. Why is it important to incorporate a gender perspective in public policy related to water and irrigation? Suggest measures.**

(Ritwika Patgiri is a doctoral candidate at the Faculty of Economics, South Asian University.)

Environment

What are the socio-ecological implications of disappearing lakes in India?

From regulating floods, providing habitat for aquatic species, birds and plants, and supporting livelihood, lakes perform various critical functions. What are the factors responsible for their disappearance? How do legal frameworks and policies seek to address them? See infographics for quick key insights and test your understanding with MCQs.

Written by **Renuka**

Lakes, a vital natural resource, are vanishing at an alarming rate because of the intense human interference (or the Anthropocene epoch) in Earth's system. Globally, around 117 million lakes cover nearly 4 per cent of Earth's land surface, which makes their decline a matter of serious ecological concern.

The trend is visible in India as well. For instance, 518 of the total

697 lakes recorded in 1967 in Jammu and Kashmir have either disappeared or shrunk, according to a recent report by the Comptroller and Auditor General (CAG) of India on Conservation and Management of Lakes.

The report for the period up to March 2022 also notes that 315 lakes have vanished in Jammu and Kashmir. But these findings are not isolated, as similar patterns of degrading or vanishing lakes can be seen in various parts of India.

But what are the underlying causes behind the disappearance of lakes? What kind of questions does it raise about the state's role to protect the natural resources of the country under the Public Trust Doctrine (PTD)? First, let's examine the significance of lakes.



From regulating floods, providing habitat for aquatic species, birds and plants, and supporting livelihood, lakes perform various critical functions. (File)

India's Lakes: Why They Matter, Why They're Dying

ENVIRONMENT – EXPLAINER

Lakes cover 4% of Earth's land surface and perform irreplaceable ecological roles – yet they are vanishing due to pollution, encroachment, and weak governance. Here's what's at stake.

ECOLOGICAL SIGNIFICANCE

Lakes are far more than scenic water bodies

Globally, around 117 million lakes cover nearly 4% of Earth's land surface. They provide 90% of the world's surface fresh water and perform critical ecological and socio-economic functions that no other natural system can replicate.

SCALE OF LOSS – INDIA

518 of 697 lakes in J&K gone or shrunk since 1967

A CAG report on Conservation and Management of Lakes found that 315 lakes have fully vanished in Jammu & Kashmir alone. Similar patterns of degradation are visible across India, driven by overlapping human pressures.

Six functions lakes perform

- ◆ **Groundwater recharge**
Lakes act as reservoirs that sustain long-term water security, especially in regions dependent on groundwater for drinking and irrigation.
- ◆ **Flood regulation**
During heavy rainfall, lakes function as natural buffers – absorbing and holding excess runoff, reducing the risk of downstream flooding.
- ◆ **Biodiversity hotspots**
Lakes provide habitat for aquatic species, birds, plants, and migratory visitors. Chilika Lake in Odisha – the world's largest brackish water lagoon – hosts thousands of migratory birds each winter.
- ◆ **Socio-economic value**
They support livelihoods through fisheries, agriculture, and domestic water supply, and contribute to local economies through tourism and recreation.
- ◆ **Cultural significance**
In India, lakes like Pushkar in Rajasthan and Dal in Jammu & Kashmir carry deep cultural and spiritual importance for communities.
- ◆ **Fresh water supply**
Lakes provide 90% of the world's surface fresh water – making their conservation directly tied to global water security.

Five key threats

- **Pollution and eutrophication**
Lakes have become dumping grounds for waste and sewage in urban areas. Agricultural runoff containing fertilisers triggers eutrophication – explosive algal growth that depletes oxygen and kills aquatic life. Bellandur Lake (Bengaluru), Hussain Sagar (Hyderabad), and Dal Lake are severely affected.
- **Illegal encroachment**
Rising land values in urban and peri-urban areas have led to lakes being treated as real estate rather than ecological assets. The CAG report flagged encroachment as a primary cause of lake loss across India.
- **Illegal sand and gravel mining**
Unregulated extraction of sand and gravel from lakebeds physically degrades these water bodies. Balsamand Lake in Rajasthan and Surajkund Lake in Haryana are among those affected.
- **Unregulated tourism**
Unchecked visitor activity around lake ecosystems increases pollution and waste generation, placing additional ecological stress on already fragile water bodies.
- **Land-use change**
Sprawling cities and infrastructure development have directly converted lakebeds and wetlands into built-up areas, permanently eliminating these ecosystems.

PUBLIC TRUST DOCTRINE

The state is a trustee of natural resources – not their owner

The Public Trust Doctrine (PTD) designates the state as a trustee of natural resources on behalf of present and future generations. But continued lake degradation reveals fragmented institutional frameworks and weak enforcement of regulations.

2025 Supreme Court ruling

- ⚖️ **Swachh Association vs State of Maharashtra (2025)**
The Supreme Court clarified that PTD extends beyond natural water bodies to artificially created lakes and reservoirs that serve ecological functions – broadening the scope of state responsibility to protect all water bodies.

Legal gaps and institutional failures

- ★ **No central law for lakes**
There is no specific central legislation for lake conservation. The Wetlands (Conservation and Management) Rules, 2017 apply only to designated Ramsar sites or specifically notified water bodies.
- ★ **Fragmented accountability**
Water is a state subject under the Constitution. Wetlands in forest or protected areas fall under separate departments, leading to diffused accountability – a concern highlighted directly in the CAG report.
- ★ **NPCA – limited in scope**
The National Programme for Conservation of Aquatic Eco-systems (formed 2013) applies only to water bodies nominated by state governments and is constrained by funding and monitoring gaps.
- **What can be done**
A dedicated national legal framework with uniform standards, a statutory nodal authority, scientific mapping, regular monitoring, and stronger community participation to reduce fragmentation and improve enforcement.

Sources: CAG Report on Conservation and Management of Lakes (up to March 2022) · Wetlands (Conservation and Management) Rules, 2017 · Swachh Association vs State of Maharashtra, Supreme Court (2025) · International Glossary of Hydrology

Ecological and socio-economic significance of lakes

According to the International Glossary of Hydrology, a lake is an “inland body of water of considerable size”. They can be either natural or man-made. Although lakes are usually seen as merely scenic elements in a landscape, they hold immense ecological and socio-economic significance.

From regulating floods, providing habitat for aquatic species, birds and plants, and supporting livelihood, lakes perform various critical functions.

Groundwater recharge: One of the key functions of lakes is groundwater recharge. They act as reservoirs that support long-term water security, especially in regions dependent on groundwater for drinking and irrigation. Lakes provide 90 per cent of the world’s surface fresh water.



Chilika Lake, Odisha, (Source: Unsplash)

Flood regulation: Lakes also help in flood regulation. During heavy rainfall, these water bodies function as natural buffers by absorbing and holding excess rainwater and runoff, thereby reducing surface water that can contribute to flooding.

Biodiversity hotspots: Lakes, including wetlands, are critical biodiversity hotspots. They provide habitat for aquatic species, birds and plants. In addition to native biodiversity, they also provide appropriate ecological conditions for migratory species. For example, Chilika Lake in Odisha, the largest brackish water lagoon in the world, is a crucial habitat for migratory birds, especially during the winter season.

Socio-economic significance: Lakes also hold substantial socio-economic value. They support livelihoods through fisheries, agriculture, and related activities. They also provide water for domestic use, and contribute to local economies through tourism and recreation.

Cultural significance: In India, some lakes also have cultural significance. Pushkar Lake in Rajasthan and Dal Lake in Jammu and Kashmir are the prominent examples of this.

Therefore, the degradation of lakes affects not only ecological balance but also economic stability and community well-being.

Consider the following statements:	Which of the statements are correct?
1. Inland body of water of considerable size 2. Water is a state subject under the Constitution 3. Public Trust Doctrine applies to only natural water bodies	(a) 1 and 2 (b) 1 and 3 (c) 2 and 3 (d) All

Major factors affecting lakes

Various overlapping factors are responsible for the disappearance and depletion of lakes. Foremost among these is pollution. Due to inadequate waste management and land scarcity, especially in urban areas, lakes have increasingly become dumping grounds for waste and sewage. Bellandur Lake of Bengaluru is one such lake that has become highly toxic due to pollution.

The inflow of waste, sewage, and agricultural runoff containing fertilizers leads to eutrophication – the excessive enrichment of water with nutrients. This results in rampant algal bloom and oxygen depletion, making it impossible for aquatic life to survive. Hussain Sagar Lake in Hyderabad, as well as Dal lake, are suffering from severe eutrophication.

Illegal encroachment and land-use change are also the major reasons behind the dramatic loss of lakes, especially in urban and peri-urban areas. The CAG report also highlighted this reason. Sprawling cities and rising land values have led to lakes and wetlands being viewed as real estate rather than ecological assets. As a result, encroachment has intensified.

In addition to this, illegal mining of sand and gravel from lakebeds contributes to their degradation. Balsamand Lake in Rajasthan and Surajkund Lake in Haryana are affected by such activities. Unregulated tourism further exacerbates the problem by increasing pollution and waste generation.

Some cultural and religious practices, such as idol immersion, also degrade water quality and intensify ecological stress on these water bodies. These overlapping pressures draw attention to legal and institutional framework for lake conservation.

Constitutional and legal status of water bodies

Water is a state subject under the Indian Constitution. Therefore, states are primarily responsible for regulating and managing water bodies. At the state level, Karnataka was one of the first states that enacted a law for lake conservation in 2015, but it repealed the act in 2018.

But there is no specific central legislation for lake conservation, except the Wetlands (Conservation and Management) Rules, 2017, enacted under the Environment Protection Act, 1986. These rules provide a regulatory framework for protecting wetlands, emphasising the “wise use” of these ecosystems. They established wetland authorities in each state and the National Wetland Committee with an advisory and supervisory role.

However, these rules are applicable only to wetlands designated as Ramsar sites or specifically notified for protection by the state or central government. Also, the rules exclude the wetlands falling under forest areas and protected areas such

Which of the following factors can lead to eutrophication in lakes?	Select the correct answer using the code below
1. Discharge of waste and sewage	(a) 1 and 2 only
2. agricultural runoff containing fertilizers	(b) 1, 2 and 4
3. Industrial effluents	(c) 1, 3 and 2
4. Illegal mining of sand and gravel from lakebeds	(d) 1, 2 and 3

as National Parks and wildlife sanctuaries, which need to be managed and regulated by the respective departments.

This institutional framework often leads to diffused accountability and administrative inefficiencies, a concern also highlighted in the CAG report.

Policy framework for lake conservation

At the policy level, the government launched the National Lake Conservation Programme (NCLP) in 2001. The programme largely focuses on restoring water quality and ecology of lakes, and developing policies for their protection.

In 2013, the NCLP was merged with the National Wetlands Conservation Programme (NWCP) of 1985 to form a new integrated scheme of the National Programme for Conservation of Aquatic Eco-system (NPCA). As a centrally sponsored scheme, NPCA seeks to promote the conservation and management of lakes and wetlands.

However, the scheme is applicable only to those water bodies that fulfil certain criteria and are nominated by the state governments/UT governments. Moreover, the implementation is often constrained by funding and monitoring issues.

Strengthening lake governance

The PTD designates the state as the trustee of natural resources on behalf of present and future generations. But continued degradation of lakes points to fragmented institutional frameworks and issues around the enforcement of regulations.

In the case of *Swachh Association vs State of Maharashtra (2025)*, the Supreme Court clarified that PTD is not only confined to natural water bodies but also extends to artificially created lakes and reservoirs serving ecological functions. This interpretation broadens the scope of state responsibility to protect all waterbodies.

Therefore, developing a dedicated national legal framework that lays down uniform standards for the protection of all lakes, including the creation of a statutory nodal authority to implement the standards, would help reduce fragmentation of responsibilities and improve coordination. Any such effort needs to be supported by scientific mapping and regular monitoring, which would further help in addressing issues like encroachment and land-use changes.

Further, more effective implementation of pollution control laws, along with the regulation of activities like sewage discharge, is crucial. Strengthening community participation can also help in efficient monitoring.

Post read questions

- 1. What are the major factors behind the disappearance of lakes in India? Discuss with examples.**
- 2. Why are wetlands and lakes disappearing in India? Discuss the consequences for ecological balance.**
- 3. Explain the process of eutrophication and assess its impact on lake ecosystems.**
- 4. Discuss the role of institutions and policies in environmental conservation. Why do implementation gaps persist?**

(Renuka is a Doctoral researcher at Himachal Pradesh National Law University, Shimla.)

Is environment a silent casualty of war?

How does the US-Israel war on Iran signal a shift from episodic environmental disasters to a more persistent and cumulative ecological crisis? Are the existing legal and policy frameworks adequate to deal with it? See infographics.

Written by **Renuka**

The two-week pause in the Iran War, announced in April by Washington and Tehran, has provided a much-needed respite and eased global anxieties. However, environmental damage caused by the war will remain a serious concern for the foreseeable future.

What are the key environmental consequences of recent conflicts in West Asia? How has the environment historically borne the brunt of wars and conflicts? Do the growing global discussions around recognising ecocide as an international crime offer an important opportunity?



A thick plume of smoke rises from an oil storage facility hit by a US-Israeli strike in Tehran, Iran, on March 8, 2026. Photo: AP/Vahid Salemi

War & the Environment: Laws, Gaps & the Road Ahead

ENVIRONMENT – INTERNATIONAL LAW

Modern warfare is one of the most destructive forces on the planet – yet the legal frameworks meant to protect nature during conflict remain weak, narrow, and largely unenforceable.

THE SCALE OF DAMAGE

Modern warfare has become an ecological crisis

Among human activities, warfare is one of the most potent drivers of environmental destruction. Unlike earlier wars confined to land, modern conflict extends across seas and airspace – generating emissions, toxic pollution, and long-lasting ecological damage that persists long after ceasefires.

KEY NUMBERS FROM RECENT CONFLICTS

500K+ tonnes of CO ₂ from Gaza war in first 120 days	~2B metric tons GHG released by US military in 6 days of Iran war	800 km of Gulf coastline contaminated in 1991 oil spill – largest in history
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HISTORICAL PATTERN

From WWI forests to Agent Orange – a long legacy

WWI destroyed around 350,000 hectares of forest. In Vietnam, Operation Ranch Hand deployed 19 million gallons of herbicides, destroying over 5 million acres of forest and 500,000 acres of crops. The Russia-Ukraine war has damaged Emerald Network sites protected under the Bern Convention.

LEGAL FRAMEWORK

Four key instruments protect the environment during war

International recognition of environmental protection during armed conflict grew after the Vietnam War's ecological devastation and the environmental awareness movement of the 1970s. Four major legal instruments now address this – each with distinct scope and limitations.

- ★ **ENMOD Convention, 1976**
Adopted by the UN General Assembly. Bans the deliberate use of environmental modification techniques as a weapon of war or conflict.
- 🗑️ **Geneva Additional Protocol, 1977**
Articles 35(3) and 55 prohibit methods of warfare causing "widespread, long-term and severe damage" to the natural environment and require care to protect it.
- ◆ **Rome Statute, ICC, 1998**
Includes environmental war crimes – prohibits intentionally launching attacks known to cause widespread, long-term, and severe environmental damage.
- **UN ILC Draft Principles, 2022**
Covers environmental protection before, during, and after armed conflict. Includes protected zones, indigenous peoples' environments, displaced persons, and peace operations. Not legally binding.

KEY PROHIBITIONS

What the legal frameworks actually prohibit

Together, these instruments establish a baseline of environmental protection – banning deliberate ecological warfare, requiring precaution during operations, and enabling prosecution for the most severe environmental damage.

- ✓ **No eco-warfare as a weapon**
ENMOD bans deliberately triggering earthquakes, floods, or climate changes as military tactics – the first international norm of its kind.
- ✓ **Duty of care in warfare**
Geneva Protocol Article 55 requires armies to actively protect the environment during operations, not merely avoid the worst damage.
- ✓ **Criminal prosecution possible**
The Rome Statute allows the ICC to prosecute individuals for environmental war crimes when damage is intentional and meets the severity threshold.
- ✓ **Full conflict-cycle coverage**
The 2022 ILC Draft Principles extend protections to the pre-conflict and post-conflict phases – not just active fighting – and cover indigenous and displaced communities.

THE ACCOUNTABILITY GAP

Why existing frameworks fall short

Despite four decades of legal development, modern conflicts continue to inflict massive ecological damage with near-total impunity. The frameworks face three critical structural failures.

- X **The threshold is too high**
The Rome Statute only covers damage that is "widespread, long-term and severe" – all three conditions must be met simultaneously. This excludes most contemporary forms of environmental harm, including cumulative damage from drone warfare and emissions.
- X **No carbon emissions coverage**
None of the existing legal instruments address greenhouse gas emissions from military operations – one of the most significant and measurable environmental impacts of modern warfare.
- X **Non-binding principles**
The most comprehensive framework – the 2022 ILC Draft Principles – is merely a set of guidelines. States are not legally obligated to follow them, limiting their real-world impact.
- X **No independent monitoring**
There is no established mechanism to independently document environmental damage in conflict zones in real time – making accountability and remediation planning nearly impossible.

REFORM AGENDA

What needs to change – and the ecocide opportunity

Growing global discussions around recognising ecocide as an international crime offer a critical opening. Alongside this, three concrete reforms are needed to give existing frameworks real teeth.

- ◆ **Recognise ecocide in international law**
Adding ecocide as a fifth crime under the Rome Statute would lower the prosecution threshold and allow the ICC to act on large-scale environmental destruction during war, even without proving deliberate intent.
- ★ **Expand scope to include emissions**
The ILC Draft Principles must be updated to explicitly cover carbon emissions from military operations – a gap that makes current frameworks blind to one of war's biggest environmental costs.
- 🗑️ **Independent monitoring in conflict zones**
A dedicated international mechanism to document real-time environmental damage in conflict areas is essential – both to inform immediate response and to build the evidentiary record for accountability.
- **Environmental restoration as a war reparation**
Post-conflict frameworks should treat ecological restoration as a priority – on par with rebuilding infrastructure – and include it in peace agreements and reparation regimes.

Sources: Greenpeace · Greenly Carbon Platform · 1992 Rio Declaration · ENMOD Convention (1976) · Geneva Additional Protocol (1977) · Rome Statute, ICC (1998) · UN ILC Draft Principles (2022) · Bern Convention

Environmental costs of wars and conflicts

Among anthropogenic activities, warfare is one of the most potent drivers of environmental disturbance. Earlier wars were largely confined to land, where crops, forests, and buildings were destroyed as part of war tactics.

In contrast, modern warfare has become more intense and extends across land, deep seas, and airspace. Its impacts are not only economic and social but also environmental, causing degradation of natural resources.

The 1992 Rio Declaration also notes that warfare is inherently destructive to sustainable development and underscores the duties of nations to respect international environmental law during armed conflicts.

But the ongoing conflicts in West Asia made the issue of environmental degradation a growing matter of concern. For example, Greenpeace estimated that during the first 120 days of the Gaza war, more than half a million tonnes of CO2

were emitted, alongside severe damage to the water and sanitation facilities.

Similarly, the US-Israel war on Iran, particularly missile strikes on oil infrastructure and the use of drone warfare, is associated with emissions, toxic air pollution, and potential marine contamination.

These developments signal a shift from episodic environmental disasters to a more persistent and cumulative ecological crisis.

From WWI to the Russia-Ukraine war

The environmental legacy of warfare has recently been recognised as a critical dimension of war and conflict. However, the environment has historically borne the brunt of wars and conflicts. For example, several studies estimated that around 350,000 hectares of forest were destroyed during World War I.

World War II involved a large-scale mobilisation of human and natural resources across the continents. It is often described as a war that both shaped and was shaped by nature. Countries like Norway saw the destruction of 15 million acres of property, crops, forests, and wildlife. In the Netherlands, the German Army flooded farmland with saltwater to starve the enemy into defeat, thus ruining 17 per cent of the Dutch agricultural land.

The Vietnam War differed from previous wars of the twentieth century, as environmental destruction became a deliberate military strategy. Under Operation Ranch Hand, the US deployed 19 million gallons of herbicides, such as Agent Orange, on an industrial scale to eliminate massive tracts of forest cover and farmland vegetation. Over 5 million acres of forest and 500,000 acres of crops were destroyed during the operations.

During the Gulf War, Iraqi troops attacked Kuwaiti oil wells and dumped around 4 to 11 million barrels of oil directly into the Persian Gulf to foil an attack on Kuwait by US Marines to expel Saddam Hussein's forces. This was the largest oil spill in history, contaminating approximately 800 km of coastline and damaging marine ecosystems, including shrimp and prawn beds of the Persian Gulf.

More recently, the Russia-Ukraine war has severely impacted the environment, including forests and wildlife habitats in Ukraine. It has damaged many Emerald Network sites of the country, including many unique steppe habitats of the highest nature value. These sites are protected under the Bern Convention.

West Asia war and environmental degradation

The ongoing conflict involving Iran illustrates how modern warfare produces wide-ranging and long-lasting environmental consequences that extend far beyond immediate physical destruction. The conflict has given rise to various environmental problems. Foremost among these is a sharp increase in greenhouse gas emissions due to military operations. This is adding to the problem of climate change. The carbon accounting platform Greenly estimated that the US military alone released almost 2 billion metric tons of greenhouse gases in just the first six days of the war.

Air pollution due to toxic chemicals is another significant concern. Attacks on oil depots and refineries have produced thick smoke containing soot and toxic gases, and, in some cases, have resulted in black rain. Reports from southern Lebanon indicate serious concern about the aerial spraying of concentrated glyphosate over agricultural fields. Such pollution poses immediate health risks, including respiratory and cardiovascular diseases.

Marine ecosystems, especially in the Persian Gulf, are also under threat. Damage to oil tankers and coastal infrastructure increases the risk of oil spills and chemical leakage. Additionally, strikes on industrial areas release

hazardous materials, including heavy metals and construction debris, which can contaminate air, soil and groundwater. The war has also impacted desalination plants in the region, which are a critical source of drinking water for the local populations.

Such environmental damage raises a pertinent question: are the existing legal and policy frameworks adequate enough to deal with it?

Environmental protection during war and conflict

The Vietnam War marked a turning point in the recognition of environmental protection during war, because of its large-scale ecological damage, combined with the rise of awareness in the 1970s.

Consequently, in 1976, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (“ENMOD Convention”) was adopted by the United Nations General Assembly. It bans the use of environmental modification techniques as a weapon of war and conflict.

Also, special provisions related to environmental protection were added in the 1977 Additional Protocol (Protection of Victims of International Armed Conflicts) of the Geneva Convention, 1949. Article 35(3) of the protocol prohibits state parties from using methods or means of warfare causing “widespread, long-term and severe damage to the natural environment”.

Article 55 of the Additional Protocol requires that care shall be taken in warfare to protect the natural environment against damage, and it also prohibits the use of weapons or methods that could harm the environment.

In addition, the Rome Statute of the International Criminal Court, 1998, contains a provision on Environmental war crimes, which prohibits conduct such as intentionally launching an attack with the knowledge that it will cause incidental widespread, long-term, and severe damage to the natural environment.

More recently, in 2022, the UN International Law Commission adopted draft principles on the protection of the environment, which are applicable before, during or after an armed conflict. It includes measures to be taken by the states for the protection of the environment, including the designation of protected zones, the protection of the environment of indigenous people, peace operations, measures for the displaced people, etc.

However, these principles are merely guidelines for the nations and not binding in nature.

Environment as a victim of war, and the need for reform

To sum up, the discussion about war and the environment becomes increasingly important considering the current climate crisis our planet is experiencing. The environmental consequences of modern warfare, as seen in the ongoing conflict in West Asia, highlight a critical but often overlooked dimension of armed conflict. Addressing this challenge requires both legal and policy reforms.

Implementation of the draft Principles will undoubtedly serve as a point of dialogue for states to further the discussion of how to protect the environment during the conflict cycle. However, the scope needs to be expanded to include carbon emissions.

Also, there needs to be independent monitoring mechanisms in the conflict zone to document the damage and inform response strategies. Thirdly, greater emphasis needs to be placed on accountability, where the restoration of the destroyed environment could be included as a priority.

While the Rome Statute provides a basis for prosecuting environmental damage, the threshold of the damage being 'widespread, long-term and severe' limits its effectiveness in addressing contemporary forms of harm.

Recognising the environment as one of the main victims of war and conflict is essential to achieve long-term peace and the health of the planetary ecosystem. In this context, growing global discussions around recognising ecocide as an international crime offer an important opportunity.

Post read questions

- 1. Examine the major environmental impacts of contemporary warfare with reference to the West Asia war.**
- 2. Air pollution, marine contamination, and ecosystem damage are key environmental consequences of recent conflicts in West Asia. Discuss.**
- 3. How do attacks on fossil fuel infrastructure during wars aggravate both local environmental crises and global climate change? Illustrate using recent examples.**
- 4. Critically examine the effectiveness of international legal frameworks in addressing environmental damage during armed conflicts.**
- 5. Evaluate the proposition that recognising ecocide as an international crime can strengthen environmental protection during armed conflict.**

(Renuka is a Doctoral researcher at Himachal Pradesh National law university, Shimla.)

UPSC FOCUS

Expert Talk

How to tackle UPSC CSAT comprehension passages

As the UPSC CSE 2026 nears, CSAT remains a daunting hurdle for many. In this expert talk by UPSC Essentials, veteran expert Dr. Mansoor Agha Siddiqui breaks down the nuances of Reading Comprehension, offering a step-by-step analysis of a real UPSC passage.

Written by **Manas Srivastava**

About our expert: For UPSC aspirants grappling with the challenges of CSAT, **Dr. Mansoor Agha Siddiqui** brings decades of experience to the conversation. With over three decades of guiding students through aptitude and assessment tests such as GMAT, IIM-CAT, GRE, SAT, LSAT, CUET and others, he has worked extensively with the design and demands of aptitude-based examinations. His expertise also includes mentoring UPSC aspirants across multiple areas, including CSAT, making his insights particularly relevant for candidates preparing for this crucial paper.



Our expert discusses comprehension, one of the most important components of the CSAT paper.

Comprehension aims at testing how good a candidate is at fact-finding, sifting through information, interpreting text, predicting, and inferring events and recognising implied meanings. In order to be good at Comprehension, a candidate must have the ability to understand the basic information given to solve a question / problem on the basis of rules.

↓ Subject *	← Number of Questions & Years →														
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1 Comprehension	27	32	24	26	32	27	31	26	30	25	27	27	27	27	29
Total	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80

* Many questions are interdisciplinary in origin and cannot be assigned to a particular discipline in a straitjacketed manner, still the data compilers have tried to help you to visualize the situation.

A candidate's sense of Language is developed and can be tested at four distinct and progressive levels:

1. Vocabulary – The first stage in picking up a language is to develop a rich vocabulary-not just more words in the mental lexicon and clarity of their meaning but also the various unrelated and different shades of meanings that a

single word may have. The situation gets further complicated by the difference in the literal and figurative meanings of certain words, by some words developing an absolutely different contextual meaning and idiomatic usage. During preparation, UPSC aspirants can develop and test their Vocabulary by attempting foundational questions based on literary meaning of words, Verbal Analogy, Synonyms, Antonyms, One Word Substitutions, idioms, and phrases.

2. Sentence Construction – Once you know words of a language, the next stage is to connect words in a certain sensible sequence to make a sentence, which can convey some information. So “The *boy smiled.*” is an example of a simple sentence as it conveys information about the boy. The construction of a sentence is governed by rules of syntax and common sense. A candidate’s skill of Sentence Construction can be improved by practicing foundational questions of Sentence Correction, Error Identification, Sentence Completion, Improving Sentences etc.

3. Paragraph Construction – In a paragraph, several sentences in the right sequence can convey a certain thought process, such as an argument or an aspect of a narrative. Paragraph construction needs rules of segue, rhetoric and flow of sequential thoughts that build on the previously expressed ones. Question may even be based on certain real-life situations to test how good a candidate is at fact-finding, sifting through information, interpreting text, concluding from given information, and discerning between stated and implied meaning of the given information. Understanding of vocabulary, rhetorical tools, hunting for the required information while keeping the holistic picture in mind, etc are essential comprehension skills at play in this area. This topic has a lot of scope for testing of the moral and ethical dimension of decision making. A candidate’s skill of Paragraph Construction can be improved by practicing foundational questions of Para-jumbles / Anagrams, CLOZE, Paragraph Improvement, Critical Reasoning, Critical Reading, and certain types of Decision-Making questions, which may even test for ethical standards of a candidate.

4. Passage Construction – Several paragraphs can be written in a sequence to express an anecdote, story, chronologically sequenced narrative, critique, analysis, or comprehensive information about a certain thing. Sense of the flow of information in a passage can be tested only through classical Reading Comprehension or unseen passages in common parlance having three broad types of questions (with several subtypes).

TYPES OF QUESTIONS IN COMPREHENSIONS

A. Specific Detail Questions:

What is tested – These questions ask about a detail / information that is explicitly mentioned in the passage. This question type differs from a main idea question in that a specific detail is a point stated by the author as a part of the overall / holistic development of the main theme of the selection.

So, the following abilities are being tested in Specific Detail Questions:

- to comprehend/understand the question,
- hunt the information from the passage that rightly answers the question,
- match the passage information with the four options given and
- not get distracted by attractive and wrong trap answers

Take care – Easy questions may just need an information directly mentioned in the passage, while difficult questions can have a wrong trap answer which has information that is mentioned in the passage, but is still a wrong answer.

Specific Detail questions can be phrased as:

- Which moral reasons guide the value selection of a common citizen?
- The author does not provide information to answer which of the following questions?
- The author mentions which of the following in this passage?
- Which of the following has not been mentioned in the passage?
- According to the author....
- The author provides information that would answer which of the following questions?

B. General Questions:

What is tested – These questions require that you have the broad picture of the passage and cannot be handled if you have just skimmed the passage. They ask about the central theme that unifies the passage.

General questions can be phrased as:

- Which of the following titles best describes the **content** of the passage?
- What is the main/central/primary **idea** of the passage?
- What is the main/central/primary **theme** of the passage?
- What is the main/central/primary **purpose** of the passage?
- What is the main/central/primary **function** of the passage?
- What is the main/central/primary **concern** of the passage?
- The author is primarily/mainly concerned with...
- What is the **organisation/structure/architecture** of the passage?
- What is the **tone** of the author/passage?

Take care: These general questions have general answers, which will not be mentioned specifically in the passage. You will need a big picture / holistic / bird eye view understanding of the passage.

(The third type of Comprehension questions are **Perception questions**. We are intentionally not going into their details as they require a grounding in Critical Reasoning and can scare off an aspirant right in the beginning of CSAT preparation, if they do not have a foundation of Argumentation & Critical Reasoning.)

Let us look at a question released by UPSC

Read the following passage and answer the given questions. Your answers should be drawn from the content of given passage only.

The economy of contemporary India is a great paradox. It is a strange combination of outstanding achievements

as well as grave failures. Since independence, India has achieved remarkable progress in overcoming its economic backwardness. From being a very poor country in the 1950s and a ‘basket case’ in the mid 1960s, it has emerged as the fourth largest economy in the world (in terms of purchasing power parity). Our economy has become one of the fastest growing economies in the world. Now the country is one of the leading players in the world knowledge economy with vast intellectual capital and booming software and information technology services. While our country has joined the league of the world’s top five fastest growing economies, we are in the bottom 20 among all countries in terms of the Human Development Index. While the country is celebrating its growth rate and technological wonders, it is witnessing social contradictions and the paradox and ironies of development. Thus, there are ‘two Indias’ in contemporary India.

1. Why is the Indian economy considered ‘a great paradox’?

- (a) It is a leading player in information technology services with low levels of literacy.
- (b) There is poverty amidst plenty in agricultural produce.
- (c) It is one of the largest economies with low human development.
- (d) It has scientific achievements with social contradictions.

Explanation: This paragraph has been picked up from an essay, *Evolution of Development Strategy Since Independence*, by Ambuja Kumar Tripathy, the Asst Professor, Dept of Political Science at Lakshmibai College, University of Delhi, and looking at the source and the erudite author’s background will give you an idea about the higher level of English language and ideas that candidates need to be comfortable with. It has fancier and more difficult English language than what you commonly use, which will be difficult to understand and when twisted questions are based upon such a paragraph, cracking the questions becomes even more difficult.

In the first go if a student reads the passage and attempts question with normal concentration, then all four choices look familiar and acceptable. Though, at a more holistic level, the question is asking – Why is the Indian economy considered ‘a great paradox’? so if we understand the structure of the paragraph, then we can see that it has been written in an argumentative style, with the author’s conclusion in the opening sentence itself, while the rest of the sentences provide propositions to support/ prove the argument. After the opening sentence, which is also the author’s conclusion, the next sentence gives the major reason why – economy of contemporary India is a great paradox – but none of the options corresponds to this sentence.

Sentences which give reasons supporting the conclusion/argument are the 6th and 7th sentence- *While our country has joined the league of the world’s top five fastest growing economies, we are in the bottom 20 among all countries in terms of the Human Development Index. While the country is celebrating its growth rate and technological wonders, it is witnessing social contradictions and the paradox and ironies of development.* This is the location for the answer and it corresponds to option (c).

So (c) is the best option.

Option a is rejected as ” low levels of literacy ” is not cited in the paragraph as a point supporting the argument.

Option b is rejected as ” poverty amidst plenty in agricultural produce ” is not mentioned in the paragraph at all and is also not cited in the paragraph as a point supporting the argument.

Option d is rejected as ” low position in Human Development Index ” is mentioned in the paragraph but the specific contrast between ” scientific achievements with social contradictions ” not cited in the paragraph as a point supporting the argument.

UPSC Ethics Simplified

Dear UPSC aspirants, how do you know what's ethical in everyday life

UPSC aspirants' ethics doubts answered. Are everyday actions ethical? Do small decisions reflect deeper moral questions? Ask more—answers will follow. Explore the 3-question ethics framework.

Written by: **Nanditesh Nilay**

There are countless situations around us that provoke a simple yet difficult question: is this ethical or not? Consider a recent outrage expressed by a woman in Mumbai over traffic jams caused unnecessarily by political parties. Should such actions be accepted as part of public life, or questioned on ethical grounds?

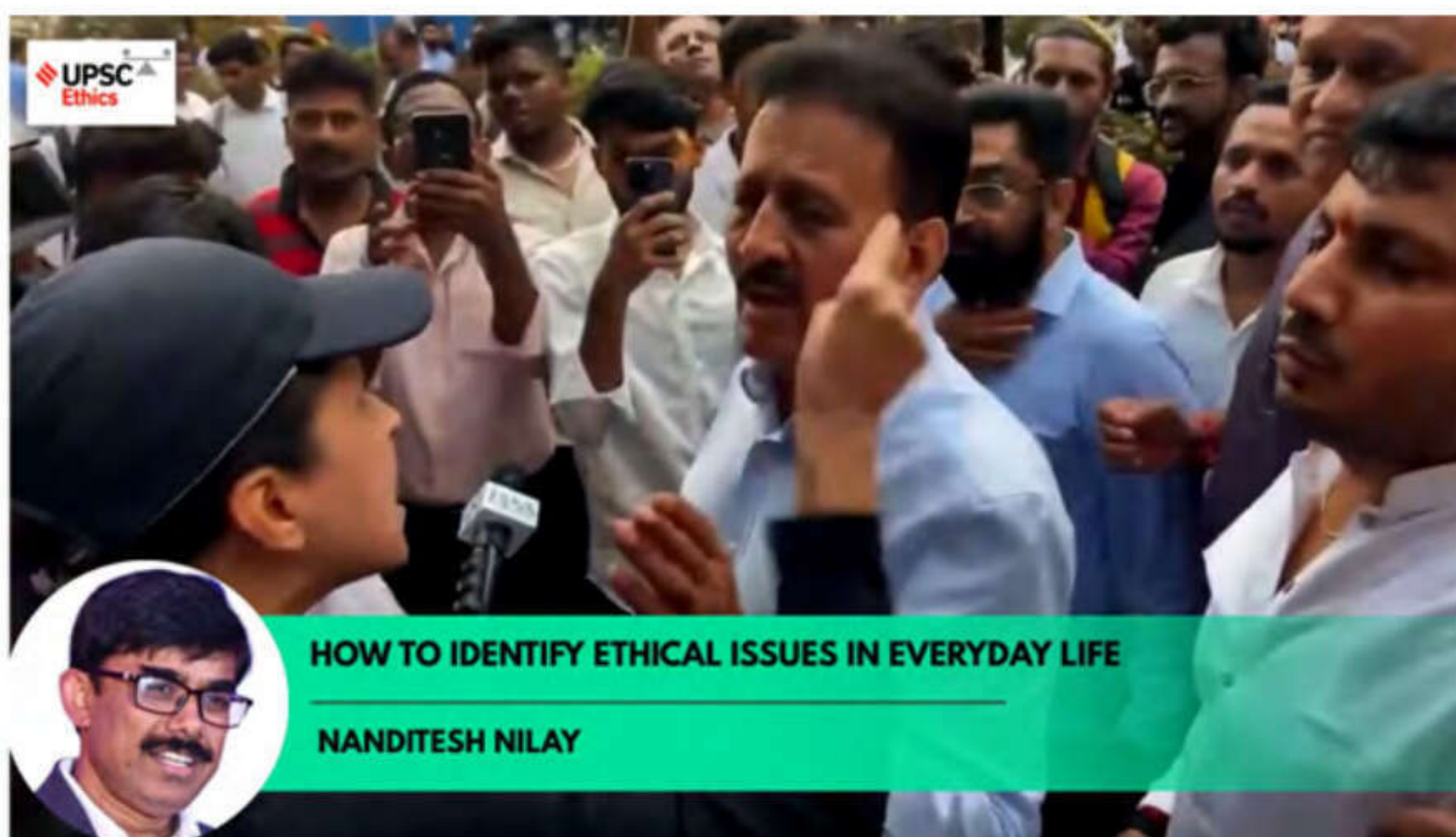
Similarly, if a senior publicly humiliates a junior during an official meeting and the junior expresses indignation, how should this be judged? While macro issues such as war, terrorism, financial corruption, and human exploitation are easily identified as ethical concerns, the real challenge for an aspirant lies in evaluating everyday situations that quietly shape public life.

These routine instances often escape scrutiny, yet they reveal the true ethical character of governance and society. In many cases, they present subtle moral dilemmas that test one's sensitivity and judgment.

The VIP culture question: Ethics of everyday governance

This becomes even more evident when society appears divided between ordinary citizens and VIPs. Whenever a VIP visit is scheduled, walls are painted overnight, roads are restored, and entire localities seem transformed. Such instances raise an important question: is this form of governance ethical, and does it promote fairness, or does it reinforce inequality in subtle ways?

Similar patterns can also be observed in domains like business ethics, where preferential treatment and unequal standards often raise concerns about fairness and accountability.



A video widely circulated on social media showed an angry woman confronting the Water Resources Minister over the gridlock, telling him to “get out of here”. (Express Photo/Screengrab)

Caselet

Imagine a school playground where one child’s father—a local official—arrives for a visit. Overnight, the rusty swings are oiled, potholes filled with fresh sand, and faded lines repainted, sparkling just for his brief tour. The next day, the other children return to the same old hazards. Is this fair play, or does it teach that some deserve better simply because of who they know?



Is it ethical? Point to ponder (Image AI generated)

A simple ethical compass for Aspirants

To navigate such dilemmas with clarity, a simple evaluative framework can be useful. Here are three key questions to identify ethical dimensions in everyday situations: Does it affect human dignity? Does it promote fairness? Does it serve the common good?

These questions help move beyond surface level reactions and enable a structured approach to ethical decision-making. For example, public humiliation directly violates dignity, while preferential treatment during VIP visits raises concerns about fairness and the larger public good.

To answer such questions with depth, it becomes necessary to revisit the basics. Morality refers to standards of right and wrong, good and bad, followed by individuals or groups. These standards guide behaviour through norms that define what is acceptable.

For instance, not treating others rudely can be understood as a moral norm. When value is attached to such norms, judgments emerge, such as the idea that compassion is good. In this sense, morality forms the foundation upon which ethical reasoning is built.

Building on this foundation, ethics is the discipline that critically examines these moral standards. It evaluates not only individual conduct but also the broader implications of actions within society.

For thinkers like Aristotle, ethics was concerned with cultivating habits of good conduct and making the right choices in life. Similarly, Jürgen Habermas emphasizes that ethics gains importance because it considers relationships within communities and the responsibilities individuals hold towards one another. Thus, ethics moves beyond personal belief and enters the realm of collective well being.

FYI: Your 3-Question Ethics Framework

1. Does it affect human dignity? Example: Public humiliation violates this principle
2. Does it promote fairness? Example: VIP road repairs while others suffer poor infrastructure
3. Does it serve the common good? Example: Political rallies causing traffic disruption

Beyond legality: The role of ethical leadership

With this understanding, it becomes clear that determining whether an issue is ethical depends on how choices are made between right and wrong conduct. Ethics is not confined to legality alone.

An action may be legally permissible, yet ethically questionable if it undermines dignity, fairness, or justice. This distinction becomes especially relevant in societies where values are often assumed but not consistently practiced.

In real life governance and administration, ethical dilemmas frequently arise from conflicts such as superior orders versus public welfare, efficiency versus fairness, or procedural correctness versus substantive outcomes. These situations cannot be resolved through rules alone. They require an ethical lens grounded in values and guided by integrity. At the core of such ethical decision-making lies self compliance, which forms the basis of both ethical conduct and responsible governance.

If issues are viewed only through a legal framework, the human dimension is often ignored. When roads are repaired only for VIP movement, it signals a deeper problem of unequal concern for citizens.

It raises important questions about dignity and fairness. Why does it become newsworthy when a VIP stands in a queue during elections? Does this imply that basic civic duties are meant only for ordinary citizens?

Such questions highlight the silent ethical tensions embedded in everyday governance.

Ultimately, ethical leadership requires humility and self awareness. It recognizes that knowledge is always evolving and that learning from society is essential. Ethical excellence is not achieved merely by clearing prestigious examinations, but through the cultivation of an inner moral compass. Figures like Socrates, Swami Vivekananda, and Mahatma Gandhi exemplify this ideal, as their actions were guided by a deep commitment to truth and justice. It is this ability to consistently distinguish between right and wrong that ultimately shapes ethical decision making in both public and private life. In this journey, the transition from awareness to action is crucial.

Start identifying ethical dimensions in your daily decisions by asking: What values are at stake? Who benefits or suffers? What would happen if everyone acted this way?

These questions not only sharpen ethical reasoning but also help in developing a consistent and reflective approach to ethical decision-making in both personal conduct and public service.

UPSC Essentials Input

Start Today: Your daily ethics check before making any significant decision, pause and ask: – What values are at stake? – Who benefits or suffers? – What if everyone did this? Practice with small decisions first—choosing your response to a rude email, deciding whether to speak up in a meeting, or how you treat service workers.

(The writer is the author of 'Being Good', 'Aaiye, Insaan Banaen', 'Kyon' and 'Ethikos: Stories Searching Happiness'. He teaches courses on and offers training in ethics, values and behaviour. He has been the expert/consultant to UPSC, SAARC countries, Civil services Academy, National Centre for Good Governance, Central Bureau of Investigation (CBI), Competition Commission of India (CCI), National Judicial Academy, etc. He has PhD in two disciplines and has been a Doctoral Fellow in Gandhian Studies from ICSSR. His second PhD is from IIT Delhi on Ethical Decision Making among Indian Bureaucrats. He writes for the UPSC Ethics Simplified (concepts and caselets) fortnightly.)

UPSC Current Affairs Pointers

Prelims Tidbits from the month of May 2026

UPSC Current Affairs Pointers aim to help you consolidate your Prelims and Mains preparation. Take a quick look at key current affairs tidbits from March 30, 2026, to May 3, 2026 — curated especially for aspirants preparing for the UPSC, State PSC, and other competitive examinations.

Compiled by **Khushboo Kumari**

Reports

(FYI: The data provided in these reports can be used to substantiate your Mains answer and create a broad understanding of the topic.)

- **New study on use of tobacco by the households**

— A new study published in the British Medical Journal (BMJ) Global Health, found that over 20.49 million households — 10.6% of all households in the country — could rise to a higher economic class just by stopping spending on tobacco and redirecting that money to other needs.

— The poorest households spend 6.4% of their entire monthly income on tobacco, the study found.

— India carries one of the world's largest tobacco burdens. With over 267 million tobacco users, which is nearly a quarter of the adult population, tobacco is the single largest preventable cause of death and disease in the country, responsible for over a million deaths every year.

— Its established links to cancers of the mouth, throat, lung, and oesophagus as well as to heart disease and stroke, have long made it a central concern of public health policy.

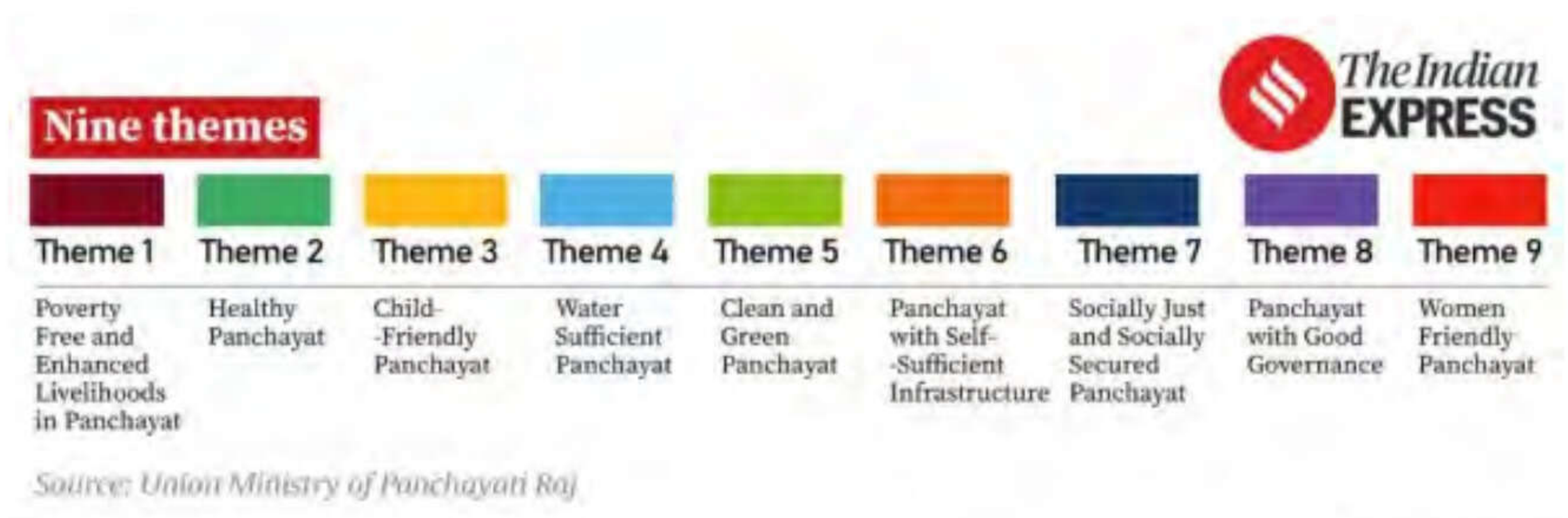
- **Extreme events could impact 36% of land animal habitats by 2085, says new study**

— By 2085, over a third of wildlife habitats on land could suffer multiple types of climate-driven extreme weather events, such as heatwaves, wildfires, and floods, if warming continues to rise in the second half of the century, according to a new study published in the Nature Ecology & Evolution journal.

— The study, led by researchers at the Potsdam Institute for Climate Impact Research (PIK), Germany, analysed the impact of climate change in a medium-high emission scenario on nearly 34,000 vertebrate species.

— The most widespread impact will be from extreme heatwaves, the study found. By 2050, 74% of animal habitats on land will be exposed to heatwaves, 16% to wildfire, 8% to droughts, and 3% to floods if warming continues into the latter half of the century, the study said.

● **Panchayat Advancement Index (PAI) 2.0**



— The Union Ministry of Panchayati Raj released the second edition of the PAI. It assessed 2,59,867 rural local bodies based on their performance and progress on nine themes covering sustainable development goals (SDGs).

— It assesses panchayats based on their performance across 150 indicators covering nine SDGs during the 2023-24 financial year.

— The Gram Panchayats have been ranked under five categories based on their score on a scale of 0-100: ‘Achiever’ (90-100), ‘Front Runner’ (75-90), ‘Performer’ (60-75), ‘Aspirant’ (40-60) and ‘Beginner’ (below 40).

— Of the 2,59,867 Gram Panchayats, 3,635 have been ranked as ‘Front Runner’, 1,18,824 as ‘Performer’, 1,23,719 as ‘Aspirant’, and 13,689 as ‘Beginner’. No panchayat could make it to the ‘Achiever’ category.

— Among the ‘Front Runner’ panchayats, 943 were in Tripura, which constituted 80 per cent of the state’s total 1,176 rural local bodies. The state was followed by Kerala, where 10 per cent of its 941 Gram Panchayats have been assessed as ‘Front Runner’. With 8 per cent of its total 6,794 Gram panchayats assessed as ‘Front Runner’, Odisha stood next.

Art & Culture

● **Japan’s Kabuki theater**

— Handing down a name over generations is a central part of the Japanese traditional theater art of Kabuki, and that ceremony gets celebrated at theaters and special events every few years. Kabuki, dating to the 1600s, is still very much alive in modern-day Japan.

— The ritual is taking place with the eighth Kikugoro, who is having that honor passed down from his 83-year-old father, the seventh Kikugoro, who in turn got that name from his father.

— In the world of Kabuki, a stage name is handed down over generations in a family in a male-only hereditary system and carries a great responsibility and honor. A new successor must live up to the expectations for the style, spirit and skill that the stage name carries.

— Actors usually have three stage names during their Kabuki career as they mature. It is typically passed from father to son, the artform largely limited to Japanese men.

— Kabuki performances feature stylized dancing and makeup, powerful live music, and elaborate costumes and sets. Many popular storylines include star-crossed lovers, suicides and the pursuit of revenge.

— The Kabuki actors specializing in women roles are called “onnagata,” while others like Kikugoro play both men and women.

Economy

• Foreign and International Monetary Authorities (FIMA) Repo Facility

— Former deputy Governor of the Indian Central Bank has suggested that with the rupee falling rapidly and the country’s foreign exchange reserves being depleted, the Reserve Bank of India (RBI) should lean on a US Federal Reserve facility to ensure US dollars are “flushed continuously in and out of the market”.

— Under the Foreign and International Monetary Authorities (FIMA) Repo Facility of US, central banks and other foreign monetary authorities such as the RBI can place their holdings of US Treasuries with the Federal Reserve’s System Open Market Account.

— They agree to buy them back at the maturity of the repurchase agreement. The term of the agreement is overnight or seven calendar days.

— Since the transactions take place exclusively in dollars, there is no exchange rate risk. Through this an alternative temporary source of U.S. dollars is provided to the approved FIMA account holders of Treasury securities.

• E-cheques

— In an effort to modernise India’s payment ecosystem, the Reserve Bank of India has proposed the introduction of electronic cheques (e-cheques).

— This initiative aims to merge the trusted, well-established features of traditional paper cheques with the efficiency, speed and security of digital payment systems, while also catering to evolving business and consumer needs.

— An e-cheque is a digital version of a paper cheque created and sent online instead of on paper. The payer fills in the details, signs it securely using a digital method, and sends it to the payee or bank. The bank verifies and processes it like a normal cheque, but it is faster, more secure, paperless and easy to track.

• RBI bars banks from non-deliverable derivative (NDD) contracts in the rupee

— In the latest directive, the Reserve Bank of India (RBI) has barred banks from non-deliverable derivative (NDD) contracts in the rupee, marking a decisive shift toward tighter control and transparency in the foreign exchange market.

— NDDs, which are typically traded outside India in financial hubs like Singapore, Hong Kong, London or Dubai, allow participants to bet on the rupee’s direction without actual delivery of the currency.

— An NDD is a derivative contract where two parties agree on a future exchange rate for the rupee, but settle the difference in cash, usually in US dollars.

— The NDD market is widely used by foreign investors, hedge funds and global banks who cannot freely access and

play in the Indian rupee market, as well as by firms looking to hedge currency risk. These trades take place offshore, outside the control of the RBI.

— The NDD market was also misused by some market participants. Previously, some participants would cancel and re-enter contracts to take advantage of favourable movements, effectively turning hedging tools into speculative instruments.

● **Bauxite Mining**

— Clashes between tribal villagers and police near Kashipur in Odisha's Rayagada district left at least 40 police personnel and 25 villagers injured on April 7. The tribals' opposition to the construction of a 3 km-long approach road leading to the Sijimali bauxite mine reflects their long-simmering discontent against the bauxite project.

— Sijimali is part of the Eastern Ghats hill ranges and is interspersed with valleys. The bauxite reserve, covering an area of 1,500 hectares, is spread over the Rayagada and Kalahandi districts.

— With an estimated reserve of 311 million tonnes of high-grade bauxite, Sijimali is located close to Vedanta's alumina refinery at Lanjigarh in Kalahandi district, capable of producing 5 million tonnes per annum. The mine was handed over to Vedanta Limited in 2023 through an auction.

— Alumina is refined from bauxite ore and used to produce aluminium, which is instrumental in making everything from soda cans to aircraft. Aluminium's strength, lightness and conductivity allow for a multiplicity of uses.

— It is also the most abundant metal in the Earth's crust, and the third most common element, after Oxygen and Silicon.

— According to the Indian Bureau of Mines' 2022 Yearbook, Odisha alone accounts for 41% of India's bauxite resources, and was the leading producer in 2021-22, comprising about 73% of the total production.

● **Bitumen**

— Road works under the Public Works Department (PWD), as well as major projects like Barapullah Phase III elevated corridor, have slowed down due to a rise in the price of petroleum-based products, including bitumen, triggered by the war in West Asia, The Indian Express has learnt.

— Bitumen, derived from crude oil, is mainly used as a binder in road construction, where it holds together materials like sand, gravel, and crushed stone to form asphalt. Waterproof, adhesive, and flexible, it helps roads withstand traffic load and weather conditions.

● **Venezuelan crude oil**

— India is likely to take delivery of around 10-12 million barrels of Venezuelan crude oil this month, the highest in over six years, according to data from commodity market analytics firm Kpler.

— The bulk of Venezuelan crude is classified as a **heavy sour crude**—heavy because it is thicker and denser than the lighter crude oil grades, and sour because of its high sulphur content.

— So, the amount of sulfur it contains determines whether it is sweet or sour. Sweet crude has very low levels of sulfur, well under 1%. Sour crude has as much as 1-2% of sulfur.

— Heavy sour crudes are usually notably cheaper than light sweet crudes, which means that the feedstock cost for the expensive-to-set-up complex refineries is much lower than that of a relatively less complex refinery that cannot handle heavy crude grades.

— That is why the US continues to import significant volumes of the cheaper heavy crudes, while exporting its domestic light crude oil at a premium in the international market.

UPSC ESSENTIALS

Background:

India — specifically private sector refining giant Reliance Industries Ltd (RIL) — was a regular buyer of Venezuelan crude prior to the imposition of US sanctions on Caracas in 2019. Following the sanctions, oil imports from Venezuela stopped within a few months.

According to India’s official trade data, Caracas was New Delhi’s fifth-largest supplier of oil in 2019, providing close to 16 million tonnes, or about 117 million barrels, of crude to Indian refiners. The bilateral trade between India and Venezuela was \$6.40 billion in 2019-20, of which Indian imports—primarily crude oil—were worth \$6.06 billion.

● **RBI’s Monetary Policy**

— The Reserve Bank of India (RBI) kept the policy repo rate unchanged at 5.25 per cent in its first bi-monthly Monetary Policy Statement for the financial year 2026–27 and the policy stance was neutral.

— Under **Section 45ZB** of the amended RBI Act, 1934, the central government is empowered to constitute a six-member Monetary Policy Committee (MPC) to determine the policy interest rate required to achieve the inflation target. The first such MPC was constituted on September 29, 2016.

— Section 45ZB says the **MPC shall consist** of the RBI Governor as its ex officio chairperson, the Deputy Governor in charge of monetary policy, an officer of the Bank to be nominated by the Central Board and three persons to be appointed by the central government.

— The MPC fixes the benchmark interest rate — or the base or reference rate that is used to set other interest rates — in India. The primary objective of the RBI’s monetary policy is to maintain price stability while keeping in mind the objective of growth. Price stability is a necessary precondition to sustainable growth.

● **RBI on FPI limit in Government Securities**

— The RBI has kept the limits for foreign portfolio investment (FPI) investment in Government Securities (G-Secs), State Government Securities (SGSs), and corporate bonds unchanged at 6%, 2% and 15% respectively, of the outstanding stocks of securities for FY27 for the general route.

— Government Securities or G-Sec are debt instruments issued by the government to borrow money. The two key categories are treasury bills – short-term instruments which mature in 91 days, 182 days, or 364 days, and dated securities – long-term instruments which mature anywhere between 5 years and 40 years.

— When foreign portfolio investors make international investments in stocks, bonds, and other financial assets, it

is known as FPI. It is different from the Foreign Direct Investment (FDI), which is a direct investment in foreign businesses along with an interest and control over the operations and management.

- **Man-Made Fibre (MMF)**

— The Textiles Ministry is pushing for another round of customs duty cuts on several input items related to man-made fibre (MMF) to cushion war impact, The Indian Express has learned.

— *The Indian Express* had reported that the biggest impact of the war has been on the prices and availability of polyethylene terephthalate (PET).

— PET is used in polyester fibre that goes into the production of roughly 40% of India's apparel production, as 60% is still cotton-based.

— Man-made fibres (MMF) are mainly of two types: synthetic and cellulosic.

— Synthetic fibres are produced from crude oil, and cellulosic fibres are from wood pulp. The main varieties of synthetic staple fibres are polyester, acrylic and polypropylene. Cellulosic fibre is viscose fibre, modal, etc.

- **Indian economy 6th largest in the World**

— According to the latest World Economic Outlook (WEO) released by the International Monetary Fund (IMF), India is now the 6th largest economy in the world, slipping from the 4th position.

— According to the latest WEO, in 2026 India's gross domestic product — the total value of all goods and services produced inside the country — will be around \$4.15 trillion (up from \$3.92 trillion in 2025)

— The UK's GDP will be \$4.27 trillion (up from \$4 trillion in 2025) and Japan's GDP would actually fall from \$4.48 trillion in 2025 to \$4.38 trillion in 2026.

UPSC CURRENT AFFAIRS BRIEF

Guinness World Record for the Andaman and Nicobar administration

The Andaman and Nicobar Islands on May 2 set a new Guinness World Record by unfurling the largest Indian flag, underwater. The feat was achieved at Swaraj Dweep, formerly known as Havelock Island. The tricolour displayed underwater measured 60 metres in length and 40 metres in width.

- **Biofuel b50 in Indonesia**

— Amid the surge in oil prices because of the Iran war, Indonesia has announced the roll-out of the biofuel B50, a blend of 50% palm oil-based biodiesel and 50% conventional diesel.

— As Indonesia accounts for half of global palm oil exports (as of 2024), the shift toward a B50 programme, which reorients supply from export markets to domestic consumption, is expected to significantly influence global palm oil markets.

— For India, the implications are particularly pronounced. India imports around USD 8.5 billion of palm oil, and more than 50 per cent of it comes from Indonesia (as of 2024).

— Palm oil is extensively used across household cooking, the food processing industry, and industrial sectors such as soaps and oleochemicals

Polity

● **Census 2027 begins**

— The first phase of Census 2027 was launched on April 1, with self-enumeration, allowing people to digitally submit information during the 15-day window preceding the first phase.

— This will be followed by the house-to-house houselisting operation, the usual “Canvasser method,” where an enumerator visits one’s household and records information using a Mobile App.

— The first phase is scheduled to be completed within a 30-day window between April and September 2026.

— Live-in couples, who consider “their relationship as a stable union” will be counted as a married couple in the 2027 Census.

— The Centre has said that caste enumeration will be conducted during the second phase of the exercise, known as Population Enumeration (PE).

—The Census is a Union subject and is listed at serial number 69 in the Seventh Schedule of the Constitution.

— In phase 1, information regarding housing conditions, household details, availability of amenities such as drinking water, toilets, electricity, fuel used for cooking, internet, etc.; and possession of assets such as radio, TV, computer, two wheelers, four-wheelers, etc. by the household is collected.

— Phase 2 will include population enumeration beginning February 2027 across India except UT of Ladakh and snow-bound areas of the UT of J&K, and the States of Himachal Pradesh, and Uttarakhand where it will be conducted in September 2026.

— In phase 2, details regarding the number of persons and their name, age, sex, marital status, caste, religion, education, language, disability, migration, occupation, and fertility details (for married women) is collected.

— In a significant shift from 2011, the 2027 Census plans to allow self-enumeration for the first time, where households can log into a government portal or use an app to fill out their own details.

— Once self-enumeration is done, the system will generate a unique ID. Individuals who have self-enumerated will have to just present this ID when Census enumerator comes to their house.

KEY DIFFERENCES

What makes Census 2027 a break from 2011

The 2027 Census is India's first digital census and the first to collect caste data for all communities since 1931. It replaces handwritten entries — which caused errors and years-long processing delays in 2011 — with smartphone apps, standardised code directories, and real-time validation.

- ★ **Digital enumeration — first ever**
Enumerators use smartphones with a Census app; paper is a fallback only. Cloud upload, real-time dashboards via the Census Management & Monitoring System (CMMS). 2011 was entirely paper-based.
- ★ **Self-enumeration — new in 2027**
Households fill their own details on a government portal before the enumerator visits; a unique ID is generated and verified on arrival. This option did not exist in 2011.
- ★ **GPS tagging & geofencing — new**
Every household is GPS-tagged to prevent coverage gaps. 2011 relied on physical maps. Supervisors can verify and correct coordinates in real time via the app.
- ★ **Caste data for all — first since 1931**
2011 collected caste data only for SCs and STs. Census 2027 extends the enumeration to all communities — the first comprehensive caste count in 96 years.
- ★ **Coding system replaces handwriting**
Enumerators select from pre-loaded drop-down code directories (castes, languages, occupations). In 2011, free-text handwriting caused spelling errors, data bias, and processing delays of years for some questions.
- ★ **New questions not in 2011**
Internet access, smartphone ownership, piped gas vs LPG, vehicle sub-types, climate displacement migration, transgender identity, live-in couples counted as married unit.

- **Subansiri Lower hydel project**

— Recently, Assam and Meghalaya have refused to purchase any power in excess of their allocated share from the Subansiri Lower hydro-electric project as this would “unnecessarily inflate their power purchase costs, a burden that ultimately impacts the end consumers.”

— Subansiri Lower hydel project at Gerukamukh on the Assam-Arunachal Pradesh border was cleared in 2005.

— According to the Ministry of Environment and Forest, Subansiri River originates in Tibet and is the major right bank tributary of Brahmaputra traversing through Arunachal Pradesh.

— There are six major river basins in Arunachal Pradesh viz. Kameng, Subansiri, Siang (Dihang), Dibang, Lohit and Tirap with a large number of their tributaries draining the waters of vast catchment areas into the Brahmaputra.

— At a meeting of the North Eastern Regional Power Committee (NERPC) last month, both states have also said they have already made adequate arrangements to meet long-term power needs.

— NERPC was established in 2005 under the Electricity Act 2003. It is a forum of the seven northeastern states for planning, development, and operation of the regional power sector.

- **Official language of Meghalaya**

— The Meghalaya cabinet on 16th April, 2026 announced the indigenous **Khasi** and **Garo** languages as the official languages of the state, in addition to English.

— The move comes amid a long-standing demand for the inclusion of Khasi and Garo – the languages of the state’s two largest tribes – in the Eight Schedule of the Constitution. Currently, all official business in the state is carried out in English.

- **Anticipatory bail**

— The Supreme Court has refused to extend the transit anticipatory bail earlier granted to Congress leader Pawan Khera by the Telangana High Court.

— The FIR against Pawan Khera was filed by Riniki Bhuyan Sharma, following a press conference where Khera levelled serious allegations of financial and legal misconduct.

— Black’s Law Dictionary (4th edition) describes ‘bail’ as procuring “the release of a person from legal custody, by undertaking that he shall appear at the time and place designated and submit himself to the jurisdiction and judgement of the court.”

— As opposed to ordinary bail, which is granted to a person who is under arrest, in anticipatory bail, a person is directed to be released on bail even before arrest made.

— The **Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS)** contains provisions for anticipatory bail in **Section 482** (earlier Section 438 of the Code of Criminal Procedure). The provision empowers only the Sessions Court and High Court to grant anticipatory bail.

— Sub-section (1) of the provision reads: “When any person has reason to believe that he may be arrested on an accusation of having committed a non-bailable offence, he may apply to the High Court or the Court of Session for a direction under this section; and that Court may, if it thinks fit, direct that in the event of such arrest, he shall be

released on bail.”

— In the 1980 *Gurbaksh Singh Sibbia vs State of Punjab* case, a five-judge Supreme Court bench led by then Chief Justice Y V Chandrachud ruled that S. 438 (1) is to be interpreted in the light of Article 21 of the Constitution (protection of life and personal liberty).

● **Constitution (One Hundred and Thirty-First Amendment) Bill, 2026**

● **DECADES-LONG ROAD TO RESERVATION**

1987: The Rajiv Gandhi-led Congress govt constituted a committee that presented the National Perspective Plan for Women (1988-2000). Among its recommendations was women’s reservation in elected bodies.

1993: The Constitution 73rd and 74th Amendment Acts were enacted under PM P V Narasimha Rao. They mandated the reservation of one-third of seats for women in Panchayati Raj institutions (and offices of the chairperson at all levels of PRIs), and in urban local bodies, respectively.

1996: Under PM H D Deve Gowda’s United Front government, the first Bill seeking women’s reservation in the legislature was introduced — the 81st Constitutional Amendment Bill — with SC, ST quotas. Despite cross-party support, several MPs, especially those belonging to the OBCs, sought quotas for OBC women within it or rejected the Bill.



Before 2023, too, several attempts were made by governments to pass the women’s reservation bill. VISHAL SRIVASTAV

1998, 1999: Two failed attempts to introduce the Bill.

2010: Under the PM Manmohan Singh-led UPA government, Rajya Sabha passed The Constitution (108th Amendment) Bill, but due to differences within the UPA and even within the Cabinet, it was never brought to Lok Sabha.

2023: The Constitution (128th Amendment) Bill, 2023, was passed under the PM Modi-led NDA government for 33% women’s reservation. It stated that the implementation of reservation was dependent on the completion of the next Census and the delimitation process, but the ongoing session seeks to de-link these stages.

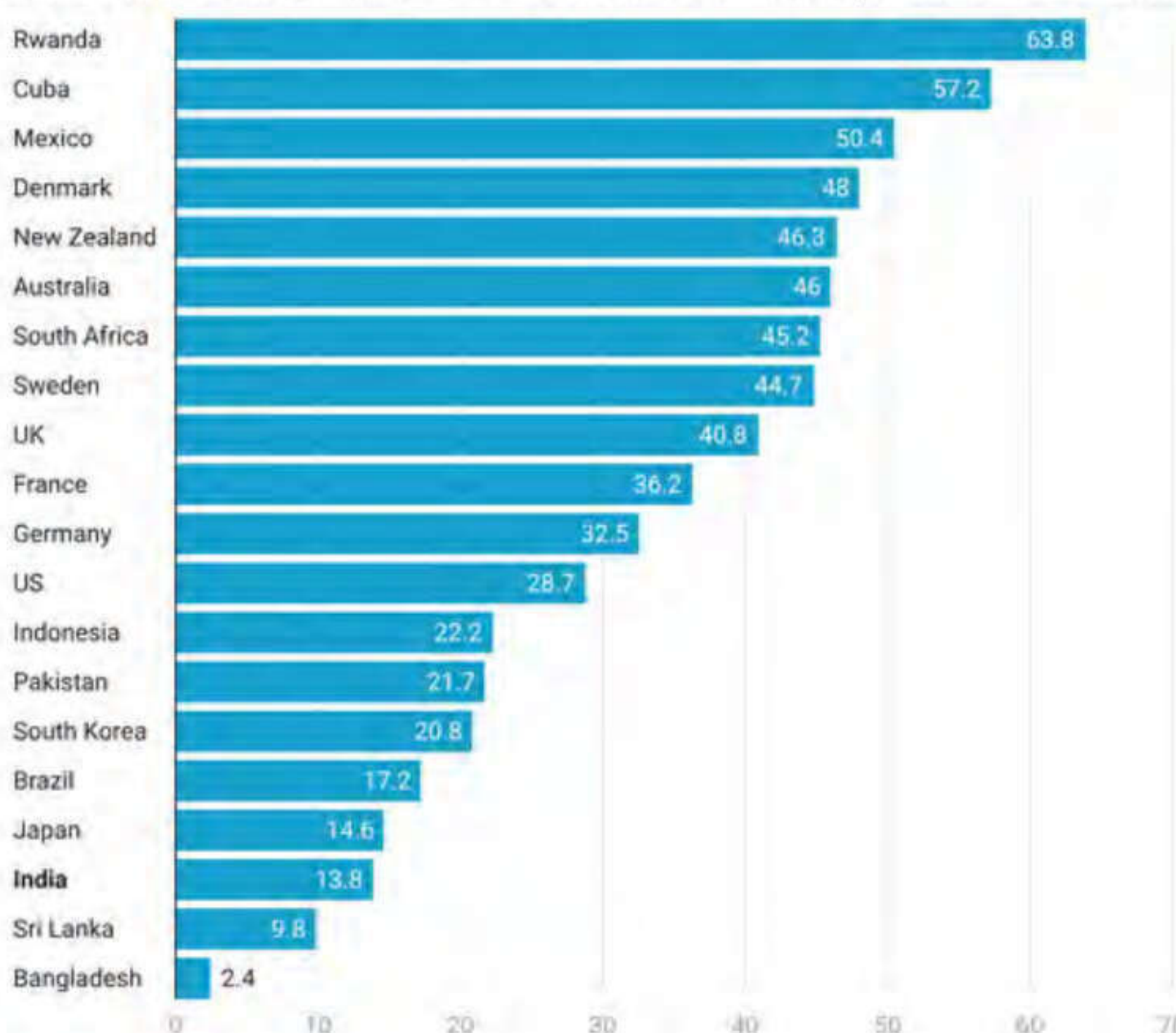
— On April 16, 2026, Lok Sabha took three bills, namely the Constitution (131st Amendment) Bill, 2026, **the Delimitation Bill, 2026**, and the **Union Territories Laws (Amendment) Bill, 2026**, for consideration and passing.

— The 131st Amendment Bill failed to get 2/3rd majority in the Lok Sabha. Following the defeat, Union Minister for Parliamentary Affairs Kiren Rijju told the Lok Sabha Speaker not to take up the two other Bills since these were linked to the Constitutional (131st Amendment) Bill, 2026.

— The Bill intended to increase the **number of seats in the Lok Sabha** from 543 to 850. Out of 850 seats, 815 members were elected from the

Chart 4 | Global trends: % Share of Women Parliamentarians

Out of some 190 countries, India ranks 147 in terms of women’s representation in Parliament.



This chart refers to figures only in the lower house of national parliaments as of April 2026. Source: Parlige/IPU - Created with Datawrapper

States and 35 members from the Union territories. The objective of the bill was to implement one-third reservation for women in the Lok Sabha as well as the assemblies of States and Union Territories.

— The Bill aimed to amend the **Nari Shakti Vandan Adhiniyam, 2023**, to expedite women’s reservation, a Delimitation Bill to set up a Delimitation Commission based on the latest available population figures, and a Bill to extend women’s reservation to Union Territories with Legislative Assemblies.

— The Nari Shakti Vandan Adhiniyam, which was passed in 2023, provided that a one-third reservation for women will come into effect after the delimitation exercise based on the first census after the commencement of the Act.

● **Deputy Chairman of Rajya Sabha**

— Rajya Sabha Deputy Chairman Harivansh is elected unopposed for a third term on 17th April, 2026, with the Opposition deciding to boycott the elections.

— The Deputy Chairman is a constitutional position created under **Article 89 of the Constitution**, which specifies that the Rajya Sabha shall choose one of its MPs to be the Deputy Chairman as often as the position becomes vacant.

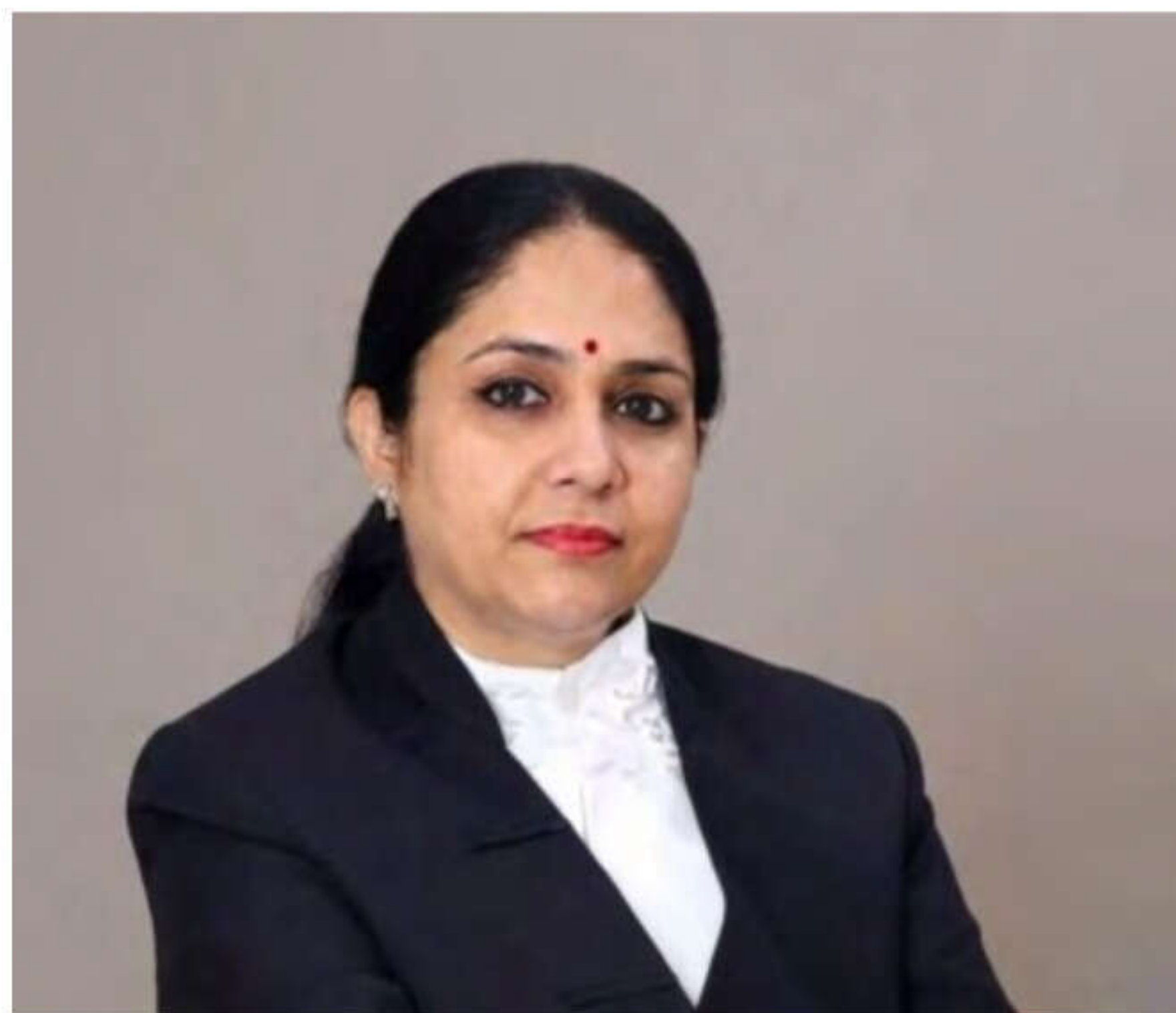
— The Deputy Chair is the one position that is elected solely by members of Rajya Sabha. It is a critical position not just because s/he steps in when there is a vacancy in the office of Chairperson/Vice President but also because s/he plays a critical role in ensuring the smooth running of the House.

● **Judges recuse**

— Justice **Swarana Kanta Sharma** of the Delhi High Court has refused to recuse from hearing a high-profile criminal revision petition arising out of the Delhi excise policy case, laying down a detailed, almost personal defence of judicial independence and institutional integrity.

— When there is a conflict of interest, a judge can withdraw from hearing a case to prevent creating a perception that she carried a bias while deciding the case.

— The practice stems from the cardinal principle of due process of law that nobody can be a judge in her own case. Any interest or conflict of interest would be a ground to withdraw from a case since a judge has a duty to act fair.



Justice Swarana Kanta Sharma. (Image enhanced using AI)

— Another instance for recusal is when an appeal is filed in the Supreme Court against a judgement of a High Court that may have been delivered by the SC judge when she was in the HC.

— There are no formal rules governing recusals, although several Supreme Court judgments have dealt with the issue. Since, there are no formal rules, it is often left to individual judges to record reasons for recusal.

— In *Ranjit Thakur v Union of India* (1987), the Supreme Court held that the test of the likelihood of bias is the reasonableness of the apprehension in the mind of the party.

— Once a request is made for recusal, the decision to recuse or not rests with the judge. There have been several cases where judges have refused to withdraw from a case.

● **Premature Release**

— The Delhi High Court on April 16, 2026 criticised the Sentencing Review Board's (SRB) latest rejection of Santosh Kumar Singh's plea for premature release.

— The SRB, comprising senior state officials, including the DG of Prisons, the Police Commissions, and the Chief Secretary, is the body that must first examine each case and pass its recommendation to the government.

— Premature release allows life convicts to be released early if they are deemed to be reformed, rehabilitated and no longer a threat to society. The powers of clemency are derived from both constitutional and statutory frameworks.

— Section 473 of the BNSS (and Section 432 of the CrPC) grants state governments the power to remit sentences "at any time".

— This is separate from the power of the President and the Governor to remit sentences under Articles 72 and 161 of the Constitution respectively.

— One of the restraints placed on the state government's power of remission can be found under Section 475 of the BNSS (and Section 433A of the CrPC). For convicts serving a life sentence and have been found guilty of an offence punishable by death, the state cannot release them from prison until at least 14 years imprisonment have been served.

● **Congress moves privilege notice against PM Modi**

— The Congress on 21st April moved a privilege notice against Prime Minister Narendra Modi for allegedly "having cast aspersions" on the "independence and integrity" of elected Members of Parliaments during his address to the nation on 18th April night.

— Parliamentary privileges are certain rights conferred to the MP for conducting the business of the Parliament. There is no codified list of the exact privileges, but it includes the right of free expression in the course of Parliamentary debates and MP will not be liable for court proceedings for this.

— According to the Constitution of India, Articles 105 and 122 outline the privileges of Parliament, while Articles 194 and 212 pertain to the privileges of state governments.

— If there is a belief that such a privilege has been breached, a motion can be raised by any member. It can be admitted by the Chairman. They can then refer it to the Privileges Committee.

UPSC ESSENTIALS

Committee of Privileges

It examines all questions involving breach of certain rights, privileges, and immunities enjoyed by MPs. It is a Standing Committee. It examines the cases of breach of the privileges of the House and its members and recommends appropriate action. The Lok Sabha committee has 15 members, while the Rajya Sabha committee has 10 members.

- **Corporate Social Responsibility (CSR)**

— Corporate Social Responsibility (CSR) spending by companies listed on stock exchanges registered a sharp rise of 23% in FY25, reaching Rs 22,212 crore compared with Rs 18,011 crore in the previous financial year. The increase has been attributed largely to robust corporate profitability.

— CSR is a management framework through which companies incorporate social and environmental considerations into their business operations and interactions with stakeholders. It represents a long-term, structured commitment to societal development and welfare.

— According to the National CSR Portal, “The Ministry of Corporate Affairs had issued ‘Voluntary Guidelines on Corporate Social Responsibility, 2009’ as a first step towards mainstreaming the concept of Business Responsibilities.

— This was further refined subsequently, as ‘National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business, 2011’.”

— Later, the Companies Act, 2013, made it mandatory for listed and unlisted organisations of a certain size and net worth to spend at least 2 per cent of their average net profit towards CSR.

- **The Mahanadi river dispute**

— The Mahanadi originates in Chhattisgarh’s Dhamtari district and flows through Odisha, finally draining into the Bay of Bengal. It is a key river system in the region and has led to water-sharing disputes between the states since 2016.

— Odisha has alleged that Chhattisgarh has “unilaterally constructed” at least eight barrages along the river, which have impacted its flow into the state during the non-monsoon period.

— Odisha has termed the river a lifeline for the state, given its significance for agriculture, fisheries and power generation.

— According to official data, Mahanadi has a total catchment area of 1,41,600 sq km, of which 45.73% falls in Odisha, 53.9% in Chhattisgarh and a small patch in Madhya Pradesh.

— Chhattisgarh, on the other hand, has argued that given the large catchment area in the state, it was within its rights to use the river water. Chhattisgarh also pointed out that Odisha had commenced certain major and medium projects without informing it as the upper riparian State.

— Almost six months after Odisha and Chhattisgarh agreed on an “amicable solution” to resolve the long-pending Mahanadi water dispute, the tribunal formed to adjudicate the matter has given the states a last opportunity to devise a settlement formula.

— In its April 20 order, the Mahanadi Water Dispute Tribunal (MWDT) warned that it will proceed on merits if the two states are unable to finalise the settlement formula and ‘place on record’ any consensus on the issues by May 2.

— Headed by former Supreme Court judge Justice Bela M Trivedi, the tribunal also expressed its displeasure with the manner in which the proceedings of the references are being conducted.

● **MHA updates citizenship rules**

- The Union Home Ministry has notified the Citizenship (Amendment) Rules, 2026.
- It has introduced electronic Overseas Citizen of India (e-OCI) cards, fully online applications, and stricter norms on dual passports for minors.
- A new provision allows issuance of electronic OCI (e-OCI) alongside physical cards, signalling a shift toward paperless identity for overseas Indians.
- A major update mandates that minors holding Indian passports cannot simultaneously possess passports of other countries, as inserted in a new proviso to rule 3 and this addresses concerns over dual citizenship misuse, though OCI status itself does not confer full citizenship rights.
- According to the notification, an application for registration as an Overseas Citizen of India cardholder under section 7A shall be made in Form XXVIII electronically on the designated online portal.

UPSC ESSENTIALS

OCI

Introduced in August 2005, the OCI scheme provides for registration of all Persons of Indian Origin (PIOs) who were citizens of India on January 26, 1950, or thereafter, or were eligible to become citizens of India on the said date. It was introduced by amending the Citizenship Act, 1955, in August 2005. In 2015, the government discontinued the PIO scheme, and PIO cardholders were required to convert to OCI.

● **Promotion and Regulation of Online Gaming Rules, 2026**

- The Promotion and Regulation of Online Gaming Rules, 2026, which was passed last year, came into force on May 1.
- The rules establish the **Online Gaming Authority of India (OGAI)** as the sectoral regulator, housed under the Ministry of Electronics and Information Technology (MietY).
- This authority has wide-ranging powers, including determining whether a game qualifies as an Online Money Game (played after depositing user fees/based on monetary stakes), Online Social Game (not involving staking money), or esports (competitive organised games involving skills like physical dexterity and strategic thinking).
- It can also issue directions, hear complaints, and impose penalties. Its composition is entirely government-led, with representatives from ministries including Home Affairs, Finance, Information & Broadcasting, Sports, and Law.
- In the case of **online money games, which are banned**, banks are required to act on OGAI directions — including suspending or restricting payments — effectively making the payments layer a key enforcement tool.
- The rules also introduce **data localisation obligations**, requiring gaming platforms offering social games or esports to store traffic and related data within India.

● **E-PRAAPTI portal**

— The Employees’ Provident Fund Organisation (EPFO) has launched a portal named E-PRAAPTI — EPF Aadhaar-Based Access Portal for Tracking Inoperative Accounts.

— It will help resolve the long-pending issue of unclaimed deposits. It will be helpful for those EPF members who do not have a Universal Account Number (UAN) and have EPF accounts in the physical mode.

— The portal will provide a streamlined Aadhaar-based authentication mechanism that will enable members to securely access their old EPF account which may not have an UAN linked with it and initiate the process for updating their member profile, followed by seamless UAN linking and activation.

● **Reconstitution of NITI Aayog**

— The government has reconstituted the NITI Aayog, appointing Ashok Kumar Lahiri as its vice chairman and four new full-time members.

— He has replaced vice-chairman Suman Berry, who was serving in the post since April 2022.

— The Governing Council of NITI Aayog comprises the Prime Minister of India; Chief Ministers of all the States and Union Territories with Legislature; Lt Governors of other UTs; Ex-Officio Members; Vice Chairperson, NITI Aayog; Full-time Members, NITI Aayog and Special Invitees.

— First constituted in February 2015 and reconstituted in February 2021, the Governing Council embodies the objectives of cooperative federalism and presents a platform to discuss inter- sectoral, inter-departmental and federal issues to accelerate the implementation of the national development agenda.

First paperless state judiciary

During the two-day National Conclave on Technology and Judicial Education, Chief Justice of India Surya Kant declared **Sikkim** to be the first paperless state judiciary in the nation. He said integrating technology into judicial processes dismantles geographical barriers to help litigants overcome problems of terrain, finance and distance.

Defence

● **INS Aridhaman**

— India, on 3rd April, inducted its third nuclear-powered ballistic missile submarine (SSBN), INS Aridhaman, significantly strengthening its sea-based nuclear deterrent capabilities.

— The other two are INS Arihant and INS Arighaat, which were commissioned in 2016 and 2024, respectively.

— It strengthens India’s nuclear triad, which refers to a country’s ability to launch nuclear missiles from platforms in the air, land, and at sea. India is part of a select group of countries with nuclear triad capabilities. These include the United States, Russia, China, and France.

— INS Aridaman, a 7,000-tonne vessel, is believed to have eight vertical launching system tubes — around double the number of its predecessors. This means it can carry more K-15 nuclear-capable submarine-launched ballistic missiles

(SLBM), which have a range of more than 700 km. They can also carry the longer-range K-4 SLBMs that can hit targets 3,500 km away.

— Aside from the SSBNs, the Indian Navy has 16 conventional submarines in service. This includes six Kalvari-class attack submarines built at India’s Mazagon Dock in partnership with France’s Naval Group, four Shishumar class subs, and seven Kilo (Sindhughosh) class subs.

— Under its “No first-use” policy, India is committed to using nuclear weapons only for deterrence and retaliation. With its ability to survive a nuclear attack and then launch a retaliatory strike, a nuclear sub acts as a very strong deterrent.

● **INS Taragiri**

— INS Taragiri, the fourth potent platform of the Project 17A class, was commissioned in the Indian Navy at Visakhapatnam, Andhra Pradesh, on April 03, 2026.

— It is built under the codename Project 17A, a follow-on vessel of the Shivalik class or Project 17 frigates that are currently in service. It is built by Mazagon Dock Shipbuilders.

— The 6,670-tonne warship features advanced design elements, including reduced radar cross-section for stealth operations and enhanced survivability in complex environments.

— The ships are fitted with a supersonic surface-to-surface missile system, a Medium Range Surface-to-Air Missiles (MRSAM) system, a 76 millimetre upgraded gun, and a combination of rapid-fire close-in weapon systems.

— The frigate is equipped with modern weaponry and systems, including BrahMos missiles, radar and sonar technologies, and is capable of high-speed transit, extended deployment and multi-role operations ranging from combat to humanitarian missions.

● **China’s new Atlas drone swarm system**

— Chinese People’s Liberation Army (PLA) unveiled its new Atlas drone swarm system (*atelasi*). The one-of-a-kind system combines features like simultaneous mass launch, control of nearly 100 drones, and a single human touchpoint to control them all.

— The system is like a mini-battlefield network on wheels, where drones are truck-launched, remotely navigated by

THE THREE ARIHANT-CLASS SUBMARINES

<p>INS Arihant Commissioned: 2016 Firepower: K-15 Sagarika missiles, over 700-km range Vertical launch tubes: Four Displacement: 6,000 tonnes Powered by: 83 MW pressurised light-water nuclear reactors</p>	<p>INS Aridaman Commissioned: 2026 Vertical launch tubes: Believed to be eight More advanced reactors — understood to be an upgrade over the ones that power its predecessors Displacement: 7,000 tonnes</p>	<p>FIREPOWER*: K-4 missiles with 3,500 km range *in addition to the capability to carry more K-15 missiles</p>
<p>INS Arighaat Commissioned: 2024 Similar in terms of power, launch tubes and displacement but much more technologically advanced than the Arihant. Believed to support K-4 missiles with 3,500 km range in addition to K-15s</p>	<p>TYPES OF NUCLEAR-POWERED SUBMARINES</p> <p>SSN (Submersible Ship Nuclear): Carries conventional weapons.</p> <p>SSGN (Ship Submersible Guided Nuclear): Carries guided missiles with conventional warheads</p> <p>SSBN (Ship Submersible Ballistic Nuclear): Capable of carrying ballistic missiles that may be nuclear armed. Typically the largest and most complex type.</p>	

Note: The specifications of Arihant-class submarines are classified. This sketch is an approximation. Wikimedia Commons

a single operator, and capable of scouting, communicating, confusing, and attacking defence across a large perimeter. More importantly, it is a very small, independent unit that is easy to hide, camouflage, and operate from remote corners.

— China Electronic Technology Group Corporation (CETC) (*zhongguo dianzi keji jituan gongsi*), established in 2002, one of the leaders of China’s push for achieving civil-military integration, has manufactured the Atlas system.

— The Atlas system can simultaneously launch up to 96 small- and medium-sized speed drones that can form defensive structures and precision formations, both to defend and attack.

— The launch time between drones is less than three seconds. Thus, within 300 seconds, the system can launch all 96 drones for an attack, reconnaissance, or to confuse the adversary. For context, amid the recent West Asia war, the US advanced E-3 Sentry AWACS aircraft at the Prince Sultan Airbase in Saudi Arabia was destroyed by a swarm of 29 drones and a few ballistic missiles.

UPSC ESSENTIALS

FYI

Currently, China’s Atlas system, at least theoretically, outpaces and outsmarts all its competitors.

Purely on scale, the US Department of War’s “Perdix” and Defense Advanced Research Project Agency’s “Offset” systems can launch 103 micro-drones and 250 unmanned systems, respectively. Even China’s “mothership” (Jiu Tian) can launch up to 100-150 drones. But Atlas stands out for its intelligence because, in modern military warfare, counting drones within the swarms is an outdated metric.

The real victory lies in the cognitive test: can these 90 to 100 drones think individually and as a unit, reroute, identify, reidentify targets, and execute multiple strikes — all with only a single human touchpoint. It is here that the Atlas Drone Swarm system outshines all its competitors, at least theoretically.

● **Vikram VT 21**

— The Defence Research and Development Organisation (DRDO) recently launched its Vikram VT 21 project with two Advanced Armoured Platforms — wheeled and tracked.

— An Advanced Armoured Platform (AAP), Vikram VT 21 is a modern military combat vehicle built with enhanced armour protection to withstand certain projectiles, blasts, and shrapnel plus which has improved mobility across varied terrains and integrated weapons and surveillance systems.

— The Vikram VT 21 project includes two variants. First is wheeled, which run on tyres and are faster, easier to maintain, and better suited for roads and urban and semi urban environments.

— Second is tracked, which moves on continuous tracks like tanks, offering superior grip, stability, and performance on rough, uneven, or off-road terrain.

— These vehicles are fitted with an indigenously designed 30 mm crewless turret — a remotely operated gun system mounted on top, with no soldier sitting inside it — built to improve mobility, firepower, and protection.

International

● **United Nations Mission in the Republic of South Sudan (UNMISS)**

— The UN has lauded efforts by Indian peacekeepers in South Sudan in re-opening a critical supply route impacted by floods last year, emphasising the “vital role” it played in supporting stability and enabling assistance to vulnerable civilians.

— The UNMISS was established following a UN Security Council resolution in July 2011 to consolidate peace and security and to help establish conditions for development in then newly born South Sudan.

— As of January 2026, India is the top troop contributing country to the UNMISS with 1,779 personnel.

— Sudan was among the earliest African countries to gain independence from colonial rule. It participated in the landmark Bandung Conference in 1955 (of 29 Asian and African nations, including India), and was Africa’s largest country till South Sudan broke away in 2011.

● **9th Indian Ocean Conference**

— India Foundation, in association with the Government of Mauritius, organised the 9th Indian Ocean Conference—IOC 2026—in Mauritius from April 10 to 12, 2026.

— The theme of the conference was “*Collective Stewardship for Indian Ocean Governance.*”

— The conference brings together leaders, policymakers, and experts from across the Indian Ocean Region to deliberate on shared responsibilities, cooperative frameworks, and the future of regional governance.

● **Section 301 investigations**

— Responding to two Section 301 investigations launched by the US in March 2026, on “structural excess capacity” and “forced labour”, the Indian government told Washington on 16th April, 2026, that its legal framework aligns with the forced labour standards of the International Labour Organisation (ILO).

— The US launched two Section 301 investigations against several countries, including India. While one cites structural excess capacity and overproduction in certain manufacturing sectors, the other cites failure to prohibit imports of goods produced using “forced” labour.

— Section 301 authorizes the U.S. Trade Representative (USTR) to investigate whether foreign governments are engaging in “unfair” acts, policies, or practices that burden or restrict U.S. commerce.

— The Section 301 investigation assumes significance for India as US Treasury Secretary Scott Bessent said that Trump’s tariffs could be restored by July to the level they were at before the Supreme Court struck them down.

● **India-South Korea**

— President of South Korea, H.E. Lee Jae Myung, was on a state visit to India from 19-21 April 2026.

— India and South Korea have signed four MoUs for cooperation in the fields of Sports, Cultural and Creative Industries, Small and Medium Enterprises and for the establishment of the Industrial Cooperation Committee.

— During the visit, the Republic of Korea formally joined the International Solar Alliance and the Indo-Pacific Oceans Initiative.

— The bilateral trade between India and Korea has reached 27 billion dollars, and they have targeted to increase the bilateral trade to 50 billion dollars by 2030.

- **Overseas Citizen of India (OCI) card**

— During the official visit to Sri Lanka, Vice-President C P Radhakrishnan on April 19 announced the extension of the eligibility for Overseas Citizen of India (OCI) card for the Indian community in the island nation till the sixth generation. Until now, this was limited to the fourth generation.

— Introduced in August 2005, the OCI scheme provides for registration of all Persons of Indian Origin (PIOs) who were citizens of India on January 26, 1950, or thereafter, or were eligible to become citizens of India on the said date.

— It was introduced by amending the Citizenship Act, 1955, in August 2005. The Scheme was launched during the Pravasi Bharatiya Divas convention 2006 at Hyderabad. In 2015, the government discontinued the PIO scheme, and PIO cardholders were required to convert to OCI.

— An applicant is not eligible to get an OCI card if his/her parents or grandparents have ever been citizens of Pakistan or Bangladesh.

— However, the spouse of foreign origin of a citizen of India or spouse of foreign origin of an OCI, whose marriage has been registered and subsisted for not less than two years, can apply for an OCI card.

- **Organization of the Petroleum Exporting Countries (OPEC)**

— The United Arab Emirates has exited the OPEC and OPEC+ oil group effective May 1 in a major setback to oil exporting groups and its leader Saudi Arabia amid the war in West Asia.

— **Founded in September 1960** at the Baghdad conference in Iraq, OPEC was originally established by five members — Iran, Kuwait, Iraq, Saudi Arabia and Venezuela.

— Prior to OPEC's formation, Western multinational oil companies (often referred to as the Seven Sisters) largely dictated the prices paid to oil-producing nations.

— OPEC was created to counter this dominance, coordinating the petroleum policies of its member states to ensure that they received stable returns.

— The UAE formally joined the alliance in 1967, six years before the OPEC oil embargo was imposed on nations like the US and the Netherlands owing to their support of Israel in the Arab-Israeli war.

— The wider OPEC+ alliance was created in 2016. It included 10 major non-OPEC producers led by Russia. A response to the US's booming shale oil production, OPEC+ produced over 40% of the world's crude oil.

— OPEC, and OPEC+ by extension, derive their power through their influence in oil supply management. OPEC attempts to manage oil prices by regulating production limits and setting strict quotas for each of its member countries.

Environment

● **Gangetic Softshell Turtles**

— During a routine check in Jharcha, Greater Noida, Police spotted a man on a scooter, carrying a rather heavy jute bag that appeared to be moving. The team stopped the man, asked him to open the bag, and found 16 turtles inside.

— These were Indian Softshell or Gangetic Softshell Turtles, which fall under Schedule I of the Wildlife Protection Act, 1972 — the most protected category under Indian wildlife law.

— It is classified as **Endangered** under the IUCN Red List of Threatened Species.



Indian Softshell or Gangetic Softshell Turtles fall under Schedule I of the Wildlife Protection Act, 1972 — the most protected category under Indian wildlife law. (Express Photo)

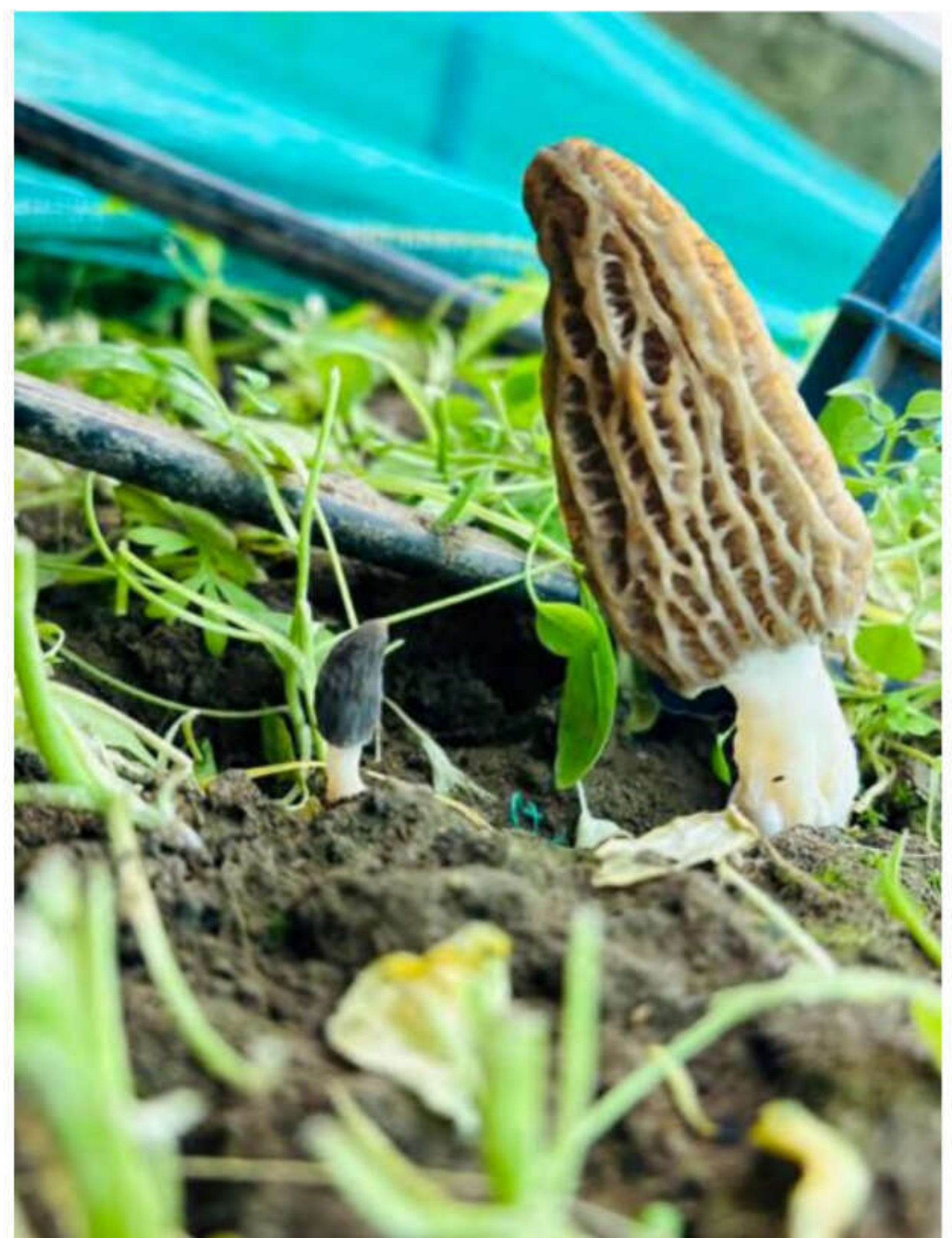
● **Morels or Morchella**

— In a major breakthrough, the Sheri Kashmir University of Agriculture and Sciences (SKUAST) in Srinagar has cultivated the most expensive and rare edible mushroom, Morels, for the first time in controlled conditions.

— Morels or Morchella, locally known as Kangaech, that grows naturally in specific high elevation forest ecosystems during a narrow rainy season costs anything between Rs 15,000 to Rs 40,000 per kilogram. It is also known as guchhi, and it is a fungus.

— Fungi in various forms (along with bacteria) are principal decomposers of dead organic material, turning it back into nutrients like phosphates and nitrates that are vital for plants. They can be deadly as well, like the death cap mushroom, aka Amanita phalloides.

— Having a high-export value, the cultivation of Morchella under controlled conditions is likely to open new frontiers in high value bioeconomy of Jammu and Kashmir.



Morels or Morchella, locally known as Kangaech, that grows naturally in specific high elevation forest ecosystems during a narrow rainy season costs anything between Rs 15,000 to Rs 40,000 per kilogram.

● **Himalayan Griffon vultures**

— Forest officials found 25 of the dead raptors near a villager living on the edge of the Dudhwa Tiger Reserve.

— Preliminary findings pointed to a suspected case of secondary poisoning. According to officials, rice laced with pesticides or some artificial chemical may have been left in the open, possibly to target stray dogs. It is suspected that

the dogs ate the poisoned rice and the vulture feed on the dead dogs leading to secondary poisoning.

— The raptor (*Gyps himalayensis*) is listed as ‘Near Threatened’ on the Red List of the International Union for Conservation of Nature (IUCN).

— The population of three species i.e. White-backed Vulture, Slender billed Vulture and Long billed Vulture in the wild has declined drastically over the past decade. All three vulture species were listed by IUCN, the World Conservation Union, in 2000 as ‘Critically Endangered’.

FYI

Vultures in India

India has nine species of vultures in the wild. These are the Oriental White-backed Vulture (*Gyps bengalensis*), Slender billed Vulture (*Gyps tenuirostris*), Long billed Vulture (*Gyps indicus*), Egyptian Vulture (*Neophron percnopterus*), Red Headed Vulture (*Sarcogyps calvus*), Indian Griffon Vulture (*Gyps fulvus*), Himalayan Griffon (*Gyps himalayensis*), Cinereous Vulture (*Aegypius monachus*) and Bearded Vulture or Lammergeier (*Gypaetus barbatus*).

● **Solid Waste Management (SWM) Rules, 2026**

— The Union Ministry of Environment, Forest and Climate Change has notified the new Solid Waste Management (SWM) Rules, 2026 in January, which come into force on April 1, 2026, replacing the SWM Rules of 2016.

— **Four streams of mandatory segregation at source:** The government has spelt out a “waste hierarchy” and defined a “four-way” segregation of waste. The hierarchy comprises prevention, reduction, reuse, recycling, recovery and disposal as the last resort. The segregation system expands the ‘dry-waste-wet-waste’ system by adding sanitary waste and special-care waste.

— **Discourage landfills:** It imposes higher landfill fees. The new rules intend to make landfills the last stop for garbage disposal and only for non-usable, non-recyclable and non-energy-recoverable waste material.

— **Refuse Derived Fuel (RDF):** Industries have been given targets to replace solid fuel with refuse-derived fuel, which is obtained from various waste categories, with 6% use initially, and up to 15 % after six years.

— RDF is produced by shredding and dehydrating municipal solid waste with high calorific value. As per the new rule, waste with calorific value of 1500 kg calories or more must be used for energy generation through refuse-derived fuel or for co-processing in cement and thermal plants.

● **Tar-balls Management Rules 2026**

— The Center for the first time has proposed Tar-balls Management Rules to manage tar balls, the sticky, weathered residue from oil leaks, spills, effluents and accidents that causes on-shore and off-shore marine pollution.

— These tar balls contain toxic contaminants, such as heavy metals, trace elements, and persistent-organic pollutants, and pose environmental and health risks.

— It affects flora and fauna, and the tourism industry due to their deposition on beaches, especially India’s western

coast, which sees tar balls wash ashore during monsoon due to strong winds and currents.

— The Rule assigns responsibilities for generation, collection, storage, transport, treatment, and disposal of this pollutant, including its repurposing as fuel in cement production.

— It has been proposed that state governments shall declare pollution in coastal areas due to tar balls as a state disaster, and they have to act under the Disaster Management Act.

— Currently, the National Oil Spill Disaster Contingency Plan (NOS-DCP) lays down a framework and responsibilities for responding to oil spills and preparing contingency plans.

— Oil facility owners will be liable to pay environmental compensation as per the ‘polluter pays principle’ if they fail to manage oil in an environmentally sound manner and lead to any oil spill.

— As part of a framework for disposal, the rules have proposed that tar balls having calorific value over 1,500 kilocalories can be used as a fuel source in industrial processes, mainly in cement industries.

● **Renewable Capacity Statistics 2026**

— As per the Renewable Energy Statistics 2026 published by the International Renewable Energy Agency (IREA), India is now ranked third globally in Renewable Energy Installed Capacity, surpassing Brazil.

— As per the Statistics, 2025 saw the largest increase in renewable energy capacity to date – with the addition of 692 gigawatts (GW) of renewable capacity – expanding the stock of renewable power by 15.5%.

— Solar power alone accounted for nearly three-quarters of renewable additions, with a record 510 GW added during the year; while 159 GW of wind energy was added.

● **Hydrofluorocarbons (HFCs)**

— The Government has directed all state and Central authorities to stop granting environmental clearances for new or additional HFC production beyond December 31, 2027.

— India is a party to the landmark Montreal Protocol of 1989 which was brought to tackle ozone depletion through phase-out of CFCs, with a complete ban from 2010.

— Later in 2021, India ratified the Kigali amendment to the protocol, which adopted a plan to phase down controlled applications of HFCs that were being used as a replacement for CFCs. This landmark amendment to the protocol was agreed upon in Kigali, Rwanda, in 2016.

— HFCs are known to be much worse than carbon dioxide in causing global warming. In fact, according to the UN



Source: AI-generated image

Environment Programme (UNEP), the average global warming potential of 22 of the most used HFCs is about 2,500 times that of carbon dioxide.

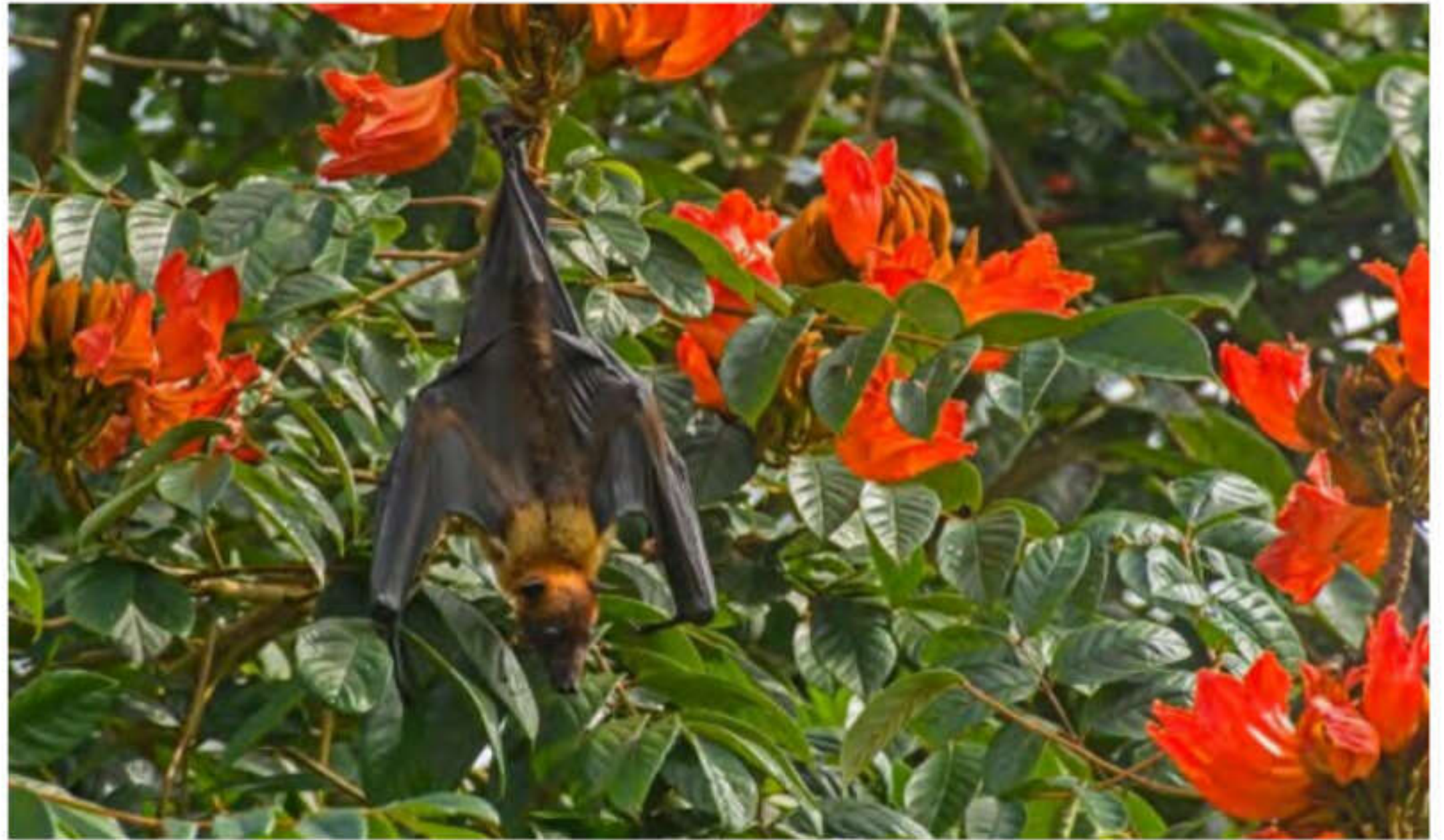
— It is a Greenhouse gas, not directly impacting the ozone layer which is why they weren't originally banned.

— The Kigali Amendment to the Montreal Protocol seeks to eliminate 80-90 per cent of the HFCs currently in use by the year 2050. This is expected to avoid up to 0.5 degree Celsius of global temperature rise by 2100, while continuing to protect the ozone layer.

● **State of India's Bats (SoIbats), 2024-25**

— The first-ever national assessment, State of India's Bats (SoIbats), 2024-25, pointed out that the bat species in India, around 135, are facing neglect due to a lack of research and are also under threat from urbanisation, deforestation, land-use changes, and climate impacts.

— SoIbats was conducted in collaboration with the Nature Conservation Foundation (NCF) and Bat Conservation International (BCI).



Most studies on the ecology and biology of bats was concentrated in southern states, including Western Ghats biodiversity hotspot. In picture: An Indian Flying Fox. (Photo: Nithin Divakar)

— Out of 135 bat species, **16 are endemic** (about 12 percent of the total bat) or only found in India and seven of them are listed under the threatened category by the International Union for Conservation of Nature.

— The report documented significant inter-variability in the distribution of bat species. West Bengal leads with 68 bat species, followed by 66 in Meghalaya, 52 in Uttarakhand 41 each in Kerala and Karnataka and 43 in Sikkim, denoting diversity.

● **Marine Spatial Planning**

— Odisha became the first state to launch the Marine Spatial Planning (MSP) in the second phase for integrated coastal and marine planning.

— It was launched after the Odisha government signed a memorandum of understanding with the National Centre for Coastal Research (NCCR) under the Union Ministry of Earth Sciences.

— Sustainable ocean planning has been underway in India since 2019, with collaboration between India and Norway. In the first phase, it was taken up in two Union territories, Puducherry and Lakshadweep.

— The MSP is a tool for sustainable and integrated ocean management aimed at boosting the blue economy and strengthening climate resilience.

— In August 2025, the Odisha government also launched the Odisha Marine Biotechnology Research and Innovation Corridor (OMBRIC) to promote the use of biotechnology for marine environmental protection and economic development.

- **AMOC, or Atlantic Meridional Overturning Circulation**

— It is part of a giant loop of water that snakes through the world's oceans. It carries warm, salty water from the tropical Atlantic up past the Eastern Seaboard and toward Europe. There, the water releases its heat into the air and helps moderate the weather in Britain and the Nordic countries.

— In the process, the water cools, sinks and heads back south, where it goes on to influence rainfall patterns in Africa, South America and beyond.

— In a study published in the journal *Science Advances*, researchers show that, under certain conditions, building a 50-mile-long dam across the Bering Strait—the shallow waterway that separates Russia and Alaska—could prevent a collapse of the AMOC, which plays a central role in regulating Earth's climate.

— The AMOC (pronounced AY-mock) has weakened in recent decades, and a growing body of evidence suggests human-caused warming could someday cause it to shut down or slow significantly, with grave effects on the weather on multiple continents.

— Warming from greenhouse gases in the atmosphere is disrupting this vast oceanic conveyor belt. As temperatures rise, the Arctic gets rainier and Greenland's ice sheet melts, more fresh water is pouring into the North Atlantic, making its surface less salty. That prevents the water of the AMOC from sinking at the loop's northern end, which in turn causes it to draw less warm water northward from the tropics.

— Should the belt stop turning altogether, Northern Europe would grow colder, deprived of the warmth the AMOC brings. With less water moving north through the Atlantic, more of it would slosh toward the U.S. East Coast, raising sea levels there. Tropical rainfall patterns would be rearranged, parching some areas while dousing others.

- **Mekong River pollution**

— Demand for fish is reducing due to worries over contamination of the Mekong River and its tributaries.

— The contamination is due to toxic runoff from rare earth mines upstream that is threatening millions who rely on those waters for farms and fisheries.

— Rising demand for rare earth materials is driving an unregulated mining boom centered in war-torn Myanmar, to the west, that is spreading to Laos, in the east.

— The Mekong originates in the Tibetan Plateau in China and flows to the South China Sea through Myanmar, Thailand, Laos, Cambodia, and Vietnam.

— Exposure to heavy metals such as arsenic, mercury, lead and cadmium raises risks of cancer, organ failure and developmental harm, especially for children and pregnant women.

— Thailand is bearing the brunt of the mining boom as such toxins imperil its global food exports — from bags of rice in U.S. supermarkets to edamame snacks served in Japan and garlic used in Malaysian kitchens.

— Rare earths are mined by digging up rock or washing chemicals through soil to extract the minerals, creating toxic waste. The physical footprint of this process is recognisable in satellite data.

- **Peacock Tarantula**

— The Andhra Pradesh Forest Department, in collaboration with the Eastern Ghats Wildlife Society, has initiated a

conservation status survey of the Peacock Tarantula (*Poecilotheria metallica*) in the vast landscape of the Nagarjunasagar Srisailem Tiger Reserve (NSTR).

— The genus *Poecilotheria* belongs to the family Theraphosidae and is made up of arboreal species of spiders, which are known to occur in India and Sri Lanka. The genus is represented by eight species in India and seven in Sri Lanka

— Peacock Tarantula is also called Gooty tarantula, or metallic tarantula because of its attractive iridescent colouration. The Gooty in the name comes from a town in Andhra Pradesh in India, where it was first discovered in 1899.

— Peacock Tarantula is found predominantly in the deciduous forests of central and southern India. It has a distinct blue hue, one that darkens with age and maturity.

— The tarantula preys upon a variety of insects, including crickets, grasshoppers, and other small bugs. This natural predation helps regulate insect numbers, preventing potential outbreaks and ensuring that no single insect species overwhelms the ecosystem

— By keeping insect populations in check, the Peacock Tarantula contributes to the overall health and stability of its environment, promoting biodiversity and supporting the intricate web of interactions that characterize its ecosystem.

— It is classified as **‘critically endangered’** by the International Union for Conservation of Nature (IUCN).



*Andhra Pradesh gears up to protect the Peacock Tarantula.
(Source: X/@APDeputyCMO)*

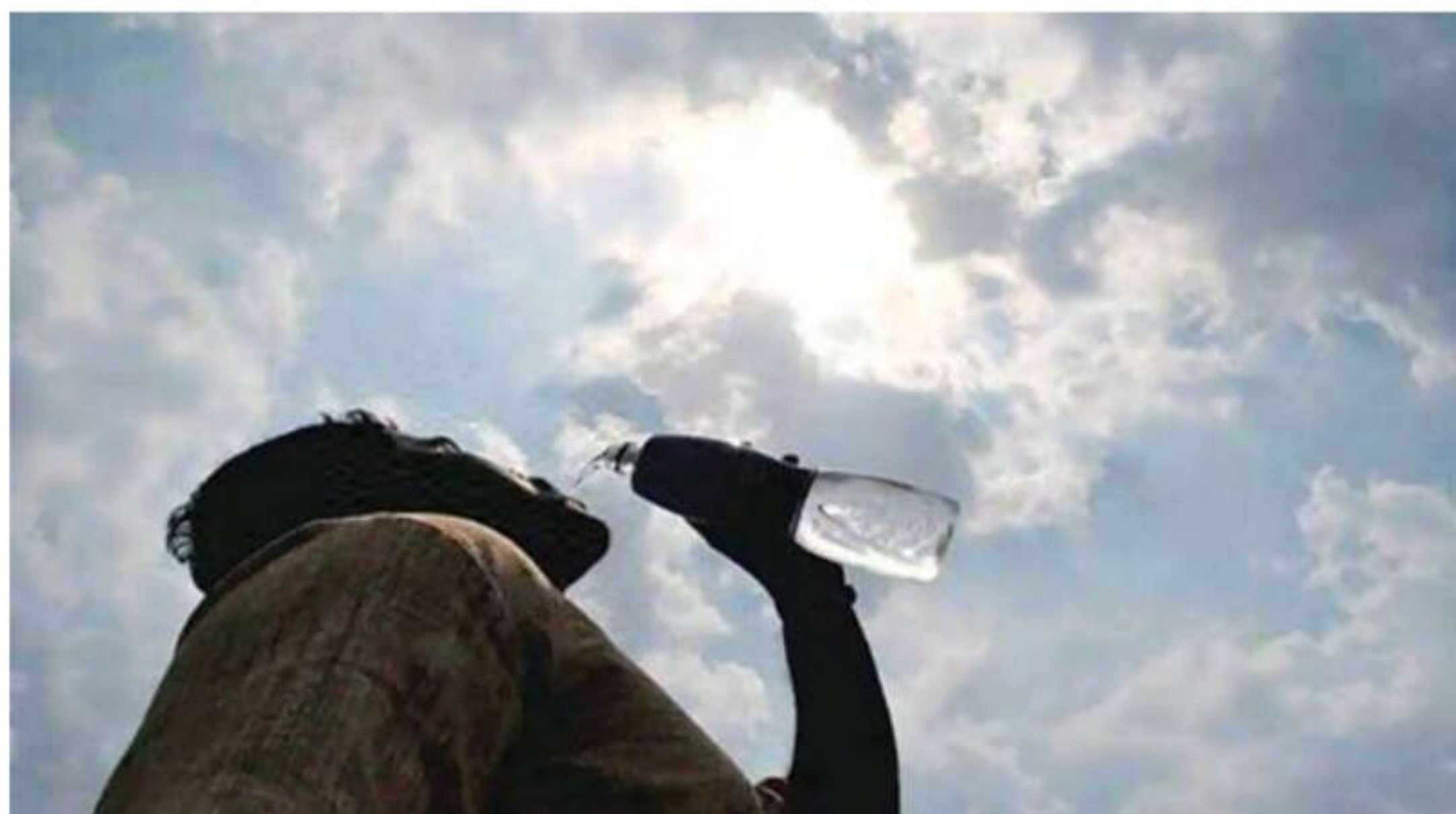
● **Heatwave in India**

— Light to moderate rainfall on 29th and 30th April, brought an end to a week-long spell of heatwaves in most parts of north and central India, the first of the season.

— Heatwave is a condition where the temperature of the place gets unusually and uncomfortably, higher than the normal. The thresholds defined by IMD are specific to India and are not universal definitions of heatwave.

— Summers have always been very warm in most parts of India, but heatwaves are very specific conditions defined by the India Meteorological Department (IMD).

— If the maximum temperature of a place gets at least 5°C higher than normal, and this condition is reached at least two days in succession, the place is said to be experiencing a heatwave. If the temperature gets warmer than normal by



Data about heat stroke deaths is hard to track, as the deaths could often be “miscoded” as other issues, such as a heart attack. (Representational Image)

7°C, a severe heatwave is declared.

— A few other things are factored in before declaring a heatwave, particularly whether the place is located in plains or mountains and whether its normal temperature is below 40°C or higher.

— There are two areas where heatwaves are common in India: one, the northwestern and central part extending into Bihar and Jharkhand, which is known as the core heatwave zone; and two, the eastern coast comprising Andhra Pradesh and Odisha.

— As many as 23 states in India are now affected by heatwaves. Each one of them, and hundreds of cities, now implement a heat action plan during summers.

— Incidentally, a heatwave is not yet considered a notified disaster under the Disaster Management Act in India. The Sixteenth Finance Commission, which submitted its report last year, recommended that both heatwaves and lightning be included as notified disasters.

Science and Technology

● **Artemis 2 mission**

— NASA's Artemis II mission, carrying four astronauts on a flyby mission to the Moon, was launched on April 1, 2026.

— This is the first time that humans will get to the Moon's neighbourhood after the last Apollo mission in 1972.

— It was launched through the Space Launch System (SLS) rocket on the Orion spacecraft.

— Both the SLS rocket and the Orion spacecraft being used for this mission are relatively new. They were used in the Artemis I mission in 2022, uncrewed but followed roughly the same path to the Moon and back.

— The Artemis II mission is a 10-day mission aimed at testing systems for a future mission to the Moon.

— The Artemis II Mission will make two rounds of the Earth before embarking on its journey towards the Moon. Once there, it will go around the Moon before starting the return journey to Earth.

— Artemis II is sort of a test-ride mission, meant to test and validate all systems before astronauts finally make the landing on the Moon in 2028.

● **About crew members**

— The crew includes Reid Wiseman, Victor Glover, Christina Koch, and Jeremy Hansen. Christina Koch became the first woman to travel to the Moon's vicinity.

— Pilot Victor Glover is the first Black astronaut ever to be sent on a lunar mission. Jeremy Hansen, first non-U.S. citizen, sent on a lunar mission even as he makes his own first spaceflight.

● **Kavach**

— The Ministry of Railways has commissioned Kavach, an indigenously developed Automatic Train Protection (ATP) system on the Vadodara-Nagda section of Delhi-Mumbai route.

— The Kavach makes rail operation safer by applying brakes in trains in critical situations. The system automatically protects against Signal Passing at Danger (SPAD), Head-on and rear-ends collision risks.

— Moreover, Overspeeding is continuously monitored and controlled and Safety is ensured even in low visibility and adverse weather conditions.

— This technology features an electronic device linked with radio frequency identification systems positioned at stations, trains and tracks. If a loco pilot inadvertently skips a red signal, Kavach automatically activates and controls the train's braking systems.

— Additionally, the system detects any trains approaching the same tracks, taking necessary actions to avert collisions and alerting the loco pilot.

— It complies with Safety Integrity Level (SIL-4) safety standards, the highest level of safety integrity globally. Being an indigenously designed and cost-effective system, it reduces dependence on imported technologies and promotes Indian signaling industry.

● **Fast Breeder Reactor**

— India's first indigenous Fast Breeder Reactor (FBR) at Kalpakkam in Tamil Nadu attains criticality.

— Attaining criticality, or going critical, means the initiation of a self-sustaining nuclear fission reaction that will eventually lead to the generation of power by the 500-megawatt electric (MWe) FBR.

— Attaining criticality is a key milestone before full power generation, indicating that the reactor core is functioning as designed and that each fission event in the core now releases a sufficient number of neutrons to sustain an ongoing series of reactions.

— This is the vital second stage of India's nuclear programme.

Three-stage nuclear programme

→ **STAGE 1:** Pressurised Heavy Water Reactors (PHWRs) use natural uranium-based fuels to generate electricity, while producing fissile plutonium (Pu239), which can be extracted by reprocessing the spent fuel. It uses heavy water (deuterium oxide) both as a coolant and moderator. The programme has been supplemented by the construction of imported Light Water Reactors (LWRs).

→ **STAGE 2:** It involves setting up Fast Breeder Reactors (FBRs) of the kind at Kalpakkam, using plutonium-based fuels, which can enhance nuclear power capacity, and convert fertile thorium into fissile uranium (U233). Reprocessing of the spent fuel is vital for efficient utilisation of the plutonium inventory.

→ **STAGE 3:** The third stage will be based on the ThU233 cycle. U233 produced in the second stage can be used for the third stage of the power programme, which consists of advanced thermal and fast breeder reactors, for long-term energy security. The Advanced Heavy Water Reactor (AHWR) is proposed for this. Now, the use of molten salt reactors is also seen as an option.

● **Induction vs infrared cooktops**

— Amidst the shortage and black market of LPG, there has been a shift toward electric alternatives, such as induction and infrared cooktops. Online retail platforms like Amazon India have reported a sharp spike in sales, with induction

cooktops seeing up to an 18-fold jump compared to pre-war levels.

— A basic induction cooktop uses electricity to heat the vessel directly. It works by generating a rapidly changing electromagnetic field.

— When the metal pan is placed on the surface, it comes under the magnetic field. The electrical resistance of the metal creates an **electrical friction** between the two, which then converts the **kinetic energy** of the moving electrons directly into thermal energy or heat.

— **Cookware:** An induction works best with ferromagnetic cookware, which contains materials like cast iron or magnetic stainless steel that respond to magnetic fields. For this, there is a need for compatible cookware that makes it more expensive than the ones normally used on gas stoves.

— Unlike induction, infrared cooktops use a heated coil beneath a glass surface to generate radiant heat, which can then warm any type of vessel — including steel, aluminium, glass, and ceramic — without requiring magnetic compatibility.

— **Process of heating:** Unlike an induction cooktop, infrared cookstoves rely on radiant heating for heating the vessel. Put simply, electricity heats a coil or halogen element placed beneath a ceramic glass surface. As it heats, it begins to glow red-hot — similar to the heating wire in a toaster. This hot element then emits infrared radiation, a form of **electromagnetic energy** that is invisible to the human eye.

— This radiation passes through the glass surface and is absorbed by the base of the cookware. The absorbed energy causes the molecules in the vessel to vibrate, generating heat that cooks the food.

— **Energy Efficiency:** Induction cooktops convert 85–95% of electricity into heat by directly heating the vessel using electromagnetic fields. In contrast, infrared cooktops operate at around 70–80% efficiency, as heat is first generated in a coil, then transferred to the glass surface, and finally to the vessel.

UPSC ESSENTIALS

An induction cooktop typically consumes slightly less electricity than an infrared cooktop for the same task. Induction cooktops use power electronics — usually rapid switching (pulse-width modulation) or frequency adjustment — to control the heat. This allows them to maintain efficiency even at low heat settings like simmering.

Infrared cooktops usually reduce heat by adjusting the electricity waveform using a method called phase-angle control. Here, the glowing coil turns on only for a short part of each cycle and then turns off, instead of staying on steadily. This method is simple and effective, but it distorts the current waveform and can reduce the power factor. For this, the grid has to supply extra current.

● **Multi-Lane Free Flow (MLFF) tolling system**

— The National Highway Authority of India (NHAI) has issued directions to all FASTag-issuing banks to immediately validate Vehicle Registration Numbers (VRNs) or license plate numbers linked to the FASTags they have issued. It also comes in the backdrop of a push for a Multi-Lane Free Flow (MLFF) tolling system.

— The MLFF is an advanced facility that allows vehicles to pass through toll gates at high speeds, without stopping or slowing at toll plazas. Accurate VRN mapping with FASTag is critical for MLFF tolling.

— The MLFF or barrier-less tolling system does not have boom barriers. The toll is collected after high-performance Radio Frequency Identification readers and Automatic Number Plate Recognition cameras read the FASTag and VRN. In the absence of human intervention in this process, a mismatch in the VRN linked to the FASTag could see commuters pass without paying the fee.

— FASTag is an electronic toll collection system managed by the National Payments Corporation of India (NPCI) and the NHAI. FASTag sticker is usually pasted on the windscreen of a car. It was launched in 2014 as a pilot project and made mandatory at every toll plaza in the country in 2021.

— It uses **Radio Frequency Identification (RFID) technology** to communicate with scanners installed at toll plazas. Once the car crosses a toll plaza, the requisite toll amount is automatically deducted from a bank account or a prepaid wallet linked to the FASTag.

● **Sports Genomics Programme**

— The ‘Sports Genomics Programme’ is launched by the Gujarat government to conduct whole **genome sequencing of talented athletes** in the state to identify and record genetic markers associated with endurance and power sports.

— According to GBRC Director Dr Snehal Bagatharia, “In a key study published in 2023, 128 genetic markers (DNA polymorphisms) showed a positive association with athlete status. A total of 41 markers were related to endurance, 45 to power, and 42 to strength.”

— It is being undertaken by the Gujarat Biotechnology Research Centre (GBRC), under the Department of Science and Technology of the state, in coordination with the Sports Authority of Gujarat.

— Under the programme, for which Rs 26.05 crore has been allocated for five years, the GBRC will collect at least 2,000 genetic samples per year over five years, with the 10,000 samples covering 10 sports – five endurance and power sports each.

UPSC ESSENTIALS

Genome India Project

It was approved by the Union government in 2020 to create a **comprehensive catalogue of genetic variations** found in the Indian population. A map of genetic diversity is essential for understanding the history of our evolution, discovering the genetic basis for various diseases, and creating therapies of the future.

The human genome is essentially a biological instruction manual that we inherit from our parents. It is a tome written with just four letters, **A,C,G,** and **T** — the four bases that come together to create everyone’s unique genetic makeup.

● **India’s first indigenous quantum computing testing facility in Amaravati**

— Andhra Pradesh Chief Minister N Chandrababu Naidu formally launched India’s first indigenous quantum computing testing facility at SRM University in Amaravati.

— The Amaravati Quantum Reference Facility (AQRA) facility at Amravati was inaugurated on World Quantum Day (14th April), and with this, India now has open sovereign quantum infrastructure.

According to the World Quantum Day, “the World Quantum Day is celebrated on April 14, a reference to 4.14, the rounded first digits of Planck’s constant: $4.1356677 \times 10^{-15} \text{ eV}\cdot\text{s} = 0.000\ 000\ 000\ 000\ 004\ 1356677$ electron volt second, a product of energy and time that is the fundamental constant governing quantum physics.”

— The initiative features two distinct platforms: the 1Q testbed at Medha Towers and the 1S testbed at SRM University, Amaravati. It was launched under the Andhra Pradesh government’s flagship quantum technology hub which is under India’s National Quantum Mission.

— **National Quantum Mission (NQM)** was launched at a total cost of Rs. 6003.65 crore from 2023-24 to 2030-31, to seed, nurture, and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT).

• **Designer Rice**

— Scientists at CSIR – National Institute for Interdisciplinary Science and Technology in Thiruvananthapuram, Kerala, have developed a “designer rice” that packs three times the protein of normal grains while maintaining a low glycemic index (below 55) to help manage diabetes.

— Instead of genetic modification, the scientists have used food-processing technology.

— They took broken rice, the bits usually sold at a discount—ground them into flour, and blended them with protein and micronutrients like iron, folic acid, and Vitamin B12. They then “reformed” this mixture into grains that look, feel, and taste exactly like the rice we know.

— **Protein powerhouse:** While normal rice has about 6–8 per cent protein, this version boasts over 20 per cent.

— **Fortified defense:** It bridges the gap for anaemia by embedding iron, folic acid, and Vitamin B12 directly into the grain’s structure.





Designer Rice: India's Nutritional Breakthrough

Scientists at **CSIR-NIIST, Thiruvananthapuram** have engineered a "designer rice" using **food processing technology – not genetic modification** – transforming India's most consumed staple into a high-protein, diabetic-friendly superfood.

20%+ **Protein Content in Designer Rice**
A 3x leap over regular milled rice – without any genetic modification

Designer Rice (CSIR-NIIST)	20%+ protein
Regular Milled Rice	6–8% protein

KEY BENEFITS

 <p>3x PROTEIN BOOST From 6–8% to 20%+ protein per grain – no GMO involved</p>	 <p><55 LOW GI Slow energy release; prevents blood sugar spikes for diabetics</p>	 <p>3 MICRONUTRIENTS Iron, Folic Acid & Vitamin B12 embedded in the grain structure</p>	 <p>CIRCULAR ECONOMY Uses broken rice – a milling byproduct – as its raw material base</p>
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HOW IT'S MADE

<p>1 BROKEN RICE Milling byproduct collected as raw material</p>	<p>2 GROUND TO FLOUR Broken grains milled into fine rice flour</p>	<p>3 FORTIFIED BLEND Protein + Iron, Folic Acid & B12 blended in</p>	<p>4 REFORMED GRAIN Mixture shaped into rice grains – looks & tastes identical</p>
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- **Narcotics Analysis & RAG-based Investigation Tool (NARIT-AI)**

— The Gujarat Police has developed the NARIT-AI tool to help police make tighter cases under the Narcotics Drugs and Psychotropic Substances (NDPS) Act to ensure conviction.

— The tool, designed to help law enforcement agencies in handling complex narcotics cases under the NDPS framework.

— It will integrate legal provisions, case laws, and investigative procedures to provide real-time analytical support to investigating officers (IOs).

— NARIT-AI was developed using Retrieval-Augmented Generation (RAG) technology.

— RAG is an AI framework that improves the accuracy of a large language model (LLM) by referencing trusted knowledge bases before generating responses, which in this case are laws, circulars, cases, and judgments on narcotics cases in India.

- **India's first advanced 3D chip packaging unit**

— The foundation stone for India's first advanced 3D chip packaging unit was laid in Bhubaneswar, in a big boost to India's growing semiconductor ambitions.

— The project is being implemented by the US-based 3D Glass Solutions Inc through its wholly owned Indian subsidiary Heterogeneous Integration Packaging Solutions Pvt Ltd. It is funded by Intel, among others. Intel's CEO Lip-Bu Tan joined the ceremony virtually.

— 3D glass semiconductor technology is an advanced chip process that utilises specialised glass substrates to enable high-performance, three-dimensional integration of electrical components.

— Unlike traditional silicon, glass offers superior radio frequency performance, lower electrical loss, and enhanced thermal stability for passive component integration. The plant in Bhubaneswar will assemble and package these chips.

- **Sovereign cloud system**

— The Indian government is considering mandating companies in critical sectors such as energy, telecom, and banking to use Made-in-India sovereign cloud systems.

— According to government officials, the move under discussion is aimed at reducing dependence on foreign cloud providers and strengthening data security.

— Cloud systems are on-demand, internet-based services that deliver computing resources—such as servers, data storage, databases, and software—hosted in remote data centres rather than on local hardware.

— Big businesses need cloud systems primarily for scalability and cost efficiency, allowing them to instantly scale IT infrastructure up or down to meet fluctuating demand without heavy capital investment.

— This consideration is made because last year Microsoft suddenly blocked oil refiner Nayara Energy from its IT services.

— A BLOCK by a cloud system provider can log out a client company from accessing its own data, communication channels and other tools and products. This can critically endanger operations in sectors such as telecom, energy and financial services.

● **Technology for pothole repairing**

— The Municipal Corporation of Delhi (MCD) is looking for a more effective, scientifically driven fix to the problem of potholes in the city.

— On the MCD’s table are three technologies for pothole repair, resurfacing, and road maintenance that have been patented by the Council of Scientific and Industrial Research-Central Road Research Institute (CSIR-CRRI).

— The technologies being examined are:

- (1) Ecofix, a ready-to-use steel-slag-based pothole-repair mix
- (2) Rejupave Rejuvenator, a material for dense carpet work and resurfacing of roads
- (3) Modified Mix Seal Surfacing or MSS+, a cold-mix surfacing technology that reduces the need to heat road material.



The Municipal Corporation of Delhi (MCD) is looking for a more effective, scientifically-driven fix to the problem of potholes this year. (Express photo)

UPSC CURRENT AFFAIRS BRIEF

Nobitex crypto exchange

As per the recent reports by Reuters, Nobitex, a crypto exchange, is used by the Iranian state and Islamic Revolutionary Guard Corps (IRGC) to route money to allies outside the conventional banking system.

Brothers Ali and Mohammad Kharrazi – using the family surname Aghamir – built Nobitex into the country’s dominant cryptocurrency provider. It handles an estimated 70% of Iran’s crypto transactions.

● **Vikram-1**

— Skyroot Aerospace has flagged off Vikram-1 rocket to Sriharikota, with the launch of the rocket slated for later this year.

— Vikram-1 is a multi-stage launch vehicle with solid and liquid fuel-based engines designed for launching satellites weighing up to 350kg to low earth orbit.

— The low earth orbit is the region of space from 160 km to 2,000 km above the surface of Earth.

— What makes Vikram-1 different is that the rocket is made of carbon composite instead of metals, and houses a 3D-printed indigenously made engine — making its manufacturing and assembly easier, quicker and cheaper.

— Skyroot was also the first private company to carry out a single-stage sub-orbital flight in 2022, followed by another company, Agnikul. A sub-orbital flight is launched at a slower speed than the orbital velocity, so it reaches outer space but cannot get into an orbit around Earth.

● **Cell-broadcasting technology and SACHET**



DOT's CAP-Integrated Alert System (SACHET)

— On May 2, India launched its Cell Broadcast messaging system using indigenous technology that would act as an instant disaster alert service for citizens.

— National Disaster Management Authority (NDMA) has successfully operationalized the Integrated Alert System (SACHET), developed by the Centre for Development of Telematics (C-DOT).

— SACHET (which means ‘alert’), is an Integrated Alert System that aims to deliver disaster and emergency related alerts via SMS to mobile users within the geo-targeted areas.

— This is different from earlier sms alerts, here cell broadcast technology is used which mirrors the technologies used in countries such as Japan- J-alert system (which issued tsunami alerts).

— Cell Broadcast is a method of simultaneously sending short messages to multiple mobile phones within a defined geographic area.

— As part of day-to-day network functionality, cell towers communicate with phones within their reach, providing information such as the network it is connected to. This information is usually invisible to the user. Its only purpose is to help the network function as it should.

— The communication of information from cell towers to handsets, and the technology that enables it, are known broadly as cell broadcast.

— So, government authorities can harness this system of one-way communication between cell towers and phones to issue emergency alerts.

— The system essentially works by sending a single message from a mobile network tower to all phones connected to that tower at the same time, instead of sending individual SMS messages.

— Unlike SMS, which is a one-to-one channel, cell broadcast is a one-to-many technology. This means that one message can be sent to millions of devices within a few seconds.

— It needs no app or subscription as well. The only requirement is that the phone is switched on and configured to accept such messages (Settings → Safety and emergency → Wireless emergency alerts → Test alerts).

● **India’s first portable bedside MRI system**

— In a first, AIIMS New Delhi has introduced India’s first portable bedside MRI system, marking a significant step in critical care and neurodiagnostics.

— The ultra-low-field device can be wheeled directly to a patient’s bedside, enabling rapid brain imaging for critically ill patients in ICUs, emergency settings, and neurosurgical care.

— Unlike conventional MRI machines that require dedicated suites and patient transport, this system eliminates the risks associated with moving unstable patients and allows imaging to be performed within the safety of the ICU environment.

Persons in News

(Just FYI: Noting historical personalities’ anniversaries aids UPSC prep. UPSC often includes such personalities in questions, so revisiting their lives refreshes your static syllabus.)

● **Mihir Bhoj**

— Samajwadi Party (SP) chief Akhilesh Yadav kicked off his 2027 election campaign in Uttar Pradesh from the Mihir Bhoj degree college, located near the statue of the 9th-century ruler Mihir Bhoj in Dadri.

— Mihir Bhoj, a 9th-century ruler of the Gurjara-Pratihara dynasty, succeeded Ramabhadra in early medieval north India.

— He is known for his devotion to Lord Vishnu, and his empire is believed to have spanned from the Himalayas to the Narmada River, and from the Sutlej River to Bengal.

— Significantly, Kannauj, located in present-day Uttar Pradesh, was once the capital of his empire.



Akhilesh Yadav kicked off his 2027 UP poll campaign at the Mihir Bhoj degree college, located near the statue of the 9th-century ruler Mihir Bhoj in Dadri. (File photos).

● **Samrat Samprati**

— On the occasion of Mahavir Jayanti on March 31, Prime Minister Narendra Modi inaugurated the Samrat Samprati Museum in Koba, Gandhinagar. The museum is dedicated to Jain history and the life of Samrat Samprati, the grandson of the Mauryan ruler Ashoka.

— Samprati was the son of Kunala, son of Ashoka. Samprati is believed to have reigned between 230 and 220 BCE.

— Some traditions describe Samprati as a Jain from birth, but most accounts emphasize his conversion under the monk Suhastin, the eighth leader of the Jain congregation established by **Mahavira**, whom he is said to have met in Ujjain.

— Following his conversion, Samprati is credited with actively promoting Jainism across the subcontinent and beyond — facilitating the movement of monks into distant regions, constructing and renovating thousands of temples, and establishing vast numbers of icons.

UPSC ESSENTIALS

Mahavira

Lord Mahavir was born to King Siddhartha and Queen Trishala in Kundalagrama in Bihar in 540 BCE. His mother, Trishala, was the sister of Licchavi chief Chetaka. He renounced his crown and spent 12 years as an ascetic away from all kinds of worldly pleasures at the age of 30.

Mahavir spent 30 years travelling across India to teach his philosophy of Ahimsa (non-violence), Satya (truth), Asteya (non-stealing), Brahmacharya (chastity), and Aparigraha (non-attachment), which later became the fundamental principles of Jainism.

● **Min Aung Hlaing**

— Myanmar’s junta chief, Min Aung Hlaing, was elected the President on 3rd April after a parliamentary vote, formalising his rule as a civilian leader. He had been the military chief since 2011.

— Hlaing toppled the Aung San Suu Kyi government in 2021, which triggered nationwide protests. Following a campaign of repression, the country plunged into ethnic armed resistance.

— In 2024, the International Criminal Court sought an arrest warrant for Min Aung Hlaing over the alleged persecution of the minority Muslim Rohingya.

— More than a million of this ethnic minority group reportedly fled from Rakhine State to neighbouring Bangladesh and India to escape a military crackdown in 2017.

● **Jotirao Phule**

— The bicentenary year of Mahatma Jotirao Phule—marking 200 years since his birth on April 11, 1827—began on April 11, 2026.

— Phule was born on April 11, 1827, and belonged to the Mali caste of gardeners and vegetable farmers. He was bestowed with the title of Mahatma on May 11, 1888 by a Maharashtrian social activist **Vithalrao Krishnaji Vandekar**.

— Phule along with his followers formed **Satyashodhak Samaj** in 1873 which meant ‘Seekers of Truth’ in order to attain equal social and economic benefits for the lower castes in Maharashtra.

— The Satyashodhak Samaj dedicated towards the removal of the socio-economic backwardness of Dalits was even supported by **Chhatrapati Shahu**, the Maratha ruler of Kolhapur state.

— In 1840, Jotirao Phule got married to Savitribai when he was merely 13 years old and Savitribai was 9 years old.

— The couple went on to open a school for girls in **Bhidewada, Pune, in 1848**. This became the **country's first girls' school**. Many more such schools were opened for girls, Shudras and Ati-Shudras (the backward castes and Dalits, respectively) in Pune, leading to discontent among Indian nationalists like Bal Gangadhar Tilak.

● **Asha Bhosle**

— Legendary playback singer Asha Bhosle died in Mumbai on 12th April at the age of 92.

— She was honoured with the Padma Vibhushan in 2008 and the Dadasaheb Phalke Award in 2001.

— She won her first Filmfare Awards for “Garibon Ki Suno” (Dus Lakh, 1967) and “Pardes Mein Rehne Do” (Shikar, 1969).

— She has also won National Film Awards for her work in films like Umrao Jaan and Ijaazat.

● **Péter Magyar**

— Péter Magyar is set to become the **Prime Minister of Hungary** after defeating Viktor Orbán who had been in power for 16 years.

— The election witnessed a historic turnout of nearly 80%, the highest in its post-communist history of 36 years.

— Magyar now faces the unsavoury challenge of remaking the “illiberal democracy” Orbán leaves behind.

— His Tisza Party secured a comfortable two-thirds majority (138 of 199 seats based on a preliminary count), which will allow it to amend the constitution and undo several Orbán-era policies.

— Today, Hungary is the EU's most corrupt member, according to the anti-corruption watchdog, Transparency National. It is also its poorest member regarding household welfare, according to 2025 Eurostat data.

— The European Commission has withheld an estimated €18 billion (\$21 billion) in funding from Hungary since 2022 over concerns about its democratic backsliding — equivalent to roughly 10% of the country's GDP.



Peter Magyar, leader of the opposition Tisza party, waves the Hungarian flag following the announcement of the partial results of the parliamentary election, in Budapest, Hungary. (AP Photo)

● **Samrat Choudhary**

— BJP leader Samrat Choudhary was sworn in as the Chief Minister of Bihar, marking the first time the party will lead a government in the state.

— Nitish Kumar, who is now a Rajya Sabha MP, relinquished the chief minister's post on April 14, 2026, dissolving his Cabinet in which Choudhary was a deputy chief minister and held the crucial Home portfolio.

● **Anita Chaudhary**

— Anita Chaudhary, a 30-year-old forest guard at Rajasthan’s Shergarh Wildlife Sanctuary, won the prestigious Machhli National Award from the World Wildlife Fund for Nature (WWF).

— The WWF’s ‘Machchli National Award’, named after the famous Ranthambhore tigress and including a cash component of Rs 50,000, was the fourth recognition of her work.

● **Sadhvi Satish Sail**

— Sadhvi Satish Sail was crowned Miss India World 2026 at the grand finale of the 61st Femina Miss India pageant held in Bhubaneswar.

— Crowned by her predecessor Nikita Porwal, Sail is all set to represent India at the Miss World 2027 pageant.



*Sadhvi Satish Sail becomes Femina Miss India World.
(Source: Instagram/@missindiaorg)*

Places in News

(Just FYI: The location of the place is important, considering that UPSC has asked several questions about places that were in the news, such as Aleppo and Kirkuk, in the 2018 UPSC Prelims. The best way to remember them is to plot them on a world map.)

● **Snake Island**

— Amid repeated assertions by US President Donald Trump that he may send American troops to seize control of Iran’s key oil export terminal at Kharg Island. However, there is a precedent and that ended in disaster.

— Nearly four years ago, and still early into Russia’s invasion of Ukraine, Snake Island, or Zmiinyi Island, was seen as a vital asset in the war.

— Quite like Kharg, this rocky outcrop held by Ukraine was categorised as strategic in the control of the western Black Sea. The island was seized by Russia in February 2022, only to be abandoned in end-June 2022.



*Snake Island has a big strategic relevance in the control over the Black Sea.
(Photo: Wikimedia Commons)*

— Zmiinyi Island is a small piece of rock less than 700 metres from end to end that has been described as being “X-shaped”. It is located 35 km from the coast in the Black Sea, to the east of the mouth of the Danube and roughly southwest of the port city of Odessa.

— The island, which has been known since ancient times and is marked on the map by the tiny village of Bile that is located on it, belongs to Ukraine.

● **Black Sea**

— Black Sea is bordered by Ukraine to the north and northwest, Russia and Georgia to the east, Türkiye to the south, and Bulgaria and Romania to the west.

— It links to the Sea of Marmara through the Bosphorus passage and then to the Aegean through the Dardanelles strait.

— Bosphorus Strait unites the Black Sea and the Sea of Marmara and separates parts of Asian Türkiye from European Türkiye.

— Dardanelles, a narrow strait in northwestern Türkiye, links the Aegean Sea with the Sea of Marmara.

● **Bab el-Mandab**

— The Iran-backed Yemeni Houthis have now entered the Middle East war. It controls the Yemeni capital of Sanaa, which is located close to the Bab el-Mandab in the Red Sea — a key reason for rise in concerns for this strait.

— The Bab el-Mandab, also known as the “Gate of Tears” in Arabic, lies at the southern tip of the Red Sea, between Yemen and the Horn of Africa.

— It connects the Red Sea to the Gulf of Aden and further to the Indian Ocean. It accounts for roughly 10 to 12 per cent of global oil and natural gas shipments.

— What makes this passage even more important is its link to the Suez Canal, a critical waterway that connects it to the Mediterranean Sea, as well as the SUMED pipeline.

— This strategic chokepoint plays a key role in the transport of petroleum and natural gas from the Persian Gulf, especially for shipments that pass through the Suez Canal via the Bab el-Mandab.

— Nearly 80 per cent of India’s merchandise trade with Europe moves through this corridor. The European Union alone accounts for more than 15 per cent of India’s total goods exports, which are valued at roughly \$450 billion each year.



Red Sea and Bab el-Mandeb. (Source: US Energy Information Administration)

● **Bihar’s Balirajgarh**

— The Archaeological Survey of India (ASI) has begun excavation at Bihar’s historic Balirajgarh site, which is believed to be the gateway to ancient Mithila.

— Balirajgarh, located in the Babubarhi block of Madhubani district, holds great mythological and historical significance, with local folklore identifying it as the capital of the legendary King Bali.

— Some scholars believe the site served as a major administrative hub of the ancient Videha Kingdom. Videha Kingdom was part of the 16 Mahajanapadas.

● **Jawai Leopard Reserve**

— The Rajasthan High Court has prohibited night safaris, the use of drones and some other activities in the Jawai Leopard Reserve in Rajasthan’s western Pali district.

— There are nine species of leopards, which are found in both Asia and Africa. The leopard (*Panthera Pardus*), the smallest of the big cats, is well known for its ability to adapt to a variety of settings. This species is a nocturnal mammal, they can hunt at night.

— The “Status of Leopards in India, 2022” report states that there were 13784 leopards in India in 2022 compared to 12,852 in 2018.

● **India’s first gourami fossil- Saharanpur district of UP**

— This is the first time that scientists have discovered freshwater fish fossils from the Siwalik foothills in Uttar Pradesh’s Saharanpur district, including the first fossil record of gourami in India and only the second known globally.

— This indicates a well-structured and complex freshwater ecosystem in the Himalayan region during the Pliocene Epoch, some 5 million years ago.

— According to a peer-reviewed research study undertaken by multiple scientists, the set of otoliths (calcium carbonate structures for hearing and balance) is the first from the Pliocene period in this region in Saharanpur’s Mohand, and helps scientists understand ancient freshwater fish in northern India.

— The presence of snakeheads, gouramis, and gobies shows a clear food chain, with smaller fish as prey and snakeheads as predators.

— Siwalik Group, which ranges in age from 18.3 to 0.22 million years old, is a freshwater deposit exposed along the length of the Himalayan foothills that stretches from the Potwar Plateau of Pakistan in the west to Assam in the east.



The fossil evidence, according to the paper, suggests that during the Pliocene, the area had a calm, stable freshwater body surrounded by dense vegetation. (Source: Wikimedia Commons)

Sports

(**Just FYI:** With the unpredictability of the UPSC examinations and questions like the ICC World Test Championship question 2021, you can’t be sure of anything. It is wise to know what it is and not go into too much detail.)

● **Asian Boxing Championship**

— The Asian Boxing Championships were held in Ulaanbaatar, Mongolia. India finished its campaign with 16 medals.

— India finished **second** on the table with five gold, one fewer than Kazakhstan, but claimed the most medals overall.

— In the women’s competition, all 10 Indian boxers finished with a medal.

* Minakshi Hooda (48kg), Preeti Pawar (54kg), Priya Ghanghas (60kg), and Arundhati Choudhary (70kg) bagged Gold

* Jaismine Lamboria (57kg) and Alfiya Pathan (+80kg) took Silver

* Nikhat Zareen (51kg), Ankushita Boro (65kg), Lovlina Borgohain (75kg) and Pooja Rani (80kg) clinched Bronze

— In the men’s competition, Asian Wrestling Championship, 6 Indian boxers finished with a medal

* Vishvanath Suresh defeated Daichi Iwai of Japan to win gold in the men’s 50kg category, becoming the only Indian man to clinch gold at this edition of the continental event.

* Sachin Siwach lost 2-3 to Orazbek Assylkulov of Kazakhstan, the reigning world champion, in the men’s 60kg final to clinch Silver

* Harsh Choudhary (90kg), Akash (75kg), Lokesh (85kg) and Narender (+90kg) - settled for Bronze



Priya claimed the 60kg gold at the Asian Boxing Championships in Ulaanbaatar, Mongolia, defeating North Korea’s Won Un-gyong 3-0 in the final. (BFI Photo)

● **Operation Upstream**

— The World Anti-Doping Agency (WADA) has decided to collaborate with the Central Bureau of Investigation (CBI) to take a ‘top to down’ approach to curb anti-doping activities in the nation as the Sports Ministry pushes for criminalization of suppliers of prohibited substances to athletes.

— Operation Upstream, a joint CBI-WADA action plan, will target supply chains that move prohibited performance-enhancing drugs, and punish coaches, physios of doping athletes.

— Currently, India is the country with the most number of dope offenders in the WADA list of suspended athletes from 2024. The nation has been a regular feature in the top three list pointing at a deep-rooted problem related to usage of prohibited substances and performance-enhancing drugs.

— Other hurdles that India faces in curbing doping activities are the lack of personnel at the National Anti-Doping Agency and lapse in procedures at the National Dope Testing Laboratory (NDTL). One of the 29 WADA accredited labs in the world, NDTL was suspended in 2019 due to non-conformities with international standards.

● **Thomas and Uber Cup 2026**

— The 34th edition of the Thomas Cup - the **men’s team world championships** in badminton, and the 31st Uber Cup - **the women’s variant**, was held in Horsens, Denmark. The finals were played on 3rd May.

— It is a biennial international championship. In 2022, India made history by winning the maiden Thomas cup and the women’s team won the bronze medal in the 2014 and 2016 editions.

— In the Thomas Cup 2026, the Indian team was defeated by the French team in the semi-final.

— The Thomas Cup 2026 edition was won by **China** after defeating France, marking their second win in a row (2024).

— The **Republic of Korea** earned its second **Uber Cup** title after beating the People’s Republic of China in the Finals.

Practice Quiz

Current Affairs Revision MCQs

Brush Up Your Current Affairs Knowledge And Consolidate Your UPSC CSE Preparation.

Compiled by **Nitendra Pal Singh**

QUESTION 1

In India, which UTs have a legislative assembly and a chief minister?

1. Puducherry
2. Delhi
3. Andaman and Nicobar
4. Jammu and Kashmir
5. Ladakh

Select the correct answer using the codes given below:

- (a) 1 and 2 only
- (b) 2, 3, 4 and 5 only
- (c) 2 and 4 only
- (d) 1, 2 and 4 only

Explanation: Puducherry has a legislative assembly and a chief minister. Only two other UTs in India currently have legislatures: Delhi, and Jammu & Kashmir. Andaman and Nicobar and Ladakh are administered by the President of India through appointed Lieutenant Governors (LG).

Answer (d)

QUESTION 2

Which of the following is/are the benefits of the Oak forests?

1. It assists watershed protection by promoting the

recharge of springs.

2. It hosts lichens, bryophytes, and other flowering plants, creating layered microhabitats.
3. It is used as fuel wood and fodder by locals.

Select the correct answer using the codes given below:

- (a) 2 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Explanation: Oak belongs to the genus *Quercus* in the Fagaceae family and holds immense social and ecological importance in the Indian Himalayan regions. In the western Himalaya, five oaks have been reported, and the species are providers of numerous ecosystem services such as conservation of soil, water, native flora and fauna, and serve as a lifeline for the local communities. Oak forests assist watershed protection by promoting the recharge of springs. Oak forests support a remarkably diverse web of life. Their trees host lichens, bryophytes, pteridophytes (all three being moss-like plants), orchids, and other flowering plants, creating layered microhabitats. In Uttarakhand, oak is used as fuel wood and fodder by locals from the forests near their settlements.

Answer (d)

QUESTION 3

With reference to the “Spacecraft Mission Operations:

SMOPS- 2026”, consider the following statements:

1. It was jointly organised by the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO).
2. It was the first edition held in Delhi.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: The second edition of the International Conference on “Spacecraft Mission Operations: SMOPS-2026” with the theme “Innovative Operations for Smart and Sustainable Space Mission Management – Next Generation” was held in Bangalore, India, from April 8 to 10, 2026. The conference, jointly organised by the Indian Space Research Organization (ISRO), the Astronautical Society of India (ASI), and the International Academy of Astronautics (IAA), aims to cover a wide range of topics related to mission operations management, advanced mission design, automation, large constellations management, human spaceflight mission, space robotics, space policy, lunar and interplanetary exploration, cybersecurity in space systems, artificial intelligence, etc.

Answer (d)

QUESTION 4

Consider the following pairs:

1. Artemis I – It was an uncrewed spacecraft that went around the Moon and came back.
2. Artemis II – It was the first ever crewed mission of NASA that seeks to get human beings on the Moon.

Which of the pairs given above is/are correctly marked?

- (a) Only 1

- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: Artemis II was the first crewed mission of the Artemis programme of NASA that seeks to get human beings back on the Moon, more than five decades after the Apollo programme got 12 astronauts, in six different historic missions, to walk on the Moon. The six Apollo missions had happened barely 12 years after the beginning of the space age, and while these marked a dream technology leap, the space technology ecosystem at that time was too nascent to capitalise on these to make further progress. So, the Moon landings became standalone successes. The first mission of the Artemis programme, in 2022, was an uncrewed spacecraft that went around the Moon and came back.

Answer (a)

QUESTION 5

Consider the following statements:

1. He was one of India’s greatest social reformers and a guiding light for generations. This year marks the beginning of his 200th birth anniversary celebrations.
2. His focus on equality and equitable measures is also evident in his submissions to the Education Commission of 1882. He argued for compulsory primary education up to the age of 12.
3. The Satyashodhak Samaj, founded by him, was one of the most important social reform movements in modern India.

The above mentioned statements refer to:

- (a) Raja Ram Mohan Roy
- (b) Ishwar Chandra Vidyasagar
- (c) Jyotirao Govindrao Phule
- (d) Bhimrao Ramji Ambedkar

Explanation: 11th April is the birth anniversary of Mahatma Jyotirao Phule, one of India’s greatest social reformers and a guiding light for generations. This year, the occasion carries even greater significance, as it marks the beginning of his 200th birth anniversary celebrations. His focus on equality and equitable measures is also evident in his submissions to the Education Commission of 1882. Phule argued for compulsory primary education up to the age of 12. He insisted that higher education must be within the reach of all, and proposed targeted government scholarships for those communities “amongst whom education has made no progress”, alongside “more liberal” and proactive measures to advance women’s education. He built institutions that translated this vision into action, contributing to a just society. The Satyashodhak Samaj, founded by him, was one of the most important social reform movements in modern India.

Answer (c)

QUESTION 6

Consider the following statements:

1. An induction cooktop works by generating a rapidly changing electromagnetic field.
2. The changing electromagnetic field induces eddy currents in the metal cookware, and the electrical resistance of the metal converts this electrical energy into heat.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation for Statement 1.
- (b) Both Statement 1 and Statement 2 are correct and Statement 2 is not the correct explanation for Statement 1.
- (c) Statement 1 is correct but Statement 2 is incorrect.
- (d) Statement 1 is incorrect but Statement 2 is correct.

Explanation: An induction cooktop works by generating a rapidly changing electromagnetic field. When the metal pan is placed on the surface, it comes under the magnetic field. The electrical resistance of the metal creates an electrical friction between the two, which then converts the kinetic energy of the moving electrons directly into thermal energy or heat. An induction works best with ferromagnetic cookware, which contains materials like cast iron or magnetic stainless steel that respond to magnetic fields. But, these compatible cookwares are more expensive than the ones normally used on gas stoves, making them less attractive for households making a temporary or partial shift to electric cooking.

Answer (a)

QUESTION 7

With reference to the Himalayan Griffon, consider the following statements:

1. It is listed as ‘Near Threatened’ on the Red List of the International Union for Conservation of Nature.
2. It is typically found at elevations between 2,000 and 4,500 meters.
3. It plays a vital ecological role as a scavenger.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) 1 and 2 only

Explanation: The International Union for Conservation of Nature’s (IUCN) Red List lists the raptor (Gyps himalayensis) as ‘Near Threatened’. According to experts, the Himalayan Griffon vulture, unlike the Oriental White-backed, Slender-billed, and Lone-billed vultures, is not an endangered species. It serves an important ecological function as a scavenger. The Griffon Vulture is normally found at elevations ranging from

2,000 to 4,500 meters. It favours wide cliffs and rocky ledges to roost and nest.

Answer (c)

QUESTION 8

The term “Axis of Autocracy,” seen in international relations discourse, is often used to refer to which of the following countries?

- (a) Russia and China
- (b) United States and Israel
- (c) United States and China
- (d) Israel and Iran

Explanation: This term is often seen in the news, especially in the context of the ongoing conflict. Recently, it came into focus again when, a day before the ceasefire was announced, China and Russia, Iran’s key strategic allies, vetoed a United Nations Security Council (UNSC) resolution aimed at enhancing security and protecting commercial shipping in the Strait of Hormuz. China, Russia, and Iran are regarded as part of the “Axis of Autocracy,” a term used in Washington policy circles to refer to the strategic alignment of authoritarian states.

Answer (a)

QUESTION 9

‘Sajjadanashin’ and ‘Mutawalli’, terms recently seen in the news, refer to:

- (a) Officials associated with the administration of cultural festivals in West Asian countries, particularly in Iran
- (b) Custodians of historical archival records from medieval Persia
- (c) Positions related to the spiritual leadership and administrative management of Islamic religious endowments such as dargahs and waqf properties
- (d) Titles given to tribal leaders in desert regions of the Middle East

Explanation: The Supreme Court held that “Sajjadanashin is the spiritual head of Waqf and declaration of Sajjadanashin is a religious affair, however, role of Mutawalli of a Waqf only pertains to the administration and management of the Waqf.” Hence, the positions of a Sajjadanashin and the Mutawalli are not the same, even if one person may sometimes wear both hats.

Answer (c)

QUESTION 10

With reference to the ‘nuclear triad’, consider the following statements:

1. It refers to the ability to launch nuclear missiles from platforms in the air, on land, and at sea.
2. Despite having INS Arihant and INS Arighaat, India is yet to be part of the nuclear triad.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: A nuclear triad refers to the ability to launch nuclear missiles from platforms in the air, land and at sea. In the case of India, such missiles (such as the Agni series) can be launched from land, and fighter aircraft such as the Rafales, Su-30MKIs, and Mirage 2000s can deliver nuclear warheads from the air. With INS Aridaman’s induction, India will have three operational ballistic missile submarines at sea for the first time. The latest induction will also strengthen India’s nuclear triad. India is part of a select group of countries with nuclear triad capabilities. These include the US, Russia, China, and France.

Answer (a)

QUESTION 11

With reference to basic astronomical concepts, consider the following statements:

1. The Hubble constant describes the present rate of expansion of the Universe.
2. A megaparsec is a unit used to measure very large distances in astronomy.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: The Ho Distance Network (H0DN) Collaboration reports a value of the Hubble constant – the number that describes the Universe’s present expansion rate – with just over 1% precision. The study to be published in *Astronomy & Astrophysics* reports a value of: $H_0 = 73.50 \pm 0.81$ kilometers per second per megaparsec. According to an official statement issued a Megaparsec is a unit astronomers use to measure very large cosmic distances and equals about 3.26 million light-years (1 light year ~ 9.5 trillion kilometers). The new H_0 measurement shows that for every megaparsec of distance, a galaxy’s speed away from us increases by about 73.5 kilometers per second. In our expanding universe, more distant galaxies move away faster than nearby galaxies.

Answer (c)

QUESTION 12

Recently, the Delhi Dehradun Economic Corridor has been inaugurated, which passes through:

- (a) Jim Corbett National Park
- (b) Rajaji National Park
- (c) Dudhwa National Park

- (d) Valley of Flowers National Park

Explanation: Delhi Dehradun Economic Corridor inaugurated by the Prime Minister Narendra Modi, built at a cost of Rs 11,868 crore, the 210-km highway is expected to cut down travel time to 2.5 hours. The final 20-kilometre stretch of the project passes through dense forest areas of the Shivalik Forest Division in Uttar Pradesh and the Rajaji Tiger Reserve and Dehradun Forest Division in Uttarakhand.

Answer (b)

QUESTION 13

Which of the following is/are the official language(s) of Meghalaya?

1. Garo
2. Khasi
3. Jantiya
4. English

Select the correct answer using the codes given below:

- (a) 1 and 4 only
- (b) 1, 2 and 3 only
- (c) 4 only
- (d) 1, 2 and 4 only

Explanation: The Meghalaya cabinet announced the indigenous Khasi and Garo languages as the official languages of the state, in addition to English. The move comes amid a long-standing demand for the inclusion of Khasi and Garo – the languages of the state’s two largest tribes – in the Eight Schedule of the Constitution. Currently, all official business in the state is carried out in English.

Answer (d)

QUESTION 14

With reference to the India-South Korea relations, consider the following statements:

1. India and South Korea do not have the Comprehensive Economic Partnership Agreement (CEPA).
2. There is no FDI investor in India through South Korea.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: Economic relations between India and South Korea gathered momentum following the implementation of the Comprehensive Economic Partnership Agreement (CEPA) in 2010. The bilateral trade between the two countries stood at USD 21.5 billion between January and October 2025, and USD 25.1 billion in 2024. India's major exports to South Korea include aluminum, iron, steel and cereals. South Korea is the 15th largest FDI investor in India, with a total investment of USD 929 million in 2024.

Answer (d)

QUESTION 15

Consider the following statements:

1. This state marks 79 years of its formation on April 15 this year.
2. It came into being as a chief commissioner's province — that is, a centrally administered territory — on April 15, 1948, with the integration of 30 erstwhile princely states.
3. It became a full-fledged state on January 25, 1971.

The above-mentioned statements refer to:

- (a) Meghalaya

- (b) Himachal Pradesh
- (c) Tripura
- (d) Sikkim

Explanation: Himachal Pradesh marks 79 years of its formation on April 15 (Wednesday) this year. It came into being as a chief commissioner's province — that is, a centrally administered territory — on April 15, 1948, with the integration of 30 erstwhile princely states. Himachal Pradesh was created by integrating 30 princely hill states after Independence. It was initially administered as a chief commissioner's province. Such provinces were administrative units in British India that were centrally governed and often lacked elected assemblies.

Answer (b)

QUESTION 16

With reference to the Marine Spatial Planning (MSP), consider the following statements:

1. It is a tool for sustainable and integrated ocean management.
2. Recently, Tamil Nadu became the first state to launch the Marine Spatial Plan.
3. It would help for sustainable utilisation of marine resources in energy and economic activities like developing ports.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Explanation: The MSP is a tool for sustainable and integrated ocean management aimed at boosting the blue economy and strengthening climate resilience. It helps for sustainable utilisation of marine resources in energy,

economic activities like developing ports, harbours, setting up industries, environment, fisheries, aquaculture and tourism and to formulate policies accordingly. The Odisha government recently signed a memorandum of understanding with the National Centre for Coastal Research (NCCR) under the Union Ministry of Earth Sciences to launch a Marine Spatial Plan (MSP) in the state for integrated coastal and marine planning.

Answer (b)

QUESTION 17

The term ‘Undercarriage failure’ refers to:

- (a) the malfunctioning of the aircraft’s landing gear system.
- (b) a failure in the aircraft’s fuel injection and distribution system.
- (c) a breakdown in the aircraft’s onboard navigation and radar equipment.
- (d) the loss of cabin pressurisation during high-altitude flight.

Explanation: Undercarriage failure is a broad term that refers to the malfunctioning of the aircraft’s landing gear system — the wheels and supporting structures used for take-off, landing and taxiing.

Answer (a)

QUESTION 18

Kirandul and Bacheli are twin towns in India renowned for the:

- (a) Coal mines
- (b) Copper mines
- (c) Bauxite ore mines
- (d) Iron ore mines

Explanation: Kirandul and Bacheli are twin towns in

the Dantewada district of Chhattisgarh, India, renowned for the massive iron ore mines.

Answer (d)

QUESTION 19

In India, the Delimitation Commissions have been constituted in:

- 1. 1963
- 2. 1952
- 3. 2002
- 4. 2012
- 5. 1972

Select the correct answer using the codes given below:

- (a) 1, 2 and 3 only
- (b) 3, 4 and 5 only
- (c) 1, 2, 3, 4 and 5
- (d) 1, 2, 3 and 5

Explanation: Delimitation literally means the act or process of fixing limits or boundaries of territorial constituencies in a country or a province having a legislative body. The job of delimitation is assigned to a high power body. Such a body is known as Delimitation Commission or a Boundary Commission. In India, such Delimitation Commissions have been constituted 4 times – in 1952 under the Delimitation Commission Act, 1952, in 1963 under Delimitation Commission Act, 1962, in 1973 under Delimitation Act, 1972 and in 2002 under Delimitation Act, 2002.

Answer (d)

QUESTION 20

The Hmar People’s Convention-Democratic (Lalhmithanga Sanate’s faction) is the only

remaining underground armed group operating within:

- (a) Assam
- (b) Arunachal Pradesh
- (c) Mizoram
- (d) Meghalaya

Explanation: The Mizoram government has announced that it signed a ‘Memorandum of Settlement’ with the Hmar People’s Convention-Democratic (Lalhmingthanga Sanate’s faction), which it says it had identified as the “only remaining underground armed group operating within Mizoram”.

Answer (c)

QUESTION 21

With reference to the Multi-Lane Free Flow (MLFF) tolling system, consider the following statements:

1. MLFF enables vehicles to pass through toll points without stopping, thereby improving traffic flow on high-density highways.
2. Under MLFF, toll collection involves technologies such as Radio Frequency Identification (RFID) readers and Automatic Number Plate Recognition (ANPR) cameras, without the use of boom barriers.
3. In the absence of human intervention in MLFF, discrepancies in vehicle identification may allow some vehicles to pass without paying the toll.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Explanation: The MLFF or barrier-less tolling system

does not have boom barriers. The toll is collected after high-performance Radio Frequency Identification readers and Automatic Number Plate Recognition cameras read the FASTag and VRN. In the absence of human intervention in this process, a mismatch in the VRN linked to the FASTag could see commuters pass without paying the fee. Under the MLFF framework, enforcement actions, including issuance of electronic notices to vehicles for non-payment of the user fee, will significantly depend on accurate and verified vehicle identification data.

Answer (c)

QUESTION 22

Recently, the term “Mosquito Fleet” was seen in the news. It is best associated with:

- (a) A group of small and fast naval vessels used for coastal defence
- (b) A network of drones used for agricultural pest control
- (c) A cluster of satellites deployed for weather monitoring
- (d) A public health initiative to control mosquito-borne diseases

Explanation: “Mosquito Fleet” is a flotilla of small, fast, agile boats designed to harass shipping, and it forms the heart of the naval forces deployed by Iran’s Revolutionary Guard, a force separate from Iran’s regular navy.

Answer (a)

QUESTION 23

With reference to the latest World Economic Outlook released by the International Monetary Fund, consider the following statements:

Statement 1: According to the IMF, India has slipped down in the rankings of the world’s largest economies.

Statement 2: India has suffered significant setbacks in the

last twelve months in terms of the country's GDP in local currency and the exchange rate with the US dollar.

Which one of the following is correct?

- (a) Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation of Statement 1
- (b) Both Statement 1 and Statement 2 are correct but Statement 2 is not the correct explanation of Statement 1
- (c) Statement 1 is correct but Statement 2 is incorrect
- (d) Statement 1 is incorrect but Statement 2 is correct

Explanation: According to the latest World Economic Outlook (WEO) released by the International Monetary Fund (IMF), India is no longer the 4th largest economy in the world. According to the latest WEO, in 2026 India's gross domestic product — the total value of all goods and services produced inside the country — will be around \$4.15 trillion (up from \$3.92 trillion in 2025) while the UK's GDP will be \$4.27 trillion (up from \$4 trillion in 2025) and Japan's GDP would actually fall from \$4.48 trillion in 2025 to \$4.38 trillion in 2026.

When the IMF calculates its rankings in US dollar terms, it uses two data points: One, a country's GDP in the local currency and two, the exchange rate with dollar to arrive at a dollar figure. On both these counts, India has suffered significant setbacks in the last twelve months.

Answer (a)

QUESTION 24

NASA has recently approved the Rosalind Franklin Support and Augmentation (ROSA) project for implementation. This mission aims to:

- (a) Study the atmosphere of Venus using orbiter-based instruments
- (b) Assist a Mars rover mission in searching for signs of past life
- (c) Deploy a space telescope to study exoplanets
- (d) Conduct asteroid mining feasibility experiments

Explanation: NASA has given approval for the agency's Rosalind Franklin Support and Augmentation (ROSA) project to begin implementation, underscoring the agency's continued partnership with ESA's (European Space Agency) Rosalind Franklin mission. The mission is led by ESA and that agency is responsible for providing the spacecraft, including the carrier module, the landing platform, as well as the rover and surface operations.

Answer (b)

QUESTION 25

The Mahanadi River dispute is between:

- 1. Odisha
- 2. Jharkhand
- 3. Chhattisgarh
- 4. Telangana

Select the correct answer using the codes given below:

- (a) 2 and 3 only
- (b) 1 and 4 only
- (c) 1 and 3 only
- (d) 3 and 4 only

Explanation: Odisha has alleged that Chhattisgarh has "unilaterally constructed" at least eight barrages along the river, which have impacted its flow into the state during the non-monsoon period. Odisha has termed the river a lifeline for the state, given its significance for agriculture, fisheries and power generation. According to official data, Mahanadi has a total catchment area of 1,41,600 sq km, of which 45.73% falls in Odisha, 53.9% in Chhattisgarh and a small patch in Madhya Pradesh.

Answer (c)

QUESTION 26

The ‘B’nei Menashe’ are a:

- (a) Jewish community among the Mizo and Kuki tribal communities of Manipur and Mizoram
- (b) Buddhist sect found predominantly in Ladakh and Himachal Pradesh
- (c) Christian tribal group inhabiting the Nicobar Islands
- (d) Indigenous animist community of central India following nature worship

Explanation: The B’nei Menashe are a Jewish community among the Mizo and Kuki tribal communities of Manipur and Mizoram, who believe that they are descendants of the Menashe tribe.

Answer (a)

QUESTION 27

With reference to the contamination of groundwater, consider the following statements:

- 1. Consumption of the arsenic through drinking water can cause skin lesions and abnormal pigmentation.
- 2. Fluoride exposure impacts bone and teeth health adversely.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: The National Green Tribunal (NGT) has instructed the state governments to mitigate the arsenic and fluoride contamination of groundwater, asking the Centre to monitor the measures being adopted across the country. Consumption of the arsenic through drinking water is a major health concern, causing arsenicosis,

with symptoms such as skin lesions and abnormal pigmentation, and even cancer in case of chronic exposure. Fluoride exposure, meanwhile, impacts bone and teeth health adversely.

Answer (c)

QUESTION 28

With reference to the Konark Sun Temple, consider the following statements:

- 1. It is a UNESCO World Heritage Site.
- 2. It was built in the 13th century by King Narasimhadeva I of the Eastern Ganga dynasty.
- 3. The Jagamohan (assembly hall) was completely destroyed in the 18th century.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Explanation: The Archaeological Survey of India (ASI) has begun drilling a passage into the Jagamohan (assembly hall) of the 13th-century Konark Sun Temple to remove sand packed inside by the British over a century ago. Officials said ASI’s technical team has started drilling a 6×5-foot passage through which the structure—now a UNESCO World Heritage Site—was filled with sand and sealed. Once the passage is drilled through the western wall, sand removal will begin manually.

The Jagamohan was filled with sand by the British between 1901 and 1903 to “prevent structural collapse and provide stability” to the monument, designed as a chariot for the Sun God. Since then, the hall has remained inaccessible, with visitors viewing it only from outside. The main temple tower, which once housed the deity, has collapsed while the Jagamohan (assembly hall) is still

standing.

Built in the 13th century by King Narasimhadeva I of the Eastern Ganga dynasty, the temple is believed to have taken 12 years and around 1,200 sculptors to complete. Today, it draws lakhs of visitors from across the world.

Answer (b)

QUESTION 29

With reference to the tenth Schedule of the Indian Constitution, consider the following statements:

1. It was inserted in the Constitution by the 52nd Constitutional Amendment Act 1985.
2. It lays down the time limit for the presiding officer of a House to rule on the disqualification of a member.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: The 10th Schedule — inserted in the Constitution by the 52nd Constitutional Amendment Act 1985 and strengthened by the 91st Constitutional Amendment Act 2003 — which says: “A member of a House shall not be disqualified... where his original political party merges with another political party and he claims that he and any other members of his original political party have become members of such other political party or, as the case may be, of a new political party formed by such merger”.

The 10th Schedule, however, does not lay down any time limit for the presiding officer of a House to rule on the disqualification of a member for either switching over or defying the party whip.

Answer (a)

QUESTION 30

In terms of economy, the ‘goldilocks zone’ refers to an:

- (a) economy experiencing hyperinflation along with rapid GDP growth.
- (b) economy facing deflation and stagnant or negative growth.
- (c) economy with high unemployment despite low inflation.
- (d) economy being exactly where policymakers would like it to be — sustained growth, low inflation, and low unemployment.

Explanation: When the Union Budget was presented in February, a popular notion was that the Indian economy was witnessing a “rare goldilocks period”, as RBI Governor Sanjay Malhotra put it. A cultural reference, goldilocks refers to an economy being exactly where policymakers would like it to be — sustained growth, low inflation, and low unemployment.

Answer (d)

QUESTION 31

Recently, the Shekha Jheel Bird Sanctuary has been inducted as a Ramsar Site. It is located in:

- (a) Madhya Pradesh
- (b) Kerala
- (c) Chhattisgarh
- (d) Uttar Pradesh

Explanation: Union Minister of Environment, Forest and Climate Change, Bhupendra Yadav expressed his delight at the recognition of Uttar Pradesh’s Shekha Jheel Bird Sanctuary as another Ramsar site. Located in the Aligarh district, Shekha Jheel supports a wide range of migratory and resident bird species, with its location serving as a key route for birds travelling between Siberia and the Indian subcontinent.

Answer (d)

QUESTION 32

Which of the following are the components in a firecracker?

1. Oxidisers
2. Potassium nitrate
3. Barium nitrate
4. Sodium chloride
5. Nitrogen gas

Select the correct answer using the codes given below:

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 3, 4 and 5
- (d) 1, 2 and 3

Explanation: There are four components in a firecracker: An oxidiser, fuel, ‘stars’ and a binder. The oxidisers in fireworks are chemicals that release oxygen to allow the explosion to take place. The most commonly used oxidisers are nitrates, chlorates and perchlorates. The core explosive is generally black powder, a mixture comprising 10% sulfur, 15% charcoal, and 75% potassium nitrate. The oxidiser breaks down the chemical bonds of the fuel, releasing energy and heat — in other words, causing the explosion.

The ‘stars’ are solid chemical lumps that are responsible for creating the bright colours and light we usually associate with a firework. Aluminium compounds produce brilliant whites, barium nitrate produces greens and the addition of copper results in blue light.

Binders are used to hold the mixture of the firecracker together in a paste. Binders don’t actually begin to work until the firework has been lit.

Answer (d)

QUESTION 33

With reference to the Payments banks in India, consider the following statements:

1. They can accept deposits only up to Rs ten lakh per customer.
2. They are allowed to offer loans or credit cards.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: Payments banks in India are tightly restricted — they can accept deposits only up to Rs two lakh per customer and are not allowed to offer loans or credit cards.

Answer (d)

QUESTION 34

The Kanwar Wildlife Sanctuary was recently in the news due to petition against the two hydel projects. The sanctuary is located in:

- (a) Sikkim
- (b) Himachal Pradesh
- (c) Uttarakhand
- (d) Arunachal Pradesh

Explanation: Two small hydropower projects coming up in Kasol in Parvati Valley in Himachal Pradesh fall under the Eco-Sensitive Zone (ESZ) of Kanwar Wildlife Sanctuary but do not need environment clearance, the Ministry of Environment, Forest & Climate Change (MoEFCC) has informed the National Green Tribunal.

Answer (b)

QUESTION 35

The term ‘Ecocide’ refers to the:

- (a) natural extinction of species due to evolutionary processes over geological time.
- (b) conservation of ecosystems through community-led environmental management practices.
- (c) economic valuation of ecosystem services for sustainable development planning.
- (d) worst harms caused to the environment by human actions, usually on a major industrial scale or affecting a huge area.

Explanation: ‘Ecocide’, a term that has been used for decades to describe widespread environmental harm caused by human actions, has come into prominence as global conflicts disrupt entire ecologies. Environmental groups have called for the inclusion of the term as one of the international crimes under the Rome Statute that governs the International Criminal Court (ICC).

Vietnam became the world’s first country to codify ecocide in its domestic law in 1990. Since then, the use of the term has become more widespread, with many countries — such as Russia, Ukraine, Chile, France and Belgium — incorporating ecocide (or its equivalent) into their laws.

Answer (d)

QUESTION 36

Which of the following is/are reasons for India being a major importer of vegetable oils?

- 1. Low farm productivity in oilseeds
- 2. Higher profitability of oilseed exports compared to domestic consumption
- 3. High labour costs making domestic oilseed cultivation unviable

Select the correct answer using the codes given below:

- (a) 1 and 2 only

- (b) 2 and 3 only

- (c) 1 only

- (d) 3 only

Explanation: India’s demand for vegetable oils has far exceeded its domestic supply, driven by a growing population and rising consumption. A key structural reason for this gap is low farm productivity in oilseeds, which results in lower yields per hectare compared with global benchmarks. India is a net importer, not exporting significantly. In India, the primary reason is yield not the labour cost.

Answer (c)

QUESTION 37

What is the correct order of these Indian states in terms of the length of border shared (high to low) with Bangladesh?

- 1. Assam
- 2. Meghalaya
- 3. West Bengal
- 4. Tripura

Select the correct answer using the codes given below:

- (a) 3—1—2—4

- (b) 1—3—2—4

- (c) 3—4—2—1

- (d) 1—2—3—4

Explanation: Bangladesh shares border with the following Indian States:

West Bengal – approximately 2200 km

Tripura – approximately 850 km

Meghalaya – approximately 440 km

Assam – approximately 260 km

Answer (c)

QUESTION 38

Consider the following statements:

1. OPEC manages oil prices by regulating production limits and setting strict quotas for each of its member countries.
2. It is designed to protect the market from oversupply during times of reduced global demand.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation for Statement 1.
- (b) Both Statement 1 and Statement 2 are correct and Statement 2 is not the correct explanation for Statement 1.
- (c) Statement 1 is correct but Statement 2 is incorrect.
- (d) Statement 1 is incorrect but Statement 2 is correct.

Explanation: Undertaking a role resembling that of a central bank for the global oil market, OPEC’s primary tool is its power over the supply management of oil. OPEC attempts to manage oil prices by regulating production limits and setting strict quotas for each of its member countries. This means that a member state may or may not be able to hit its peak oil production capacity, depending on OPEC-assigned limits. Designed to protect the market from oversupply during times of reduced global demand, these quotas ensure members collectively pump less oil to prevent a crash in per-barrel pricing.

Answer (a)

QUESTION 39

The Fourth Geneva Convention mandates that:

- (a) a country cannot transfer its civilian population into

occupied territory.

- (b) an occupying power may deport protected civilians from occupied territory for administrative convenience.
- (c) civilians in occupied territories are not entitled to legal protection during armed conflict.
- (d) occupying powers are free to alter the demographic composition of occupied territory.

Explanation: The Fourth Geneva Convention mandates that a country cannot transfer its civilian population into occupied territory. This position is also reaffirmed by the International Court of Justice (ICJ).

Answer (a)

QUESTION 40

With reference to the remittances, consider the following statements:

1. These are the source of foreign exchange for India as it helps offset some part of the country’s trade deficit.
2. The remittance inflows from the Gulf countries of UAE, Saudi Arabia, Kuwait, Qatar, Oman and Bahrain had increased in 2023-24 from 2016-17.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: Remittances are a key source of foreign exchange for India as it helps offset some part of the country’s trade deficit, which is under pressure due to a sharp rise in global energy prices and the rapid depreciation of the rupee. While India suffers from a large trade deficit (\$119 billion in 2025-26), foreign direct investment (FDI) and remittances help it to usually post a surplus in its overall Balance of Payments (BoP).

According to findings from the RBI's latest survey on remittances, inflows from the Gulf countries of UAE, Saudi Arabia, Kuwait, Qatar, Oman and Bahrain had declined to 38% of the overall figure in 2023-24 from 47% in 2016-17. Meanwhile, money being sent to India has risen from advanced countries such as the US and the UK.

Answer (a)

QUESTION 41

With reference to the Panchayat Advancement Index (PAI) 2.0, consider the following statements:

1. The index assessed rural local bodies based on their performance and progress on themes covering sustainable development goals (SDGs).
2. The PAI 2.0 is for the financial year 2025-26.
3. Out of the total Panchayats, maximum of them fall under the 'Front Runner' category.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Explanation: Gram Panchayats in Tripura, Kerala, and Odisha have performed better, while those in Punjab, Uttar Pradesh, Bihar, and Rajasthan lagged on the Centre's Panchayat Advancement Index (PAI) 2.0, which assessed 2,59,867 rural local bodies based on their performance and progress on nine themes covering sustainable development goals (SDGs). The PAI 2.0 was prepared by the Union Ministry of Panchayati Raj after assessing panchayats based on their performance across 150 indicators covering nine SDGs—from poverty-free and enhanced livelihoods to women-friendly panchayats—during the 2023-24 financial year.

According to the ministry officials, the Gram Panchayats

have been ranked under five categories based on their score on a scale of 0-100: 'Achiever' (90-100), 'Front Runner' (75-90), 'Performer' (60-75), 'Aspirant' (40-60) and 'Beginner' (below 40). Of the 2,59,867 Gram Panchayats, 3,635 have been ranked as 'Front Runner', 1,18,824 as 'Performer', 1,23,719 as 'Aspirant', and 13,689 as 'Beginner'. No panchayat could make it to the 'Achiever' category.

The PAI 2.0 covers all Gram Panchayats in the country, except West Bengal.

Answer (a)

QUESTION 42

Consider the following statements:

1. This state only became an official part of India after almost three decades of independence for the country.
2. The treaty of Titaliya in 1817 gave the British authorities several commercial and political advantages in this state.
3. The monarchy of the Namgyal dynasty was maintained for 333 years, from 1642 to until 1975 in the state.

The above-mentioned statements refer to which state?

- (a) Arunachal Pradesh
- (b) Assam
- (c) Sikkim
- (d) Himachal Pradesh

Explanation: Sikkim only became an official part of India after almost three decades of independence for the country. Annually commemorated on May 16, Sikkim Day marks the former kingdom's integration with India in 1975. Sandwiched between India and China, and often party to conflicts over land with Bhutan and Nepal, the British colonisation of India first led to a semi-formal relationship between the two states. The British saw Sikkim as a buffer state against China and Nepal.

In 1950, the Indo-Sikkim Treaty was signed, making

Sikkim an Indian protectorate. It would not be sovereign, as India controlled its defence, external affairs and strategic communications. India also secured exclusive rights to build infrastructure, and Sikkimese people would travel abroad with Indian passports. Sikkim would have “Internal autonomy”. Additionally, a clause gave India overriding powers in cases of security threats.

Answer (c)

QUESTION 43

Consider the following statements about ‘Look-Out Circular’:

1. It is issued either by the Supreme Court or High Courts.
2. It is a communication circulated to the immigration authorities at airports and other exit points.
3. It acts as an arrest warrant

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Explanation: A Look-Out Circular is a communication circulated to the immigration authorities at airports and other exit points, asking them to monitor, detain or prevent the departure of a person. It is not an arrest warrant and does not originate from the court. It is merely an administrative alert which is triggered by a request from an authorised agency.

Answer (a)

QUESTION 44

With reference to the Regional Comprehensive Economic Partnership (RCEP), consider the following statements:

1. It is a comprehensive free trade agreement being

negotiated between the ASEAN Member States and ASEAN’s free trade agreement (FTA) partners.

2. India pulled out of the RCEP negotiations in 2019.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: For the first time since India pulled out of the China-led Regional Comprehensive Economic Partnership (RCEP) negotiations in 2019, Commerce and Industry Minister Piyush Goyal held bilateral talks with his Chinese counterpart Wang Wentao on the sidelines of the 14th World Trade Organisation (WTO) interministerial conference in Cameroon. The Regional Comprehensive Economic Partnership (RCEP) is a comprehensive free trade agreement being negotiated by ASEAN Member States and their free trade agreement (FTA) partners.

RCEP reflects the world’s growing trade and economic architecture. It should not be viewed in isolation, but rather in the context of other emerging comprehensive free trade agreements, such as the Trans-Pacific Partnership (TPP) and the newly launched Trans-Atlantic Trade and Investment Partnership (TTIP) between the United States and the European Union.

Answer (c)

QUESTION 45

With reference to the Samrat Samprati, consider the following statements:

1. The Samrat Samprati Museum has been inaugurated in Mysore.
2. Samrat Samprati was the grandson of the Mauryan ruler Ashoka.
3. He was a follower of Buddhism.

Which of the statements given above are correct?

- (a) 1 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1 and 3 only

Explanation: On the occasion of Mahavir Jayanti on Tuesday (March 31), Prime Minister Narendra Modi inaugurated the Samrat Samprati Museum in Koba, Gandhinagar. The museum is dedicated to Jain history and the life of Samrat Samprati, the grandson of the Mauryan ruler Ashoka. Samprati was the son of Kunala. Jain texts, in particular, portray him as an adherent who played a significant role in the dissemination of Jina images across the subcontinent. Samprati is believed to have reigned between 230 and 220 BCE. According to Cort, “The story of Samprati first emerges in Shvetambara writings... in the context of the rules of monastic practice.”

Answer (b)

QUESTION 46

The place ‘Isfahan’ was recently in the news. It is:

- (a) a major port city located on the Persian Gulf involved in maritime trade
- (b) central Iranian city hosting key defence facilities
- (c) a desert region in Saudi Arabia known for oil reserves
- (d) a capital city of Iraq known for political instability

Explanation: The US and Israeli forces struck an ammunition depot in Iran’s Isfahan. US officials, cited by The Wall Street Journal, said the strike involved 2,000-pound (about 907-kg) bunker-buster bombs targeting a military-linked site in Isfahan, a central Iranian city hosting key defence facilities, including the Badr airbase. It stated that a large number of penetrator munitions were used in the operation.

Answer (b)

QUESTION 47

Which of the following are the petrochemical products?

- 1. Styrene butadiene
- 2. Polypropylene
- 3. Toluene
- 4. Anhydrous Ammonia
- 5. Ammonium Nitrate

Select the correct answer using the codes given below:

- (a) 1, 2 and 3 only
- (b) 2, 3, 4 and 5
- (c) 3, 4 and 5 only
- (d) 1, 3 and 5 only

Explanation: About 40 petrochemical products have been given the customs duty exemption including anhydrous ammonia, toluene, styrene, dichloromethane, methanol, acetic acid, ammonium nitrate, polypropylene, polyvinyl chloride, polyols, polycarbonates, polyurethanes, and poly butadiene, styrene butadiene.

Anhydrous Ammonia and Ammonium Nitrate are not petrochemical products.

Answer (a)

QUESTION 48

Consider the following statements:

- 1. This state was the first state in India to be formed on a linguistic identity.
- 2. The state celebrated Utkal Divas to commemorate its formation.
- 3. In 2011, the name of the state and its language was changed.

The above mentioned statements refer to:

- (a) Andhra Pradesh

- (b) Kerala
- (c) Karnataka
- (d) Odisha

Explanation: Odisha, the first state in India to be formed on a linguistic identity, turned 90 on Wednesday as the state celebrated Utkal Divas (Odisha Day) to commemorate its formation on April 1, 1936. Until 2011, the state continued to be known as Orissa and its language was called Oriya. After Parliament passed the 113th Constitutional Amendment Bill in March 2011, it was changed to Odisha and Odia.

Answer (d)

QUESTION 49

With reference to the India’s defence exports, consider the following statements:

1. The year 2025-26 have marked a decline in India’s defence exports as compared to the 2024-25.
2. Out of total defence exports in 2025-26, the private sector has contributed more than Defence Public Sector Undertakings (DPSUs).

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Explanation: Defence exports have reached an all-time high of Rs 38,424 crore in the financial year 2025-26, marking an increase of Rs 14,802 crore (62.66%) over the previous fiscal year’s figure of Rs 23,622 crore, in which the Defence Public Sector Undertakings (DPSUs) and the private sector have contributed 54.84% and 45.16% respectively, the Defence Ministry said.

Answer (d)

QUESTION 50

With reference to the Non-Deliverable Derivatives (NDD), consider the following statements:

1. These instruments allow participants to take positions on the rupee without actual delivery of the currency.
2. These are traded only within India under the direct supervision of the Reserve Bank of India.
3. These instruments are primarily used only by domestic retail investors in India.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Explanation: NDDs, which are typically traded outside India in financial hubs like Singapore, Hong Kong, London or Dubai, allow participants to bet on the rupee’s direction without actual delivery of the currency. An NDD is a derivative contract where two parties agree on a future exchange rate for the rupee, but settle the difference in cash, usually in US dollars. As India has capital controls, offshore investors can’t freely trade in the rupee in physical form. This led to the creation of the NDD markets in the rupee. These instruments have long been criticised for distorting price discovery and manipulation as such an offshore sentiment can diverge sharply from domestic fundamentals and movements.

The NDD market is widely used by foreign investors, hedge funds and global banks who cannot freely access and play in the Indian rupee market, as well as by firms looking to hedge currency risk. These trades take place offshore, outside the control of the RBI. This often acts as a price discovery mechanism for the rupee, even influencing expectations before Indian markets open. The ban on NDD is aimed at curbing offshore speculation that often leads to rupee volatility.

Answer (a)