

SEPT WEEK 1: 31 AUGUST- 5 SEPT

SAMACHAR

MANTHAN

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Editor's Note:

UPSC tests how deeply you understand the pressing issues shaping India, what direction the country is headed, and what topics are dominating policy circles. This is the core essence of the exam.

Every week, an overwhelming volume of news is generated. On eventful days, close to 100 news items appear across The Hindu, The Indian Express, and PIB alone. For you, reading everything is impossible and reading selectively without guidance is risky.

Our team rigorously filters this daily noise using UPSC Microthemes and consolidates repetitive coverage down to the 15 most relevant news items each day. From these, only around 30 high-impact topics make it into the weekly Samachar Manthan Magazine. These are the most pressing issues across the 10 major subjects that matter for the UPSC.

The Magazine is structured with tags for Op-eds and Explainers, along with a separate section dedicated to Prelims-focused news. All complex or multi-dimensional developments need to be supplemented by Backgrounder Notes. These Backgrounders are shared through our official groups and discussed in class so you never miss the entire context.

Our classes follow the 'Structure-Rupture' approach. For every issue, we answer two fundamental questions:

What has changed? the clear transition from A to B

Why is it important now? why this has become a focus area today

Once these two points are streamlined, everything else, interlinkages, implications, challenges, and potential questions, falls into place naturally.

Samachar Manthan is engineered to turn current affairs into your competitive advantage.

ECONOMICS

1. [Op-ed] Chinese overcapacity is a problem for the world

Why in the News

Chinese manufacturing overcapacity is being framed as a global structural challenge rather than a bilateral trade irritant. China is the world's largest trade surplus economy, with a surplus valued at \$1.2 trillion, and accounts for roughly 30 per cent of global manufacturing output. Cheap Chinese supply lowers input and consumer prices everywhere it lands. The same supply also removes the space in which importing economies would build their own manufacturing capability. What is contested is whether import dependence on the world's most competitive producer thwarts capability building and upgradation in manufacturing value chains.

What is Chinese overcapacity?

- **Capacity built beyond profitable demand:** Chinese industry carries production capacity well past what commercial returns justify, sustained by state support rather than by market profitability.
- **The subsidy and credit mechanism:** State backed industrial subsidies and a state directed financial system supplying cheap credit allow firms to expand without being concerned about profits and returns against their international competitors.
- **How it shows up in prices:** Firms operating on razor thin or negative margins run zero sum price wars at home and abroad to expand market share, producing a self defeating race to the bottom.

How did China build an “absolute advantage” in manufacturing?

- **The advantage is not price alone:** China's success reflects scale, supplier networks, infrastructure, technological capabilities and state supported industrial ecosystems, not only low cost production.
- **Breadth of the product range:** The same base manufactures textiles, machinery, electronics, solar photovoltaic (solar PV) modules, batteries and electric vehicles (EVs) at competitive prices.

What does China's low cost supply give the rest of the world?

- **Gains accrue to rich and poor economies alike:** China's rise has produced significant economic gains for both developed and developing countries.
- **Cheaper inputs, not only cheaper consumption:** Low cost Chinese goods reduce the prices of consumer goods, machinery, clean technology products and intermediate inputs.
- **A development effect:** Those cheaper inputs support industrial transformation and infrastructure development in developing economies.

Why does the same cheap supply weaken manufacturing in developing countries?

- **Asymmetric competitive pressure:** Producers in developing countries face difficulty competing with Chinese producers, creating what is termed a “late industrialisation dilemma”.
- **Upstream capability erodes:** The pressure gradually weakens both the incentives and the capabilities to foster domestic upstream industries.
- **The question is dependence, not efficiency:** The issue is not whether Chinese imports are efficient and competitive, but whether import dependence blocks capability building and upgradation in manufacturing value chains.

How is China's dominance reshaping global value chains?

- **Control of critical nodes:** In the EV sector China controls 65 per cent of lithium refining, 70 per cent of cobalt refining and over 80 per cent of battery manufacturing.
- **A position across multiple stages:** China occupies a dominant and critical position across multiple stages of manufacturing value chain networks, which is transforming the geography of those networks.
- **The paradox of dominance:** The most competitive supplier in the system is also the source of strategic vulnerability for every country that relies excessively on a single supplier.

What does Chinese overcapacity mean for India's self reliance?

- **Import concentration:** China accounts for roughly 17 per cent of India's imports, with dependence concentrated in solar PV modules, telecom components, electronics and active pharmaceutical ingredients (APIs).
- **The MSME layer takes the hit:** Chinese imports have affected micro, small and medium enterprise (MSME) led domestic manufacturing, undermining India's manufacturing imperatives.
- **A component bottleneck:** India's electronics industry faces a shortage of printed circuit boards because of geopolitical headwinds and supply chain impediments, which affects downstream manufacturing.
- **The pincer dilemma:** Chinese export curbs could restrict India's access to key inputs such as solar wafers, cells and batteries. India's Production Linked Incentive (PLI) scheme for solar and EVs is at the same time challenged at the World Trade Organization (WTO) for violating local content rules.

Challenges to rebalancing Chinese overcapacity

- **No effective multilateral discipline on industrial subsidies:** Trade rules reach export and local content subsidies, and reach unreported state support and cheap state bank credit only weakly. Eg. China's subsidy notifications to the WTO have been repeatedly counter notified as incomplete by the United States, the European Union and Japan. **The Fix:** Negotiate a subsidy transparency code with automatic counter notification, so unreported support carries a rebuttable presumption of injury.
- **Rebalancing depends on Chinese household demand, which stays weak:** Household consumption remains under 40 per cent of Chinese output, so domestic absorption cannot take the place of exports. Eg. The property sector downturn after 2021 cut household wealth and pushed precautionary saving higher. **The Fix:** Tie any coordinated adjustment to verifiable social security and household income targets rather than to currency movement alone.
- **Tariffs shift trade rather than retire capacity:** Duties raise the price of arriving goods and leave the surplus plants that produced them in operation. Eg. Duties on Chinese solar cells were followed by assembly routed through Southeast Asia, later covered by circumvention findings. **The Fix:** Pair every trade remedy with rules of origin and value addition thresholds, so relief is not defeated by transshipment.
- **Alternative suppliers do not exist at the required scale:** Refining and processing capacity outside China takes years to build even where the ore is available. Eg. Indonesia's nickel processing expansion was itself built largely with Chinese capital and technology. **The Fix:** Fund refining and processing capacity through pooled offtake guarantees among importing countries rather than through single country subsidies.

- **No forum acts on the surplus itself:** Existing instruments discipline individual programmes and individual shipments, not aggregate industrial capacity. Eg. WTO subsidy disputes are brought against named schemes one at a time. **The Fix:** Open a global dialogue on gradually rebalancing the Chinese economy in partnership with the United States and other major economies, on the pattern of the 1985 Plaza Accord.

Conclusion

The argument over Chinese overcapacity is not an argument about efficiency. Cheap supply and domestic capability building pull against each other, and no importing economy has yet found a way to hold both. The unresolved question is whether a surplus economy will accept an adjustment that no external rule obliges it to accept.

Back2Basics: Plaza Accord

- **What it was:** An agreement reached in 1985 among the United States, Japan, West Germany, France and the United Kingdom to act jointly on exchange rates.
- **What it did:** The five agreed to intervene in currency markets to depreciate the US dollar against the Japanese yen and the Deutsche Mark.
- **Why it is cited:** It remains the standard example of major economies coordinating to correct a large trade imbalance rather than each acting through tariffs.

PREVIOUS YEAR QUESTION

[2025, GS3, 10 marks] What are the challenges before the Indian economy when the world is moving away from free trade and multilateralism to protectionism and bilateralism? How can these challenges be met?

2. [Explainer] Perils of comparing GDP from different base years

Why in the News

The Ministry of Statistics and Programme Implementation (MoSPI) has released output data for the first quarter of 2026-27, showing gross domestic product (GDP) growth of 7.8 per cent in real terms and 10.3 per cent in nominal terms. A former Finance Secretary alleged that the corresponding quarter of the previous year had been revised down to produce a flattering comparison, and computed nominal growth of only 2.6 per cent. That computation takes its numerator from the new 2022-23 base year series and its denominator from the discontinued 2011-12 series. The two series rest on different data sources and a different methodology, so no growth rate can be derived across them. The live question is no longer the arithmetic. It is the size of the downward revision the new base produced, and whether the statistical ministry will account for it rupee by rupee.

What does a base year revision do?

- **The base year anchors the price comparison:** A base year is the reference year whose prices are used to strip inflation out of output, so that real growth measures volume rather than price change.
- **Revision is routine and was overdue:** Every economy revises its base year, normally once in about five years. The absence of a revision was itself a reason India's GDP was losing credibility.
- **It is an opportunity to rebuild the estimate:** A revision lets the government bring in new data sources, improve methodology and capture an economy that has changed since the last base.
- **It changes real GDP measurement first:** Nominal GDP is measured at current prices, so a change of base year does not by itself explain a fall in the nominal series.

What did the first quarter data show?

- **Growth beat the expectation set at the start of the quarter:** Most economists expected about 7.5 per cent for April to June. The official figure came in at 7.8 per cent in real terms.
- **The quarter opened in the middle of a war:** The West Asia conflict was disrupting output across the world, and India's heavy dependence on West Asian energy imports was expected to slow growth further.
- **The world did not contract either:** The International Monetary Fund (IMF) expects world growth of 3.0 per cent in 2026 against 2.9 per cent in the previous year, so an economy withstanding the shock is not by itself anomalous.

Why is the 2.6 per cent claim invalid?

- **The rollback happened before the war, not after the result:** The new series was unveiled on 27 February 2026, one day before the United States went to war with Iran. Nominal GDP for the first quarter of 2025-26 was rolled down that day from Rs 86.1 trillion on the old series to Rs 80.3 trillion on the new one.
- **Later revisions were marginal:** The same quarter was estimated at Rs 80.4 trillion in June and Rs 80.0 trillion on 31 August, against Rs 88.3 trillion for the first quarter of 2026-27.
- **The sequence rules out reverse engineering:** The base was rolled down six months before the current quarter's number existed, so the previous year's figure was not cut to flatter it.
- **The same method produces an absurd result on real GDP:** Applied to the real series, mixing the old denominator with the new numerator implies growth of almost 70 per cent in the quarter.

What question does the revision genuinely leave open?

- **The first half of 2025-26 lost about Rs 11 lakh crore:** Nominal GDP for the first two quarters fell from Rs 171.30 lakh crore on the old series to roughly Rs 160 lakh crore on the new one, a cut of about 6.5 per cent concentrated in those two quarters.
- **There is nothing left to reconcile against:** The old series was discontinued before comparable third and fourth quarter estimates for 2025-26 were published, so no complete old series year exists to match quarter by quarter.
- **The demand is for a reconciliation bridge:** The revision should be broken down in rupees into revised source data, changed sectoral coverage, methodological changes, revised taxes and subsidies, and changed price indices and deflators, for GVA as well as for GDP.
- **The long run picture is comparable:** Nominal GDP rose about 32.8 per cent under the old series and 32.3 per cent under the new one over 2022-23 to 2025-26, and cumulative real growth is broadly similar.
- **A downward revision is not lost output:** The economy did not shrink by Rs 11 lakh crore. Better data can move a historical estimate down.

- **The annual number moved too:** Nominal GDP for 2025-26 was revised from Rs 357 trillion on the old series to Rs 345 trillion on the new one.

Challenges to India's national income estimation

- **Informality is estimated rather than counted:** A large share of output comes from unregistered units that no annual return captures, so their contribution is inferred from proxies. Eg. The unincorporated sector is covered by a sample survey, and its output after the 2020 lockdown was derived from indicators rather than enumerated. **The Fix:** Link the enterprise surveys to Goods and Services Tax and Udyam registration data to build a live frame for small units.
- **Deflators historically overstated value addition:** Single deflation applies one price index to output without separately deflating inputs, so a squeeze on firms' margins is recorded as extra production. Eg. Manufacturing GVA in the 2011-12 series was criticised for a decade on exactly this ground. **The Fix:** The 2022-23 series abolished single deflation, and producer price indices published from June 2026 must now be extended to services.
- **No back series accompanies the new base:** Users cannot compare the new estimates with earlier decades without a consistent recomputed history. Eg. The back series produced for the 2011-12 base was itself contested and withdrawn from circulation. **The Fix:** Publish a full recomputed back series alongside the new base rather than after a lag.
- **Credibility is contested politically rather than statistically:** Each release is judged as a verdict on the government instead of as an estimate with a stated method, which crowds out technical scrutiny. Eg. The IMF has previously raised issues with India's national income estimates. **The Fix:** Restore a fixed publication calendar for the National Statistical Commission's own review reports, so scrutiny is institutional rather than episodic.

Conclusion

The methodological point is settled and the credibility point is not. A series can be more accurate than the one it replaced and still be harder to interrogate, because the comparison the public used to make has been withdrawn. Confidence in official statistics is built by letting an independent reader reproduce the numbers, not by asserting that the method was correct. The larger unresolved problem sits behind the estimate: output is growing fast and is not generating enough good quality jobs, which is how a demographic dividend turns into a demographic burden.

PREVIOUS YEAR QUESTION

[2021, GS3, 10 marks] Explain the difference between computing methodology of India's Gross Domestic Product(GDP) before the year 2015 and after the year 2015.

3. Majority of India's gig workers remain out of govt's reach

Why in the News

Only 8.58 lakh gig workers stood registered on the e-Shram portal as of the Ministry of Labour and Employment's reply in the Rajya Sabha in January 2026, the latest publicly available figure. The Union Budget 2025-26 had recognised gig workers' contribution to the "new age services economy" and announced healthcare coverage for gig workers registered on e-Shram. The Finance Minister said in the Budget speech that the measure would benefit over one crore gig workers. Even if registrations have doubled since January, they cover only around 15 percent of the estimated gig workforce, so five out of every six gig workers remain outside the government's reach. The gap also exposes a measurement failure: the one crore figure rests on a single NITI Aayog report from 2022, and no survey counts gig workers as a category.

How far has the Budget's health cover promise actually reached?

- **Registration against the promise:** The Budget's beneficiary figure of over one crore compares with 8.58 lakh registrations on e-Shram, the figure the Ministry gave Parliament in January 2026.
- **The optimistic case still falls short:** A doubling of registrations since January would still cover only around 15 percent of the estimated gig workforce.
- **The promise itself drove enrolment:** Registrations of gig workers on e-Shram rose sharply from 2025, and the health cover announcement is the visible cause of that surge.
- **Registration is the gate to every benefit:** Registration on e-Shram is a prerequisite for availing benefits, so an unregistered gig worker is invisible to the scheme by design.

Why does the government not know how many gig workers India has?

- **One source for every estimate:** The figure of over one crore gig workers, quoted in many government replies in Parliament last year, comes from a single document, the NITI Aayog report "India's Booming Gig and Platform Economy" released in June 2022.
- **What that report estimated:** It put the gig workforce at around 77 lakh in 2020-21 and projected 1.27 crore in 2024-25 and 1.43 crore in the year after.
- **No dedicated measurement effort exists:** In the absence of any effort to measure the gig workforce, official estimates rely solely on this NITI Aayog report.
- **The national labour survey does not count them:** The Periodic Labour Force Survey (PLFS) reports do not capture gig workers as a distinct category, even though the estimated gig workforce is about 2 percent of India's total workforce of 61.6 crore as cited by the 2025 PLFS report.

What has the government built for gig workers, and what has not arrived?

- **e-Shram as the single register:** The portal, launched in 2021, is conceptualised as an Aadhaar-seeded National Database of Unorganised Workers (NDUW) and has become the unified platform for tracking the unorganised workforce, including gig workers.
- **A legal definition came only in 2020:** The government officially defined a gig worker only in the Code on Social Security, 2020, which came into force last year.
- **The Code's promises remain largely on paper:** The Code promised accident insurance, maternity benefits and a dedicated social security fund for gig workers, and most of these are yet to materialise.

Where are the registered gig workers, by State and by sector?

- **Registrations are uneven across States:** The ten States with the most registered gig workers as of January 2026 are led by West Bengal (54,734), Delhi (49,479), Andhra Pradesh (39,212), Rajasthan (38,205), Karnataka (37,871), Gujarat (34,756) and Madhya Pradesh (34,351), with Maharashtra, Uttar Pradesh and Bihar completing the list.
- **Urbanised southern States are missing from the top ten:** Tamil Nadu (31,654), Telangana (29,951) and Kerala (11,219) are not among the ten States with the highest registrations, despite their high urbanisation.
- **Twenty one sectors on paper, three in practice:** NITI Aayog's 2022 report listed 21 sectors with gig workers, including agriculture, healthcare, education and retail, but e-Shram registrations concentrate in the food industry, transportation, and domestic and household work.
- **The sector shares are lopsided:** The largest single sector accounts for 32.8 percent of registered gig workers, and construction (3.6 percent) and agriculture (3.4 percent) are the smallest of the top five sectors.

Challenges to e-Shram as the gateway for gig worker welfare

- **Enrolment depends on the worker, not the platform:** e-Shram is a self-registration portal, and no aggregator is obliged to enrol the workers it engages. Eg. The Rajasthan Platform Based Gig Workers (Registration and Welfare) Act, 2023 instead makes aggregators register their workers with a State welfare board. **The Fix:** Require aggregators to push worker data into e-Shram at onboarding under the Code on Social Security, 2020, so registration stops depending on individual initiative.
- **No survey category means no target to measure against:** Without a gig work module in the labour survey, the government cannot say what share of the workforce any scheme covers. Eg. The Ministry's January 2026 reply to Parliament could cite portal registrations but no survey count. **The Fix:** Add a platform and gig work classification to the PLFS questionnaire so coverage is measured against a surveyed denominator.
- **The funding source has not been built:** The Code provides for aggregator contributions of 1 to 2 percent of annual turnover,

capped at 5 percent of payments to workers, and the fund those contributions were to feed has not materialised. Eg. Karnataka's Platform Based Gig Workers (Social Security and Welfare) Act, 2025 levies its own transaction fee because no central fund is flowing. **The Fix:** Notify the contribution rules and the social security fund so central benefits do not depend on Budget-by-Budget announcements.

- **State schemes fragment portability:** State-level gig worker boards create separate registrations and benefits for a workforce that moves across State lines. Eg. A delivery worker registered in Rajasthan gains nothing from Karnataka's fund on relocating. **The Fix:** Make e-Shram the single identifier that State boards read from, so benefits follow the worker across States.

Conclusion

The health cover promise has produced registrations faster than any earlier measure, but the register still holds a fraction of the workforce the promise was made for. The deeper problem is a denominator the state has never measured. The next e-Shram registration figure released to Parliament, and whether the Code's social security fund is finally notified, are the two markers to watch.

Back2Basics: Gig worker and platform worker under the Code on Social Security, 2020

- **Gig worker:** A person who performs work or participates in a work arrangement and earns from such activities outside the traditional employer-employee relationship.
- **Platform worker:** A person in platform work, meaning work arranged through an online platform that connects organisations or individuals with workers to provide specific services for payment.
- **Aggregator:** A digital intermediary or marketplace through which a buyer or user connects with a seller or service provider, the entity the Code identifies for contributions.
- **Why the definitions matter:** They are the first statutory recognition of gig work in India, and eligibility for the Code's social security schemes is tied to them.

PREVIOUS YEAR QUESTION

[2024, GS3, 15 marks] Discuss the merits and demerits of the four 'Labour Codes' in the context of labour market reforms in India. What has been the progress so far in this regard?

4. Forex swap rakes in over \$136 bn

Why in the News

Foreign exchange inflows under the Reserve Bank of India's (RBI) special swap facility have crossed \$136 billion, surpassing all projections. The facility was introduced on 8 June this year to deal with forex outflows caused by high oil prices and by the exit of Foreign Portfolio Investors from the stock market. The task has now shifted from raising dollars to managing what they release. Every dollar brought in creates rupee liquidity in the banking system, and the RBI has already begun absorbing it to stop call rates falling below the policy rate.

What is the RBI's special USD-INR swap facility?

- **What it does:** The facility lets a bank exchange dollars raised abroad for rupees with the RBI at a concessional rate, with a commitment to reverse the exchange at a future date.
- **What it covers:** It applies to three instruments, Foreign Currency Non-Resident (Bank) or FCNR(B) deposits, Overseas Foreign Currency Borrowings (OFCBs), and External Commercial Borrowings (ECBs).
- **Why it was opened:** It was designed to attract fresh foreign currency at a time when the rupee and India's reserves were under pressure from oil prices and portfolio outflows.

Where did the \$136 billion come from?

- **The total mobilised:** A total of \$1,36,377 million has been mobilised, according to data released by the RBI.
- **FCNR(B) deposits dominate:** Deposits by overseas Indians accounted for \$1,27,226 million, the overwhelming share of the mobilisation.
- **Corporate borrowing contributed little:** OFCBs brought in \$5,260 million and ECBs a further \$3,891 million.

Why does the RBI's short forward dollar position matter now?

- **What a short forward position is:** Short forward dollars are currency derivative contracts in which the RBI commits to sell dollars at a future date at a predetermined rate.
- **Why the RBI built one:** The instrument defends the rupee without drawing down spot reserves immediately, so the headline reserve figure holds while the commitment sits in the forward book.
- **The size of the book:** The RBI carries an outstanding short forward position of \$137 billion, close to the entire mobilisation under the swap facility.
- **How the two connect:** If the RBI decides not to roll over those positions, it may use the excess reserves generated from the FCNR(B) scheme to deliver the dollars it has contracted to sell.

What does the inflow do to domestic liquidity?

- **Rupees enter as dollars arrive:** Delivering on the forward book absorbs rupee liquidity from the banking system, which is why the RBI has begun draining it before call rates slip under the policy rate.
- **The surplus is large:** Banking system liquidity stood at Rs 6.5 lakh crore, and the RBI may absorb part of it so short term money supply does not feed into inflation and borrowing costs stay aligned with the policy rate.
- **Banks gain a cheap funding base:** In the immediate term banks are inclined to use the inflow to strengthen their asset side books and cut their dependence on wholesale deposits.
- **The longer use is credit:** Over a longer horizon the same liquidity can be deployed to fund credit growth.

Conclusion

The facility has done more than it was designed to do, and the constraint has moved from the external account to the domestic money market. The decision that now matters is whether the central bank rolls its forward commitments over or lets them run off against the deposits it has raised. Rolling over keeps the liquidity in the system; delivering drains it. That choice, and the pace at which it is made, is what will determine short term rates over the coming quarter.

Back2Basics: External Commercial Borrowings

- **What they are:** ECBs are loans raised by eligible Indian entities from recognised non resident lenders, denominated in foreign currency or in rupees.
- **Forms they take:** They cover bank loans, buyers' and suppliers' credit, and instruments such as foreign currency convertible bonds.
- **How they are regulated:** The RBI governs them under the Foreign Exchange Management Act, 1999, through the automatic route up to prescribed limits and the approval route beyond them.

- **What the framework controls:** The rules set the minimum average maturity, the all in cost ceiling and the end uses for which the borrowed money may be applied.

PREVIOUS YEAR QUESTION

[2022] With reference to the Indian economy, consider the following statements :

1. An increase in Nominal Effective Exchange Rate (NEER) indicates the appreciation of rupee.
2. An increase in the Real Effective Exchange Rate (REER) indicates an improvement in trade competitiveness.
3. An increasing trend in domestic inflation relative to inflation in other countries is likely to cause an increasing divergence between NEER and REER.

Which of the above statements are correct ?

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

Answer: (c)

SCHEMES, MISSIONS AND PORTALS

5. Foreign Assets Disclosure Scheme: Concerns rise over high fee on ESOPs, small investments

Why in the News

The **Foreign Assets of Small Taxpayers Disclosure Scheme (FAST-DS)**, launched on 16 August 2026, charges a flat **Rs 1 lakh** fee to disclose a foreign asset that was already taxed or acquired as a non resident but was not declared in the income tax return. Salaried employees holding unreported **employee stock ownership plans (ESOPs)** and **restricted stock units (RSUs)** must pay the fee even where they made no gain, and the tax department maintains that an updated return does not cure non disclosure under the **Black Money Act, 2015** (The Indian Express, 2 September 2026).

About FAST-DS

- **Notified by:** The **Central Board of Direct Taxes (CBDT)**, as a voluntary disclosure window proposed in the Union Budget 2026-27 for small taxpayers such as students, young professionals, tech employees and relocated NRIs.
- **Window:** Open from **16 August to 31 December 2026**.
- **Terms:** Undisclosed foreign assets up to **Rs 1 crore** can be declared at **30 per cent tax plus 30 per cent in lieu of**

penalty; already taxed or non resident acquired assets up to **Rs 5 crore** are regularised on payment of a flat **Rs 1 lakh** fee.

- **Immunity:** Immunity from penalty and prosecution under the **Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015**, but not from the **Prevention of Money Laundering Act, 2002**.

PREVIOUS YEAR QUESTION

[2026] Which one of the following best describes the 'Crowding Out Effect' in the context of fiscal policy?

- (a) A situation where private investment increases due to increased Government spending
- (b) A situation where Government borrowing leads to higher interest rates, which reduces private investment
- (c) A situation where an increase in taxes leads to increased private sector investment
- (d) A situation where Government spending has no impact on aggregate demand

Answer: (b)

6. No takers for govt's Rs 37,500-crore coal gasification scheme

Why in the News

The coal ministry's **Rs 37,500 crore** financial incentive scheme for **surface coal and lignite gasification** drew no application from any private or public player ahead of the **7 September 2026** submission deadline fixed by a Request for Proposal issued on 7 July 2026. The ministry attributed the empty first round to the time pre feasibility reports and proposals of this scale take to prepare, and said further application rounds will open every two months (The Hindu, 5 September 2026).

About the Financial Incentive Scheme for Surface Coal and Lignite Gasification

- **Ministry:** Ministry of Coal; outlay of **Rs 37,500 crore** approved by the Union Cabinet.
- **Objective:** Gasification of **75 million tonnes** of coal and lignite, and reduction of imports of **liquefied natural gas, urea and methanol**, to insulate domestic supply from global price volatility and supply chain disruption.
- **Mechanism:** Financial incentives to surface gasification projects selected through a Request for Proposal, with application rounds envisaged every two months.

- **Coal gasification:** Converts coal into **syngas** (a mixture of carbon monoxide and hydrogen) by reacting it with oxygen and steam at high temperature; syngas is a feedstock for **urea, methanol, synthetic natural gas** and other chemicals.

PREVIOUS YEAR QUESTION

[2025] Consider the following substances:

- Ethanol
- Nitroglycerine
- Urea

Coal gasification technology can be used in the production of how many of them?

- Only one
- Only two
- All three
- None

Answer: (b)

7. Domestic chip design to receive a boost with Rs 1.27 lakh cr push

Why in the News

The Centre notified the operational framework for the **Rs 1.27 lakh crore Semicon 2.0** programme, approved by the Union Cabinet in July, placing the design of Indian chips and the intellectual property behind them at the front of the semiconductor strategy. The framework has **six pillars**, at least three devoted entirely to chip design (strategic, commercial and scale deployed designs), and extends support beyond fabrication to semiconductor materials, chemicals, manufacturing equipment and advanced packaging (The Indian Express, 1 September 2026).

About the India Semiconductor Mission and Semicon 2.0

- **India Semiconductor Mission (ISM):** Launched in December 2021 under the **Ministry of Electronics and Information Technology** with an outlay of Rs 76,000 crore for fabs, display fabs, OSAT/ATMP units and the Design Linked Incentive scheme.
- **Progress:** 12 approved projects worth about **Rs 1.64 lakh crore**, three of them in commercial production, as told to the Lok Sabha in July 2026.

- **Semicon 2.0:** Second phase with an outlay of **Rs 1.27 lakh crore**; design led, with support extended to equipment, materials and advanced packaging.
- **Related:** The **PLI for Large Scale Electronics Manufacturing** catalysed Rs 96,000 crore investment in mobile manufacturing, lifting electronics production from Rs 1.32 lakh crore to Rs 3.11 lakh crore.

PREVIOUS YEAR QUESTION

[2025, GS3, 15 marks] India aims to become a semiconductor manufacturing hub. What are the challenges faced by the semiconductor industry in India? Mention the salient features of the India Semiconductor Mission.

8. World food prices highest since 2022 as supply risks mount: FAO

Why in the News

World food prices reached their **highest level since 2022** as supply risks mounted, on the **Food and Agriculture Organization's** monthly **FAO Food Price Index** (The Indian Express, 5 September 2026).

About the FAO Food Price Index

- **What it measures:** A monthly measure of the change in international prices of a basket of food commodities, published by the FAO.
- **Five sub indices:** Cereals, vegetable oils, dairy, meat and sugar, weighted by the average export shares of each group.
- **Base period:** 2014-16 = 100.

About the Food and Agriculture Organization (FAO)

- **Formation:** 1945; a **UN specialised agency** headquartered in Rome, Italy.
- **Mandate:** Leads international efforts to defeat hunger and improve nutrition and food security; **194 member nations**, 2 associate members and the European Union as a member organisation.
- **Flagship reports:** **The State of Food Security and Nutrition in the World (SOFI)**, The State of Food and Agriculture, The State of World Fisheries and Aquaculture.

PREVIOUS YEAR QUESTION

[2026] At the United Nations Ocean Conference (UNOC) held in June, 2025 in France, the Food and Agricultural Organization (FAO) of the United Nations demonstrated its leading voice on marine and ocean issues, especially on sustainable fisheries and aquaculture for resilient livelihood and 'Blue Transformation'. Which of the following combinations about the 'Four Betters' proposed by FAO for 'Blue Transformation' is correct?

- Better production, better nutrition, better environment and better ocean
- Better production, better nutrition, better environment and better life
- Better coral reefs, better nutrition, better environment and better life
- Better estuaries, better nutrition, better environment and better mangrove vegetation

Answer: (b)

POLITY AND CONSTITUTION

9. [Op-ed] Political demography, the future of democracy

Why in the News

Census 2027 operations are under way in India, and delimitation of Lok Sabha constituencies is to follow the first Census after 2026. Political and religious leaders across parties and across countries are separately urging their own communities to have more children. That pronatalist turn, a belief system or policy stance encouraging reproduction and higher birth rates, runs against India's own fertility data, which places the total fertility rate below replacement level with the gaps between religious communities narrowing. The tension is that representation and resource allocation in a federal democracy are keyed to population, and population change is now uneven across States in a way that no birth rate campaign has reversed anywhere it has been tried.

Who is making the pronatalist call, and what are they asking for?

- **A technology entrepreneur frames it as civilisational:** Elon Musk describes falling birth rates as a major threat to civilisation, particularly western civilisation.
- **The Andhra Pradesh appeal is addressed to Telugu families:** The president of the Telugu Desam Party, who is also Chief Minister of Andhra Pradesh, has urged Telugu families to have more children.
- **The Tamil appeal was made rhetorically:** The president of the Dravida Munnetra Kazhagam and former Chief Minister of Tamil Nadu invoked the idea of having "16 children" for Tamils.
- **The Sangh call names a number:** The Rashtriya Swayamsevak Sangh (RSS) chief has explicitly called for Indian, and specifically Hindu, families to have three children.
- **A religious institution makes the same ask:** The Catholic Church asks its members to have bigger families.
- **Tamil Nadu has converted rhetoric into an entitlement:** The State government has extended one year maternity leave to women government employees who have a third child.
- **A demographic remark drew censure from within:** A Trinamool Congress Minister in West Bengal remarked in 2024 that Muslims could soon become a majority in the State, and the party distanced itself from the comment and condemned it.

Why is political demography a thin field of study?

- **The field treats population change as a political variable:** Political demography studies how births, deaths, ageing and migration affect government policies, political power and international security.
- **Two opposite pressures suppress the scholarship:** Conspiracy theorists seeking political capital and demographic sceptics who read any discussion as nativism both crowd out serious work.
- **It is marginal within both parent disciplines:** The subject sits at the edge of political science and of demography rather than at the centre of either.

- **Federal structure raises the stakes:** In countries such as the United States and India, federalism interacts with demography and the economy at the same time.

What does India's fertility data actually show?

- **The total fertility rate has fallen to 2.0:** India is below replacement level at 2.0 children per woman according to the National Family Health Survey (NFHS)-5.
- **Every major religious community has seen decline:** Fertility fell across all of them, and the gap between communities is narrowing.
- **Muslim fertility nearly halved in three decades:** Pew Research using NFHS data found it fell from 4.4 children per woman in 1992 to 2.4 in 2019-21.
- **The pace of decline is uneven:** Regions and communities moved through the transition at different speeds even as the endpoint converged.

Why is ageing, not fertility, the variable that separates States?

- **Kerala is the oldest State:** Its median age is estimated at 37 years in 2026 and projected to reach 47 years by 2051.
- **Uttar Pradesh is among the youngest:** Its median age is approximately 26.9 years.
- **The national figure sits between the two:** India's projected median age is about 29.2 years in 2026.
- **The gap will not close within a decade:** Uttar Pradesh is projected to reach a median age of only 31.7 years even by 2036.
- **Early success brings early ageing:** Southern States achieved fertility decline earlier and face the possibility of ageing faster than States with younger populations.

What does the international record show about reversing fertility decline?

- **No country has reversed a sustained decline:** Japan, South Korea, China and Italy introduced financial incentives, childcare support and parental leave, and none restored fertility to the levels seen in earlier decades.
- **South Korea shows the limit of policy generosity:** It continues to record extraordinarily low fertility despite extensive family policies.
- **Italy repeats the result in Europe:** Births have continued to decline there despite financial incentives and family support measures.
- **Money is not the binding constraint:** Fertility is tied to housing, employment, education, gender relations, the cost of raising children and people's expectations about the future.

How does the movement of people complicate representation?

- **Internal migration is on a very large scale:** The 2011 Census recorded about 45 crore internal migrants in India.
- **Emigration is steady at the top end:** Around two lakh Indians have given up Indian citizenship on average each year in recent years.
- **The poor move for opportunity:** Movement runs from places with fewer opportunities to places with greater opportunities, and the rich move for their own reasons.
- **Vote value is not applied blindly:** The principle of one person, one vote, one value operates in consonance with group rights of representation, so social federalism and political federalism are both part of India's democratic design.

What do demographic differences do to planning and politics?

- **Larger groups will claim greater power:** Groups whose numbers rise will press for a bigger share of political authority.
- **Shrinking groups will feel insecure:** A group losing share experiences that change as a threat to its standing.
- **Care of the old becomes a fiscal claim:** As the number of older and retired people grows relative to the working age population, their care requires a higher commitment of national resources.
- **Movement of people and resources creates friction between States:** Both flow from regions where there is more to regions where there is less.
- **The disputes surface as fiscal and electoral questions:** Regional demographic differences generate disputes over taxation, fiscal transfers, development and political representation.

Why is the problem not that groups exist?

- **Recognition of group identity is integral to democracy:** Democratic practice already accommodates group identity rather than treating it as alien to itself.
- **The political question is not who has more people:** It is who has invested in development, who has fewer young people entering the workforce, who needs resources, and how representation should respond to those differences.
- **The risk is permanence, not difference:** Demographic difference becomes a democratic problem only when institutions convert it into permanent political antagonism.

Challenges to pronatalism as a response to fertility decline

- **Incentives do not reach the decision they target:** Cash transfers and leave entitlements address the cost of a birth rather than the conditions that make raising a child feasible. Eg. Hungary exempted mothers of four children from personal income tax for life, and its fertility rate has stayed below replacement level. **The Fix:** Move spending from birth linked bonuses to childcare places, housing supply and secure employment, which are what the decision actually turns on.
- **Pronatalist rhetoric attaches fertility to group identity:** A call addressed to one's own community converts a household decision into a demographic contest between communities. Eg. Replacement theory has moved from fringe forums into mainstream electoral campaigning in Europe and the United States. **The Fix:** Publish community wise fertility trends from official surveys at fixed intervals, so contested claims are settled against data rather than assertion.
- **A higher birth rate cannot fix an ageing ratio in time:** A child born today enters the workforce two decades later, and the care burden of an ageing population is immediate. Eg. Japan's working age population began shrinking in the 1990s, and three decades of family policy have not altered its dependency trajectory. **The Fix:** Build long term care financing and raise participation by women and older workers, which change the ratio within the same decade.
- **The cost of pronatalism falls on women:** Higher birth targets translate into unpaid care time that reduces women's participation in paid work. Eg. Domestic duties are recorded as the main reason women in India remain outside the labour force. **The Fix:** Tie any natalist entitlement to matched investment in creches, safe transport and paid paternity leave, so the time cost is shared.
- **Population based seat allocation penalises the State that succeeded:** A State that reduced fertility earlier ends with a smaller share of seats under any strictly population based formula. Eg. Tamil Nadu's share of Lok Sabha seats would fall relative to its 1971 based share if seats were reallocated purely on current population. **The Fix:** Weight seat allocation with development and demographic performance indicators alongside population, rather than on population alone.

Conclusion

Demographic change in India is real, uneven and slow to reverse, and no political appeal has altered that pattern anywhere it has been tried. The democratic problem it creates is not that groups exist. It is how seats and money are divided between them at the moment the next redistribution falls due. What must change is that the formula be agreed before the population count is in hand, since every State's position hardens the day its own number becomes public.

Current Status of Delimitation in India

- **Seat allocation is frozen on the 1971 Census:** The 42nd Amendment, 1976 froze the allocation of Lok Sabha seats among States on 1971 population figures until 2000.
- **The freeze was extended to the first Census after 2026:** The 84th Amendment, 2001 carried it forward, which is why the next Census is the trigger for the exercise.
- **Four Delimitation Commissions have been constituted:** They were set up in 1952, 1963, 1973 and 2002.

- **The 2002 exercise changed boundaries, not State shares:** Constituency boundaries within States were readjusted. Each State's total number of seats stayed at its 1971 based level.

Constitutional Framework Governing Delimitation

- **Article 81:** Fixes the composition of the Lok Sabha and the principle that seats are allotted to States in proportion to population.
- **Article 82:** Requires Parliament to enact a Delimitation Act after every Census for readjustment of Lok Sabha seats.
- **Article 170:** Provides for readjustment of seats in State Legislative Assemblies after every Census.
- **Article 327:** Empowers Parliament to make provisions on all matters relating to elections, including delimitation.
- **Article 329:** Bars courts from interfering in electoral matters, including a delimitation order, except through an election petition.

Major debates surrounding delimitation

- **The value of a vote is unequal across States:** A member from a populous State represents several times the electorate of a member from a small one, and correcting that is the case for revision.
- **Federal balance sits against numerical parity:** A revision keyed to current population moves weight towards States with slower fertility decline, which raises the question of what weight the Council of States should carry to offset it.

- **The size of the House is contested:** A substantially larger Lok Sabha raises questions about the quality of deliberation and the recurring cost of the institution.
- **The women's quota is linked to the exercise:** The Constitution (One Hundred and Sixth Amendment) Act, 2023 makes the 33 per cent reservation for women in the Lok Sabha and State Assemblies operative only after the next Census and delimitation.
- **Boundary drawing is itself disputed:** Redrawing constituencies invites gerrymandering allegations, and in the Northeast it runs into ethnic tension over tribal and non-tribal representation.

PREVIOUS YEAR QUESTION

[2024] How many Delimitation Commissions have been constituted by the Government of India till December 2023?

- (a) One
 - (b) Two
 - (c) Three
 - (d) Four*
- Answer: (d)

10. All Ladakh districts to have autonomous hill development councils

Why in the News

Ladakh's Lieutenant Governor has approved the notification creating Ladakh Autonomous Hill Development Councils (LAHDCs) for each district of the Union Territory. Elected hill councils existed only in Leh and Kargil, and the notification extends the framework to the five districts notified in April. The councils are the only elected tier of self government in Ladakh, which has had no legislature since it was constituted as a Union Territory without one. The Leh Apex Body (LAB) and the Kargil Democratic Alliance (KDA) are in talks with the Ministry of Home Affairs (MHA) for something the notification does not provide: a legislature, and protection for land and environment under the Sixth Schedule of the Constitution.

What is a Ladakh Autonomous Hill Development Council?

- **It is a statutory district level body:** The councils were created under the Ladakh Autonomous Hill Development Councils Act, first in 1995 and then in the 1997 Act that governs them.
- **It is directly elected:** The Act provides for 26 directly elected councillors in each council, who then elect a chief executive councillor from among themselves.
- **Its functions are developmental and land related:** Powers concerning allotment, use and occupation of land vested in the council by the government, formulation of the district's development programmes, special measures for employment generation, public health and sanitation, and local road transport sit with it.

- **Elections require a separate notification:** Polls to the newly constituted councils will be held after a formal notification is issued under Section 8 of the 1997 Act.

What has the notification changed?

- **All seven districts get a council:** Leh, Kargil, Sham, Nubra, Changthang, Zaskar and Drass will each have a hill council.
- **Elected local government reaches beyond two districts:** The framework was earlier confined to Leh and Kargil, the two long standing district headquarters and the most densely populated areas of the Union Territory.
- **It completes a step begun in April:** The Lieutenant Governor notified the creation of the new districts in April, and the councils follow for each of them.
- **The stated purpose is district level planning:** Seven councils are expected to decentralise governance and let local priorities enter district level planning and development directly.

Why does the expansion not settle the Ladakh demand?

- **The demand is constitutional, not administrative:** The LAB and the KDA are seeking a legislature for Ladakh and Sixth Schedule protection for land and environment, neither of which a hill council can supply.
- **Talks continue on a separate track:** The MHA has fixed a meeting of its sub committee for 9 September, the previous meeting having been held on 22 May.
- **One existing council is running without a mandate:** The term of the Leh council ended in October 2025 and fresh elections

have not been announced since, which is without precedent for that body. The Kargil council last went to the polls in October 2023.

- **More bodies do not equal more powers:** Extending a council with land allotment and development functions widens the number of devolved units, and leaves untouched the legislative and protective powers the two bodies are asking for.

Challenges to the Ladakh Autonomous Hill Development Councils

- **The councils hold no legislative power:** They plan and execute within powers delegated by the administration, and cannot legislate on land, forest or inheritance the way an autonomous district council under the Sixth Schedule can. Eg. The Bodoland Territorial Council in Assam legislates on subjects transferred to it, which no Ladakh hill council can do. **The Fix:** Specify the subjects transferred to each council in a schedule to the Act, so its jurisdiction does not depend on an executive order.
- **Finances flow through the Union Territory administration:** A council's plan depends on funds released by an administration it does not elect, so its priorities can be reordered upstream. Eg. Ladakh has no legislature to vote its budget, so the entire allocation is decided through the Union Territory's administrative route. **The Fix:** Fix a formula based untied share of the Union Territory's budget for each council, released on a published calendar.
- **Elections can lapse without consequence:** Nothing forces a poll when a council's term ends, so an elected body can be replaced by administrative control by default. Eg. The Leh council has been without an elected body since its term ended in October 2025. **The Fix:** Make the election notification under Section 8 mandatory within a fixed period before the term expires, enforceable by the courts.
- **The new districts are thinly populated and lightly staffed:** Sham, Nubra, Changthang, Zaskar and Drass have small populations spread over long distances, so each new council needs an administrative apparatus that does not yet exist. Eg. Zaskar remains cut off by road for several months each winter, which limits both administration and service delivery. **The Fix:** Sanction a standard district cadre and a linked digital service delivery backbone for each new council before its first election.
- **Two councils have historically pulled in different directions:** Leh and Kargil have differed on statehood and on religious and political representation, and seven councils multiply the coordination problem. Eg. The LAB and the KDA came together only after 2020, having earlier taken opposing positions on the Union Territory demand. **The Fix:** Constitute a statutory Ladakh level council of chief executive councillors to settle inter district allocation and present a single position to the Centre.

Conclusion

Devolution has widened in Ladakh at the district level and has not deepened in the powers each district holds. The two claims now sit against each other: an administration that has multiplied elected bodies, and representative groups that are asking for a legislature and a constitutional shield that no number of councils can substitute for. The sub committee meeting on 9 September is the next point at which that gap either narrows or is confirmed. The more immediate test is whether the notification for the new councils is followed by a poll date for the one that has been without an elected body for nearly a year.

Back2Basics: Sixth Schedule of the Constitution

- **What it provides:** The Sixth Schedule, read with Articles 244(2) and 275(1), provides for the administration of tribal areas through Autonomous District Councils and Regional Councils.
- **Where it applies:** It currently covers tribal areas in four States, namely Assam, Meghalaya, Tripura and Mizoram. Ladakh is not covered by it.
- **What the councils can do:** These councils can make laws on land, forest other than reserved forest, shifting cultivation, village administration, inheritance, marriage and social customs, subject to the Governor's assent.
- **What powers they hold beyond lawmaking:** They may constitute village courts for disputes among Scheduled Tribes, and may levy specified taxes and collect land revenue within their areas.

PREVIOUS YEAR QUESTION

[2022, GS2, 10 marks] To what extent, in your opinion, has the decentralisation of power in India changed the governance landscape at the grassroots ?

GOVERNANCE

11. [Explainer] Govt has deferred Census in Manipur amid calls for NRC to be carried out

Why in the News

The Union government has decided to defer the 2027 Census in Manipur. The decision followed a meeting of the Union Home Minister with the Governor and the Chief Minister of Manipur, and the State government said it came out of discussions on the demand that the Census be held only after a National Register of Citizens (NRC), a register of persons verified as Indian citizens, is implemented in the State. Meitei and Naga organisations want citizenship settled before any population figure is recorded. Kuki-Zo organisations want the reverse order, arguing that the Census is the credible data source against which citizenship allegations should be tested. The count is contested because the same figures will eventually decide how Assembly seats are shared between the valley and the hills.

Why is the Census being opposed?

- **Citizenship and demographic change:** Meitei civil society groups in the valley and Naga communities in the hill districts allege that migration from Myanmar and elsewhere has altered Manipur's demographic composition. They want an exercise distinguishing Indian citizens from illegal immigrants before population figures are recorded.
- **Displacement from the ethnic conflict:** Thousands remain displaced more than three years after the violence that began in May 2023. Meitei groups say a count taken while people live away from their homes would record the consequences of displacement rather than the underlying population pattern.
- **Political representation:** Census figures will eventually govern delimitation, and Manipur has had no fresh delimitation implemented since the 1970s.

How old is the NRC demand?

- **It predates the current conflict:** The demand existed before the May 2023 violence, and the influx from Myanmar and the conflict later gave it a sharper political and security dimension.
- **A joint memorandum in 2022:** In June 2022 the Coordinating Committee on Manipur Integrity (COCOMI), representing Meitei civil society, and the United Naga Council (UNC) jointly demanded an NRC and a State Population Commission.
- **The Assembly endorsed it twice:** The Manipur Assembly adopted a resolution seeking both on 5 August 2022, and reaffirmed it on 1 March 2024.
- **The growth figures the resolution cited:** The resolution recorded population growth of 153.3 percent between 1971 and 2001 and 250.9 percent between 2001 and 2011 in the hill districts, against 94.8 percent and 125.4 percent respectively in the valley. Those figures do not by themselves establish illegal immigration.
- **An institution was created:** The State government constituted the Manipur State Population Commission in February 2023.

What did the Myanmar crisis add?

- **Displacement across the border:** Fighting in Myanmar's Chin State and adjoining areas after the 2021 military coup drove thousands across the border into India.
- **Ethnic links on both sides of the border:** Many of those arriving belonged to Chin and related communities with ethnic and familial ties to the Kuki-Zomi population in Manipur.
- **The State government's framing:** The Manipur government linked the influx to new settlements, poppy cultivation, encroachment and demographic change.
- **The counter position:** Kuki organisations disputed that framing, arguing that legitimate Indian citizens were being conflated with recent arrivals from Myanmar.
- **A border policy change:** The Centre scrapped the Free Movement Regime with Myanmar in February 2024, citing security and demographic concerns.

What are the Meitei and Naga groups demanding now?

- **A fixed sequence:** The UNC stated on 18 August, "NRC first: No Census, No Delimitation Before Implementation of NRC in Manipur."
- **An old base year:** It demanded an NRC with 1951 as the base year, followed by the Census and then delimitation.
- **The demand cuts across party lines:** The State Congress president, himself a former Chief Minister, supported the demand for an NRC before the Census on 19 and 20 August, placing the two main parties broadly on the same side.

Why do the Kuki-Zo groups oppose it?

- **A national exercise, not a State one:** The Kuki-Zo Council called an NRC before the Census "premature and unjustified", stating on 23 August that there is no provision for a community or a State government to unilaterally initiate a separate NRC in one State.
- **Allegations should be tested against data:** It argued that the demand rests on unsubstantiated allegations about the Kuki-Zo community, and that such claims should be tested against credible demographic data. The Census is the appropriate source of that data.
- **It supports delimitation on verified data:** The Council has backed delimitation once verified demographic figures exist.
- **The documentary cut off is the underlying fear:** Kuki, Zomi and Chin communities straddle the India-Myanmar border, so a register built on an old documentary cut off could raise doubts about people who have lived in Manipur for generations.

Why does delimitation matter so much here?

- **The present seat split:** Manipur has 60 Assembly seats, 40 in the valley and 20 in the hills.
- **The demographic map behind it:** The State's 16 districts divide broadly into hills, where Nagas and Kuki-Zomis predominate, and the valley, where Meiteis are in the majority.
- **The map is more than fifty years old:** The present political map goes back to the 1973 delimitation, which was based on the 1971 Census.
- **Manipur was left out of the last exercise:** A national delimitation based on the 2001 Census ran between 2002 and 2008, and Manipur, Assam, Arunachal Pradesh and Nagaland were excluded after the Centre deferred it in 2008, citing security concerns and challenges to the credibility of the 2001 Census data in the region.
- **The disputed 2001 figures:** In nine hill subdivisions the increase between 1991 and 2001 was over 40 percent, and in four it exceeded 100 percent.
- **What the valley's political class fears:** A new Census followed by delimitation could move the 40:20 distribution to something closer to 35:25 or 30:30.

Can an NRC be held only in Manipur, and what else is the Centre weighing?

- **The usual national sequence is stalled:** A nationwide NRC is supposed to follow an update of the National Population Register (NPR), a register of usual residents, and the government has not notified the NPR to be taken up with the 2027 Census.
- **No legal bar on a State specific exercise:** Section 14A of the Citizenship Act, 1955 vests the power to compulsorily register citizens and maintain the National Register of Indian Citizens in the Centre. No statutory requirement makes simultaneous nationwide deployment necessary.
- **The decision is political rather than legal:** The Centre could in principle notify the exercise for a particular State or border region, and the recorded position is that this is a political call.
- **An alternative route already exists:** A High-Level Committee on Demographic Change, announced in May this year, is examining demographic change arising from illegal immigration and other abnormal causes, and will recommend policy, legislative and administrative measures. Its findings could form the basis of a policy specific to Manipur.

Challenges to holding the Census in Manipur

- **Displacement distorts where people are counted:** An enumeration records a person where they are living on the reference date, so a district hosting relief camps absorbs the population of the district people fled. Eg. Displaced Kashmiri Pandit families have been counted in Jammu and Delhi rather than in their home districts across successive Censuses. **The Fix:** Record a home district field for persons enumerated in relief camps, so displacement is visible in the data instead of silently altering district totals.
- **A register built on an old base year excludes documented residents:** Citizenship registration turns on producing legacy documents, which the poorest and the most mobile are least able to hold. Eg. Assam's updated register, worked against a 1971 cut off, left 19,06,657 persons out of the final list published in August 2019, and the appeals process has still not concluded. **The Fix:** Publish the documentary standard and a binding appeal timeline before enumeration begins, so exclusion is contestable within a fixed period.
- **A deferred count leaves the State on stale data:** Allocations for welfare programmes are pegged to Census population, so a State that is skipped keeps running on figures more than a decade old. Eg. Coverage under the National Food Security Act, 2013 is still fixed against the 2011 Census population. **The Fix:** Notify an alternative statutory data source, such as updated ration and electoral rolls, for allocations in the deferred State until enumeration is held.
- **The credibility of the count is itself contested in the region:** A count that any side believes is inflated cannot settle the question it is being deferred to answer. Eg. Nagaland recorded decadal growth of about 64 percent in the 2001 Census and a fall of about 0.6 percent in 2011, and the earlier count was widely described within the State as inflated. **The Fix:** Publish subdivision level growth anomalies alongside post enumeration survey results, so a disputed count is audited rather than defended.

Conclusion

Deferring the count postpones the dispute without resolving either question behind it. The two demands cannot be met on the same timetable, since one side wants citizenship settled before people are counted and the other wants the count to test the citizenship allegations. A deferral also leaves the State without the current population data that its own programmes and its own representation ultimately rest on. What to watch is whether the Centre fixes a date for enumeration in the State or lets the deferral run open ended.

Back2Basics: National Register of Indian Citizens

- **What it is:** A register of persons verified as citizens of India, maintained by the Centre.
- **Its statutory basis:** Section 14A of the Citizenship Act, 1955 empowers the Centre to compulsorily register every citizen and to issue national identity cards.
- **How it is meant to be built:** The rules contemplate verification of the particulars collected in the National Population Register to sort residents into citizens and doubtful cases.
- **Where it has been done:** The only State level exercise so far was in Assam, carried out under Supreme Court supervision, with the final list published in 2019.

PREVIOUS YEAR QUESTION

[2009] Consider the following statements :

1. Between Census 1951 and Census 2001, the density of the population of India has increased more than three times.
2. Between Census 1951 and Census 2001, the annual growth rate (exponential) of the population of India has doubled.

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

Answer: (d)

12. Constitutional faultlines in FCRA Bill

Why in the News

The **Foreign Contribution (Regulation) Amendment Bill, 2026** creates a statutory framework for the vesting, supervision, management and disposal of foreign contributions and the assets built from them. Where an organisation's certificate under the **Foreign Contribution (Regulation) Act, 2010** is cancelled, surrendered or ceases to exist, including through non renewal, the Central government may appoint a **Designated Authority** in which those contributions and assets vest provisionally. The measure is framed as an accountability mechanism to prevent the diversion or abuse of such properties. The existing law already allows assets created from foreign funds to vest on cancellation, so what is new is the detailed machinery for provisional vesting, possession, management, restoration, permanent vesting and disposal. The constitutional question is not whether foreign contributions should be regulated, but how far the state may go in regulating the institutions that receive them.

What is the Designated Authority?

- **It is appointed by the Central government:** The appointment is triggered where an organisation's FCRA certificate is cancelled, surrendered or ceases to exist, including due to non renewal.
- **Assets vest in it provisionally:** The foreign contribution and the assets created from it may vest in the authority on a provisional basis.
- **It may take possession and manage those assets:** The government may, through the authority, take possession of and manage assets created from foreign contributions.
- **It may also run the organisation's activities:** Where considered necessary or expedient in the public interest, it may undertake the management of the concerned organisation's activities.

How far do the consequences of losing registration now travel?

- **The existing consequences were financial and regulatory:** Registrations could be withdrawn, cancellation could follow continuing non compliance, and penalties attached to the diversion or misappropriation of foreign contributions.
- **A vesting provision already existed:** The current law already contains a provision for vesting assets created from foreign funds upon cancellation.
- **The Bill supplies the machinery that was missing:** What is added is a detailed statutory framework for provisional

vesting, possession, management, restoration and ultimately permanent vesting and disposal.

- **The end point changes in kind, not in degree:** What was previously limited to the loss of eligibility to receive foreign funds can now extend to provisional management and, where registration is not restored within the prescribed period, permanent vesting and disposal of assets.

Why does management control matter more than formal ownership?

- **The ownership and custody distinction has limited practical force:** The legal separation between owning an asset and holding custody of it does not change the practical consequence for the institution.
- **Institutions run on continuity of management:** An entity whose success depends on continuous administration places greater weight on control than on ownership.
- **The relationship with the state changes:** Ownership may remain formally undisturbed, and a change in management control still alters the relationship between the institution and the state.
- **The affected entities are operating institutions:** A hospital, a school or a laboratory is not made effective by ownership alone, and depends on its independence to administer for charitable ends what it owns.

Does the Bill satisfy constitutional proportionality?

- **A legitimate objective is not sufficient by itself:** The Supreme Court has repeatedly held that the state pursuing a legitimate objective does not settle the constitutional question.
- **The means must fit the end:** The means adopted must bear a reasonable connection to that objective and must maintain an appropriate balance between the public purpose and the burden imposed on rights.
- **A heavier consequence demands heavier safeguards:** Where losing registration can lead to provisional vesting and government appointed management, the safeguards attending that transfer must be commensurately robust.
- **The Bill does provide safeguards:** It provides for the restoration of assets where registration is obtained, renewed or restored within the prescribed period, and for mechanisms of revision and judicial appeal.
- **The open question is their quality:** What remains contested is whether those safeguards are sufficiently clear, timely and

effective, and what standards govern decisions on possession, management and permanent vesting.

Why does the regulatory backdrop raise the stakes?

- **Registrations have lapsed at scale:** Over the past decade thousands of FCRA registrations have ceased to operate, for reasons ranging from non renewal to alleged statutory violations.
- **An administrative lapse and a proven violation converge:** Non renewal is not a finding of wrongdoing, and under the proposed framework it can attract the same asset consequence as a violation.
- **The Bill has drawn parliamentary opposition:** Opposition members of Parliament have protested in New Delhi demanding the withdrawal of the Bill.

Challenges to the FCRA Amendment Bill, 2026

- **Renewal is a recurring administrative cliff:** FCRA registration must be renewed every five years, and a delay in deciding a renewal application would now carry asset consequences rather than only a pause in funding. Eg. The Ministry of Home Affairs has repeatedly issued blanket extensions of FCRA validity as renewal deadlines approached, which shows the decision backlog is routine rather than exceptional. **The Fix:** Provide by statute that registration continues in force until a renewal application is decided, so a pending file cannot trigger vesting.
- **The receiving channel is already a single point of failure:** The 2020 amendment required every recipient to receive foreign contribution only in a designated account at one specified bank branch in New Delhi. Eg. Organisations working in every State had to open and operate that one account irrespective of where they function. **The Fix:** Allow any scheduled bank branch to host the designated account with the same automated reporting feed to the Ministry.
- **The bar on onward granting cuts off the smallest organisations:** The 2020 amendment prohibited the transfer of foreign contribution to any other person, ending the model in which a registered body funded unregistered grassroots groups. Eg. Community organisations that never held registration of their own lost their funding route entirely. **The Fix:** Restore sub granting to registered entities under a reporting requirement rather than a blanket prohibition.
- **The administrative expense cap squeezes research and advocacy work:** The 2020 amendment cut the share of foreign contribution usable for administrative expenses from 50 percent to 20 percent, and staff salaries are the principal cost of such work. Eg. A research institute's main expenditure is staff time, which the cap treats as overhead rather than as programme cost. **The Fix:** Define programme staff costs as programme expenditure rather than as administrative expenditure.

- **Remedies move slower than an operating institution can survive:** Restoration and appeal run through the Ministry and then the courts, and a hospital or school under government appointed management cannot suspend operations while that runs. Eg. Writ challenges to FCRA cancellations have taken years to reach a hearing on merits. **The Fix:** Fix an outer statutory time limit for deciding restoration, with automatic reversion in the organisation once that limit expires.
- **Freedom of association is engaged, not only property:** Article 19(1)(c) protects the right to form associations, and control over an association's assets and management directly affects its capacity to function. Eg. In **Noel Harper v. Union of India (2022)** the Supreme Court upheld the 2020 amendments and held that receiving foreign contribution is not an absolute right, which leaves the associational effect of asset control unsettled. **The Fix:** Write into the Bill an express requirement that the least restrictive measure available be recorded in writing before management is assumed.

Conclusion

The Bill moves FCRA from policing money to holding institutions. That shift is not by itself unconstitutional, and it is what makes the safeguards the whole of the question. The unresolved tension is that the trigger for the heaviest consequence can be an expired file rather than a proved diversion, and the remedy for a wrong trigger runs slower than the institution it applies to. Whether the Bill survives a proportionality challenge will turn on how tightly Parliament defines the Designated Authority's discretion, and on how fast restoration actually works in practice.

Back2Basics

- **What it regulates:** The Foreign Contribution (Regulation) Act, 2010 governs the acceptance and utilisation of foreign contribution and foreign hospitality by individuals, associations and companies in India.
- **Who administers it:** It is administered by the Ministry of Home Affairs, and it replaced the earlier Foreign Contribution (Regulation) Act, 1976.
- **How access is granted:** An association must hold either registration, valid for five years and renewable, or prior permission tied to a specific purpose and a specific foreign source.
- **Who is barred outright:** Election candidates, judges, government servants, members of the legislature, journalists and political parties are prohibited from accepting foreign contribution.

PREVIOUS YEAR QUESTION

[2015, GS2, 12 marks] Examine critically the recent changes in the rules governing foreign funding of NGOs under the Foreign Contribution (Regulation) Act (FCRA), 1976.

13. More than 40 crore Indians are caught in a healthcare gap: panel

Why in the News

More than 40 crore Indians, over a quarter of the population, are covered neither by government health insurance nor by private cover, a Parliamentary Standing Committee on Health and Family Welfare has found. Its report, Affordability and Accessibility of Healthcare Facilities in Public and Private Sector, was presented to Parliament last month and carries 368 recommendations. The group it identifies sits above the eligibility line for fully subsidised cover and below the income at which private care is affordable. The committee's conclusion is that insurance alone cannot close that gap, and that the fix lies in public capacity and in regulation of private prices.

What is the 'missing middle' in health coverage?

- **It is a group defined by exclusion from both systems:** These households are too well off to rely on government subsidies and not financially secure enough to absorb the rising cost of private care.
- **Its size is over a quarter of the population:** More than 40 crore people fall into it, sitting between the poorest, who hold government protection, and the affluent, who can buy private care.
- **The risk it faces is attrition, not catastrophe:** The threat is the slow erosion of household income through medicines, consultations, tests and repeated treatment, rather than a single large hospital bill.

Where do Indians actually seek care, and at what price?

- **The private sector delivers most of the care:** Over 60 percent of inpatient care and 70 percent of outpatient care is provided by private facilities, so households without financial protection meet private prices directly.
- **Medicines are the single largest drain:** They account for nearly 30 percent of current health expenditure.
- **Chronic illness converts a cost into a recurring one:** For a person with diabetes, hypertension or cardiovascular disease, medicines, consultations and diagnostic tests become a lifelong expense, and the non-communicable disease burden is climbing steadily.
- **Childbirth shows the gap in one comparison:** Average out-of-pocket spending is Rs 37,630 in private facilities against Rs 2,299 in public ones, more than sixteen times higher.

What does the financing record show?

- **Public spending sits below the policy's own target:** Government health expenditure is 1.43 percent of gross domestic product (GDP) against the 2.5 percent target set by the National Health Policy, 2017.
- **Health's share of the budget is shrinking:** It fell from 6.12 percent of total government expenditure in 2021-22 to 4.89 percent in 2022-23, below the 5.02 percent recorded in 2019-20.
- **The shortfall lands on households:** Public capacity that is not built is care that is bought privately, which is what converts a spending decision into an out-of-pocket bill.

Why does insurance alone not close the gap?

- **Government cover is targeted at the poorest:** Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) protects vulnerable households against hospitalisation costs, and the missing middle falls outside fully subsidised coverage.
- **Private cover carries its own filters:** A household that buys a policy still faces premiums, exclusions, waiting periods and co-payments.
- **Both instruments insure the wrong event:** Hospitalisation cover does not reach outpatient consultations, diagnostics and medicines, which is where this group's expenditure actually accumulates.

What has the committee recommended?

- **A single regulatory floor for private providers:** Nationwide implementation of the Clinical Establishments Act, so registration and minimum standards apply uniformly rather than State by State.
- **Mandatory quality standards:** Facilities would be held to a defined standard of services as a condition of operation rather than as a voluntary accreditation.
- **Price transparency in private facilities:** Rates for procedures, consultations and diagnostics would be published and displayed.
- **Curbs on retail pharmacy practice:** The report flags excessive trade margins and the non-prescription sale of antibiotics, and recommends stronger audits and enforcement.
- **Stronger public healthcare infrastructure:** The committee argued for building public capacity directly rather than relying on insurance to purchase care from private providers.

Challenges to closing the missing middle

- **A contributory product for this group has failed to launch before:** The design has been proposed repeatedly and never converted into a national scheme with take-up. Eg. A NITI Aayog report in 2021 proposed extending PM-JAY to the missing middle on a contributory basis, and no national product followed it. **The Fix:** Collect the premium through an existing payment channel the household already uses, so enrolment does not depend on a separate voluntary transaction.
- **The Clinical Establishments Act is not in force everywhere:** Health is a State subject, so the central Act applies only where a State has adopted it. Eg. Large States including Karnataka, Tamil Nadu and Maharashtra regulate through their own statutes instead. **The Fix:** Tie a share of National Health Mission funds to adoption of a common minimum standard, whichever statute a State chooses to enforce it under.
- **Transparency without a ceiling changes little:** A published rate does not restrain a price where the patient is in no position to shop. Eg. Ceiling prices set by the National Pharmaceutical Pricing Authority cover scheduled medicines, and non-scheduled formulations sit outside that control. **The Fix:** Extend price capping to the high volume diagnostics and consumables that make up the bulk of a private bill.
- **Cheap medicine supply is a fraction of the retail network:** A generic price ceiling reaches a household only where a generic outlet exists. Eg. Jan Aushadhi Kendras number about 15,000 against roughly nine lakh retail pharmacies. **The Fix:** Mandate prescription by generic name and stock the full essential drug list at every public facility, so the public system itself becomes the cheap outlet.

- **Human resources, not finance, cap public capacity:** Money released for a facility does not produce the specialist who has to staff it. Eg. Rural Community Health Centres run with a shortfall of roughly 80 percent against sanctioned specialist posts. **The Fix:** Create a public health management cadre so clinical posts are not consumed by administrative duty.

Conclusion

The committee's finding is not that coverage is absent. It is that coverage is built around hospitalisation. The expense that erodes household income is recurring and outpatient. Closing that requires a financing instrument that pays for consultations, diagnostics and medicines, and no such instrument operates at scale today. Whether the committee's recommendations produce one, or produce another set of standards for private providers to display, is what the government's action taken reply will show.

Back2Basics

- **The Clinical Establishments (Registration and Regulation) Act, 2010** provides for the registration and regulation of all clinical establishments, public and private, across recognised systems of medicine.
- **Health is a State subject**, so the Act operates in the Union Territories and in States that adopt it by resolution, and several States regulate under their own laws instead.
- **It prescribes minimum standards** of facilities and services as a condition of registration.
- **It requires establishments to display their rates** and to maintain and report records to the National Council for Clinical Establishments.

PREVIOUS YEAR QUESTION

[2024, GS2, 15 marks] In a crucial domain like the public healthcare system, the Indian State should play a vital role to contain the adverse impact of marketisation of the system. Suggest some measures through which the State can enhance the reach of public healthcare at the grassroots level.

SCHEMES, MISSIONS AND PORTALS

14. Play leading role in skilling push: Govt tells industry

Why in the News

The **Ministry of Skill Development and Entrepreneurship** asked industry, in particular the power and utilities sector, to take the leading role in the **Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs (PM-SETU)** scheme, citing ArcelorMittal's leadership of the Vizag cluster as the benchmark. Control over curriculum, technology and delivery passes to an industry partner holding **51 per cent** of the managing Section 8 company while contributing **17 per cent** of the funding out of its statutory CSR obligation (The Indian Express, 5 September 2026).

About PM-SETU

- **Ministry:** Ministry of Skill Development and Entrepreneurship; a central scheme with an outlay of **Rs 60,000 crore**.
- **Objective:** Upgradation of government **Industrial Training Institutes (ITIs)** through upgraded laboratories, new machines and revised trade curricula, with **employability** rather than the number of training seats as the measure of success.

- **Structure:** Clusters of ITIs are managed by **Section 8 companies** (not for profit companies under the Companies Act, 2013) in which industry partners hold a controlling **51 per cent** stake.
- **Funding:** The Centre and the States provide the bulk of the funds against an industry contribution of **17 per cent**, which is eligible as **Corporate Social Responsibility (CSR)** spending.

PREVIOUS YEAR QUESTION

[2023, GS2, 15 marks] Skill development programs have succeeded in increasing human resources supply to various sectors. In the context of the statement analyse the linkages between education, skill and employment.

REPORTS, INDICES AND SURVEYS

15. V-Dem's democracy index rates India at its lowest since 1975

About the V-Dem Institute

- **Host and status:** Varieties of Democracy (V-Dem) is an independent research institute based at the Department of Political Science, University of Gothenburg, Sweden.
- **Method:** It uses a multidimensional approach to conceptualising and measuring democracy, aggregating ratings supplied by country experts rather than issuing a single composite judgement.
- **Five principles measured:** The dataset is organised around the electoral, liberal, participatory, deliberative and egalitarian principles of democracy.
- **Flagship output:** It publishes an annual Democracy Report, releasing the index in March and naming the countries it assesses as autocratising or democratising.

About the Electoral Democracy Index

- **What it measures:** It scores how far the ideal of electoral democracy is achieved in a country, on a scale from 0 to 1.
- **Its conceptual base:** It builds on the polyarchy concept, which requires elected officials, free and fair elections, freedom of expression, alternative sources of information, freedom of association and inclusive suffrage.
- **Regime classes:** V-Dem sorts countries into closed autocracy, electoral autocracy, electoral democracy and liberal democracy.
- **The comparator to know:** The Economist Intelligence Unit's Democracy Index is a separate exercise, scoring 60 indicators from 0 to 10 across five categories and classifying India as a flawed democracy.

India in the latest reading

- **The score is a 50 year low:** India's electoral democracy index score was 0.38 in 2025, below the 0.39 recorded in 1975 under Emergency rule.
- **The ranking:** India stands 106th among 179 countries, against Denmark at the top with a score of 0.9 in 2025.
- **The classification:** V-Dem lists India among countries autocratising slowly, with a systematic dismantling of democratic institutions.
- **The decline is not new:** India's performance on the index has fallen gradually since 2009.
- **The parameters at 50 year lows:** Judicial accountability and judicial corruption, autonomy of the Election Management Body (EMB), impartial administration by public officials, media freedom and academic freedom are all at their lowest in 50 years.
- **A parallel United Nations finding:** The Committee on the Elimination of Racial Discrimination, in its first review of India since 2007, recorded grave concern over reports of large-scale violations by law enforcement officials and over the exclusion of large numbers of voters, Muslims in particular, under the Special Intensive Revision of electoral rolls.

PREVIOUS YEAR QUESTION

[2016]

Which of the following is/are the indicator/ indicators used by IFPRI to compute the Global Hunger Index Report?

1. Undernourishment
 2. Child stunting
 3. Child mortality
- Select the correct answer using the code given below.
- (a) 1 only
(b) 2 and 3 only
(c) 1, 2 and 3
(d) 1 and 3 only
- Answer: (c)

SOCIETY AND SOCIAL ISSUES

16. [Op-ed] Mental health must anchor public health

Why in the News

Mental health has been placed at the centre of India's public health agenda as a determinant of every other health goal rather than as a separate specialty. India's **Viksit Bharat 2047** vision carries a **Healthcare for All** pillar built on strengthening Ayushman Bharat, expanding primary healthcare, reducing out of pocket expenditure and promoting preventive care. Mental health cuts across all four and decides whether they succeed. The case for prioritising it rests on a treatment gap that has not closed even as delivery infrastructure has expanded across districts. The tension is between an architecture that now reaches most of the country and an outcome in which more than four out of five people needing care still receive none.

How wide is the gap between mental illness and mental healthcare?

- **Prevalence:** Mental illness affects one in seven Indians, with nearly **200 million** people living with a diagnosable mental health condition.
- **A rising share of total disease burden:** The contribution of mental disorders to India's total disease burden has **doubled over the past three decades**.
- **The treatment gap:** The national treatment gap stands at **84.5%**, so more than four out of five people who need care do not receive it.
- **Specialist density:** India has **0.3 psychiatrists per 1,00,000 population**.
- **The shortage runs across the whole care team:** Clinical psychologists, psychiatric social workers and psychiatric nurses are all in significant short supply, the result of decades of insufficient attention to the field.

Why does neglecting mental health weaken physical health programmes?

- **The risk runs both ways:** Mental disorders significantly raise the risk of chronic disease, and chronic disease in turn raises the risk of mental illness.
- **Most primary care patients are already affected:** More than **60%** of people attending primary care facilities have a diagnosable mental disorder.
- **Specific comorbidities are worse:** Rates of anxiety and depression are substantially higher among people living with diabetes, hypertension, tuberculosis and HIV/AIDS.
- **The cost falls on disease control programmes:** Ignoring mental health undermines efforts to control non communicable diseases and to reduce healthcare expenditure.

What is the economic case for universal screening?

- **The study:** A 2025 modelling study by researchers from the **Postgraduate Institute of Medical Education and Research (PGIMER)** and the **National Institute of Mental Health and Neurosciences (NIMHANS)** examined integrating universal depression screening into India's primary healthcare system.
- **The estimated saving:** It put net savings at **₹291 billion to ₹482 billion annually**.
- **The scale relative to the economy:** That is equivalent to as much as **0.32% of GDP**.
- **The framing that follows:** On those numbers mental health is a human capital investment and an economic growth strategy, not a social welfare issue alone.

What delivery foundation already exists?

- **Primary care conversion:** More than **1.73 lakh** sub centres and primary health centres have been converted into **Ayushman Bharat Arogya Mandirs**.
- **Mental health sits inside the service package:** Mental healthcare is included among the essential service packages those centres are meant to deliver.
- **District coverage:** The **District Mental Health Programme** now covers more than **90% of districts**.
- **A national tele service:** **Tele-MANAS** (Tele Mental Health Assistance and Networking Across States), launched in 2022, has expanded across all States and Union Territories.

What three priorities does scaling this foundation require?

- **Make frontline workers the backbone of community mental healthcare:** India's one million **Accredited Social Health Activists (ASHAs)** form the world's largest community health workforce, and with training and supervision they can identify, support and refer individuals with common mental disorders. Validated screening tools, digital learning platforms and performance linked incentives are the levers that would scale the model. Eg. Evidence from Madhya Pradesh and other States shows ASHAs already performing that role.
- **Invest systematically in community based care:** Trained community workers bridge the gap between awareness and treatment, particularly in rural and underserved populations, and these approaches improve access while reducing costs. Eg. Zimbabwe's **Friendship Bench**, **Atmiyata** in India and programmes run by The Live Love Laugh Foundation all operate on this model.
- **Complete the promise of financial protection:** Extending outpatient mental health benefits under the **Pradhan Mantri Jan Arogya Yojana** would cover the continuous care that mental illness actually needs. Strengthening implementation of insurance parity under the **Mental Healthcare Act, 2017** would make that care affordable for people currently going without it.

Challenges to integrating mental health into primary care

- **Stigma stops care seeking before any service is reached:** A diagnosis treated as a family reputational risk rather than as an illness keeps the patient out of the system entirely. Eg. Tele-MANAS was built as an anonymous telephone service precisely because anonymity lowers a barrier that in person help seeking raises. **The Fix:** Fund sustained district level anti stigma communication through the same channels that already carry immunisation and tuberculosis messaging.
- **District coverage is counted in districts, not in staff:** Sanctioned psychiatrist, psychologist and psychiatric social worker posts at district level frequently remain vacant, so a covered district may still have no functioning team. Eg. District hospitals must recruit specialists against private practice pay, which is why the posts stay open. **The Fix:** Allow districts to contract trained mid level providers against unfilled specialist posts rather than carry the vacancy.
- **The rights framework depends on authorities that were slow to appear:** The Mental Healthcare Act, 2017 requires every State to constitute a State Mental Health Authority and to register mental health establishments, and several States were late in doing so. Eg. The Act's advance directive and nominated representative provisions cannot be exercised without a functioning State authority. **The Fix:** Tie a State's central mental health funding to a constituted and staffed State Mental Health Authority.
- **Psychotropic medicines are not reliably stocked below district level:** Treatment breaks when a patient stabilised at a district hospital cannot refill medication at the primary health centre. Eg. Antipsychotics and mood stabilisers sit outside the routine stock lists many sub district facilities actually maintain. **The Fix:** Place the core psychotropic list on the essential drug list procured for every Ayushman Bharat Arogya Mandir.
- **Suicide prevention has no single accountable owner:** Prevention needs police, education, agriculture and health departments to act together, and none of them is answerable for the outcome. Eg. The **National Suicide Prevention Strategy**, released in 2022, set a target of reducing suicide mortality by 10% by 2030 and relies on voluntary departmental convergence. **The Fix:** Give the strategy a named nodal authority in each State reporting against annual targets.

Conclusion

Mental health is not a missing programme in India. It is a programme that exists at scale and does not reach people. The binding constraint is who delivers care at the point a person first presents, and that is a workforce question before it is a financing question. Closing the gap therefore turns on whether frontline and community workers are trained, supervised and paid to do the work, and on whether the payment system follows the patient out of the hospital. Until those two move together, coverage will keep expanding without treatment expanding with it.

Back2Basics

- **What it is:** Tele-MANAS is a national round the clock tele mental health service providing free counselling and psychiatric support by telephone, run under the Ministry of Health and Family Welfare.
- **Origin:** It was announced in the Union Budget for 2022-23 as the National Tele Mental Health Programme and launched in October 2022.
- **How it is organised:** It works in two tiers, with State level cells staffed by trained counsellors and a second tier of specialists and district programme resources for escalation.
- **Nodal institution:** NIMHANS is the nodal centre for the programme, with technical support from the International Institute of Information Technology, Bangalore.

PREVIOUS YEAR QUESTION

[2024] With reference to the 'Pradhan Mantri Surakshit Matritva Abhiyan', consider the following statements:

1. This scheme guarantees a minimum package of antenatal care services to women in their second and third trimesters of pregnancy and six months post-delivery health care service in any government health facility.
2. Under this scheme, private sector health care providers of certain specialities can volunteer to provide services at nearby government health facilities.

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

Answer: (b)

17. [Op-ed] Focus on the children, not the platform

Why in the News

Meta has settled a \$171 billion case with several United States States over allegations about the effect of its apps on children's mental health. The settlement requires daily usage limits and "nighttime blocks" for teenagers. It requires "enhanced age assurance measures" (checks intended to establish a user's age before access is granted) to keep children off the apps. It also requires the depersonalisation of feeds, so a child is served random content rather than content matched to that child's interests. The outcome is being read as a step towards holding platforms accountable. That framing places the platform at the centre of the problem rather than the child, and the two framings do not produce the same policy.

Why does a platform centric approach to child safety misfire?

- **The measures are difficult to enforce:** An age gate assumes a child will not defeat it, while children are sophisticated and motivated users of technology who find ways around such checks.
- **It ignores what children need to be safe online:** Poorly designed recommendation systems expose children to harmful content, and stripping personalisation replaces that risk with irrelevant or inappropriate material. It also makes it harder for educational and support services to reach the children who need them.
- **Online spaces are the only support some children have:** Children experiencing neglect or abuse, LGBTQIA+ children

and socially isolated children use platforms to find information, companionship or help. A child's participation is not confined to one service, so a platform that becomes too restrictive simply loses them to platforms with weaker protections.

- **The offline environment is what pushes children online:** In India screens fill a vacuum rather than displacing abundant offline opportunities, because many children have no access to safe public spaces or affordable recreational facilities.

What would a child centred approach ask for instead?

- **Equip the child, as is done in the physical world:** Children are taught what not to share, how to respond to unsolicited contact, how to recognise manipulation, when to block or report someone, and when to seek help.
- **Treat digital literacy as the instrument, not the afterthought:** Digital literacy and sensitisation are what change a child's behaviour at the moment a technical control fails, and they receive far less policy attention than platform obligations.
- **Address the whole ecology of childhood:** Responsibility sits across platforms, parents, schools, communities, public spaces and children themselves, so a measure aimed at one of the six leaves the other five untouched.

Why does the harder answer receive less policy attention?

- **A platform obligation is visible and countable:** A regulator can order a control, verify that it shipped, and record compliance, none of which a curriculum or a public playground delivers on the same timescale.
- **India's move so far is a recommendation, not a mandate:** The 2026 Economic Survey called for a digital wellness curriculum in schools, and whether it is implemented widely and appropriately is untested.
- **The effective lever sits outside the regulator's reach:** Digital literacy runs through school systems and recreational space runs through municipalities, while enforcement powers sit with technology and data protection regulators.
- **The argument does not absolve platforms:** Platform responsibility survives intact, and the contest is over which lever produces a safer child rather than over whether platforms owe anything at all.

Conclusion

Child online safety is presently measured by the number of controls a service ships. The better measure is what a child is able to do when a control fails, and the settlement model produces no information about that at all. The capability side of the problem belongs to schools, parents and municipalities. The enforcement side belongs to a technology regulator, and nobody owns the gap between the two.

Child Online Safety in India

- **What the field covers:** The rules governing children's access to online services, the data those services may collect about a child, and the content they may direct at one.
- **How India regulates it:** Through due diligence obligations on intermediaries under technology law and consent rules under data protection law, rather than through a single children's online safety statute.
- **Who counts as a child:** Indian data protection law treats every person below 18 as a child, a higher threshold than the 13 year line used in United States children's privacy law.

Laws and Rules Governing Child Online Safety

- **Information Technology Act, 2000, amended in 2008:** The parent statute for offences committed through a computer resource, carrying Section 66D on cheating by impersonation and Section 69 on interception.
 - Section 67B separately punishes publishing or transmitting material depicting children in sexually explicit acts.
- **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, amended in 2023:** Impose due diligence, grievance redressal and content takedown obligations on intermediaries.
- **Digital Personal Data Protection Act, 2023, with the Digital Personal Data Protection Rules, 2025:** Govern consent, data fiduciary duties, breach notification and the Data Protection Board of India.
 - Section 9 requires verifiable parental consent before a child's personal data is processed, and bars tracking, behavioural monitoring and advertising targeted at children.
- **Protection of Children from Sexual Offences Act, 2012:** Defines and punishes sexual offences against persons below 18, covers offences committed using electronic material, and makes reporting mandatory.

PREVIOUS YEAR QUESTION

[2024, GS3, 10 marks] Describe the context and salient features of the Digital Personal Data Protection Act, 2023

18. [Editorial] State of exception

Why in the News

The United Nations Committee on the Elimination of Racial Discrimination (CERD) has expressed “grave concern” at reports of the law enforcement apparatus resorting to violence, physical and otherwise, against minority ethnic and ethno religious groups, Dalits and non citizens. This is India’s first review by the Committee since 2007, and India ratified the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD) in 1968. The Committee also recorded that India has not provided detailed and updated information on the state’s inquiries and sanctions arising from allegations of such violence. The government’s position before the Committee is that caste bias falls outside Article 1 of the Convention because caste is not synonymous with race. The Committee has read the Convention as covering all forms of discrimination based on inherited status. The tension is between a state defending a definitional boundary to keep caste a domestic matter and a treaty body reading descent into the Convention to bring caste inside international scrutiny.

What is the Committee on the Elimination of Racial Discrimination?

- **A treaty body:** CERD is a body of independent experts that monitors how states that have ratified ICERD implement it.
- **Periodic review:** States file periodic reports and the Committee issues concluding observations recording its concerns and its recommendations.
- **No enforcement power:** Concluding observations are not binding and carry no sanction, so their effect runs through the reporting obligation and reputational exposure.

Why does the caste and race question decide the Committee’s jurisdiction?

- **The government’s reading:** Article 1 of ICERD defines racial discrimination by race, colour, descent, and national or ethnic origin, and the government argues that caste is not race and therefore sits outside that definition.
- **The Committee’s reading:** The Committee treats discrimination based on inherited status as covered, which brings caste within the Convention through the descent limb rather than the race limb.
- **What actually turns on it:** If caste falls outside Article 1, India owes the Committee no account of caste discrimination at all, so the argument is jurisdictional rather than semantic.
- **The scale of what the technicality would exclude:** The position would place the situation of 200 million Dalits beyond the reach of international review. The underlying facts would remain undisputed.

What specific practices did the Committee flag?

- **Manual cleaning of sewers:** The practice continues despite a law prohibiting it.
- **Treatment of Rohingya Muslims:** Hate speech against them, their poor living conditions, and their mass refoulement, meaning return to a territory where they face persecution.
- **Citizenship deprivation:** Mass deprivation of citizenship through the National Register of Citizens (NRC).
- **Electoral roll deletions:** Large scale deletions arising from the Special Intensive Revision (SIR) of electoral rolls.
- **Statutes used against civil society:** Use of the Foreign Contribution (Regulation) Act, 2010, the Unlawful Activities (Prevention) Act, 1967, the Armed Forces (Special Powers) Act,

1958 and the Prevention of Money Laundering Act, 2002 to hamper the work of civil society organisations.

- **A gap in the criminal code:** The Bharatiya Nyaya Sanhita, 2023 does not expressly criminalise racist hate speech.
- **Exemptions in forest law:** The Forest (Conservation) Amendment Act, 2023 exempts “national security” projects from consultative decision making.

Why is the data gap the enabling condition?

- **Enumeration is overdue:** A much delayed Census means suitably disaggregated data on disenfranchised communities does not exist in current form.
- **Crime data arrives late:** Slow release of National Crime Records Bureau (NCRB) data delays any independent check on recorded offences against Scheduled Castes and Scheduled Tribes.
- **Special measures run on stale figures:** Affirmative action is being implemented on 2011 Census data, which can mask a regression in the socioeconomic status of Scheduled Tribes and Adivasis.
- **The effect is no longer administrative:** The absence of data has moved past lethargy into actively impeding independent verification of the state’s own claims about fighting caste and faith based discrimination.

What has happened to the domestic accountability machinery?

- **Accreditation at risk:** The Global Alliance of National Human Rights Institutions (GANHRI), the peer body that accredits national human rights institutions against the Paris Principles, recommended a downgrade of the National Human Rights Commission (NHRC) last year.
- **The stated grounds:** The appointment of police officers to investigative roles within the Commission, and a lack of pluralism in its composition.
- **The consequence:** With the domestic institution weakened, a treaty body review becomes the surviving external check rather than a supplement to a working domestic one.

Domestic matter or international accountability?

- **The sovereignty claim:** The government treats the caste question as an internal matter and has dismissed the Committee’s concerns as politically motivated.
- **The counter position:** A definitional objection raised at the treaty body removes an entire class of discrimination from review without disputing that the discrimination occurs.
- **Who is left carrying it:** With the state contesting jurisdiction, the work of raising these issues in multilateral fora falls to civil society organisations, which are themselves the subject of the Committee’s concern about the use of regulatory and criminal law against them.

What does the road ahead require?

- **Institutional independence:** Restoring the independence of the NHRC, beginning with the composition and appointment concerns that triggered the accreditation review.
- **Criminal law:** Expressly criminalising racist hate speech, which the current code does not do.
- **Affirmative action:** Supportive affirmative action, extended rather than narrowed, for the communities the measures are meant to reach.
- **Data:** Collecting and publishing disaggregated data on the affected communities.

- **Electoral process:** Improving the transparency of electoral roll revisions.
- **Enforcement:** Strengthening enforcement of existing protective law overall.

Challenges to treaty body review as a check on caste discrimination

- **No individual complaint route:** India has not made the declaration under Article 14 of ICERD, so an individual or a group in India cannot petition the Committee directly. Eg. States that have made the Article 14 declaration allow individual communications, and India's absence from that list leaves domestic courts as the only forum. Fix. Make the Article 14 declaration, which is a unilateral act requiring no amendment to the Convention.
- **The evidence base is state controlled:** The Committee reviews what the state chooses to report, so a gap in official data becomes a gap in the review itself. Eg. Shadow reports by non governmental organisations are the main corrective, which is why restrictions on their foreign funding directly shape what the Committee sees. Fix. Require the state report to be tabled domestically before submission, so its omissions are contested at home first.
- **Long reporting gaps defeat periodicity:** The Convention requires reports every two years and states file many years late with no consequence. Eg. Several states parties carry reports overdue by more than a decade on the Committee's own schedule. Fix. Apply the review in the absence of a report procedure on a fixed timetable, so a missing report does not postpone scrutiny.
- **Recommendations have no domestic legal effect:** A concluding observation creates no right enforceable in an Indian court, since a treaty requires enabling legislation

under Article 253 of the Constitution to become domestic law. Eg. Courts have used unincorporated treaty obligations as an interpretive aid rather than as a source of enforceable rights, as in *Vishaka v. State of Rajasthan* (1997). Fix. Route the recommendations through the NHRC's statutory annual report to Parliament, so each produces a documented government response.

Conclusion

The dispute is not over whether the discrimination occurs but over whether an international body may examine it, and the two positions cannot both hold: a Convention read to cover inherited status, and a state reading that places caste outside its scope. What keeps the disagreement unresolvable is that the evidence which would settle either claim is the same disaggregated data the state has not produced.

Back2Basics

National Human Rights Commission (NHRC) - Statutory basis: It was constituted under the Protection of Human Rights Act, 1993. - **Composition:** It is chaired by a former Chief Justice of India or a former judge of the Supreme Court, with members including a serving or former Chief Justice of a High Court and persons with knowledge of human rights. - **Powers:** It inquires into complaints of human rights violation, exercises the powers of a civil court during inquiry, and may visit places of detention. - **Recommendatory character:** Its findings are recommendations to the government concerned, which must report the action taken, and the Commission cannot enforce them itself.

PREVIOUS YEAR QUESTION

[2023, GS1, 15 marks] Why is caste identity in India both fluid and static?

19. [Editorial] Red label for salt, sugar and fat is a good start

Why in the News

The Food Safety and Standards Authority of India (FSSAI) has proposed **front-of-pack warnings** (mandatory cautions printed on the front face of a packet, not in the nutrition table on the back) in the form of **red hexagonal labels** on packaged food high in sugar, refined carbohydrates, salt and unhealthy fats. Sweetened beverages will carry a separate warning. The proposal follows the Supreme Court pulling up the food regulator for failing to move on warning labels. The stakes are set by child obesity: India now ranks second globally, after China, for the number of children who are overweight or living with obesity. The unresolved question is whether a label can alter eating behaviour that is shaped by income, awareness and faith, or whether it only marks out harmful products for those already inclined to avoid them.

Can a warning label change what people actually eat?

- **The case for scepticism:** Eating behaviour is complex and shaped by gender, economic wherewithal, awareness and faith-based restrictions, so a label competes with several stronger determinants of choice.
- **The evidence from Chile:** Chile recorded a **24 per cent drop** in sugary drink consumption after it introduced black octagonal warning labels on packages in 2016, which shows that a clear front-of-pack warning can shift consumption.
- **Why the earlier star design failed:** An earlier FSSAI proposal for a **health star rating** was criticised because stars are perceived as positive. Warning labels bearing stars have been associated with increased consumption of unhealthy foods, so clarity and legibility decide whether a label warns or advertises.

Why can a label be only one part of the response?

- **A double burden:** The obesity epidemic exists alongside malnutrition, so a policy that only discourages excess consumption addresses one half of India's nutrition problem.
- **The broader public-health response:** The label must sit inside three further measures, raising nutritional awareness, stronger regulation of junk food, and nudges towards healthier lifestyles.

- **What a label can honestly claim:** A red label on a packet will not by itself make people eat better. Its value lies in making it easier to tell healthy choices from harmful ones at the point of purchase.

Challenges to the front-of-pack warning label proposal

- **No notification or timeline yet:** The proposal has not been notified and the implementation timeline is still awaited, so the regulator's intent has no legal force. Eg. FSSAI's 2022 draft for an Indian Nutrition Rating star label was never operationalised and has now been replaced by this proposal. **The Fix:** Notify the regulation with dated phases so manufacturers and consumers have a fixed compliance calendar.
- **A threshold that misses single-nutrient products:** The first of two intended phases applies the label only where a product is high in two or more unhealthy ingredients, which leaves out products high in just one. Eg. A sweetened biscuit that is high in sugar but within limits for salt and fat would carry no warning in phase one. **The Fix:** Trigger the label on any single nutrient of concern crossing its limit, as Chile's per-nutrient octagons do.
- **A font too small to warn:** The proposed font size may be too small to be effective, so the label could exist on paper without being seen on the shelf. Eg. Chile fixes a minimum size for each octagon relative to the pack face so it cannot be shrunk into the design. **The Fix:** Prescribe a minimum label area as a share of the front panel rather than a point size alone.

Conclusion

A warning label sorts products, it does not by itself change appetite. The Chilean result shows the sort is worth doing when the mark is unambiguous. What decides the outcome now is the notification: the date it is issued, whether phase one keeps the two-ingredient threshold, and whether the font is large enough to be read. Those three details are what to watch when FSSAI publishes the final regulation.

Back2Basics: Food Safety and Standards Authority of India

- **Statutory basis:** FSSAI is a statutory body established under the Food Safety and Standards Act, 2006, which consolidated earlier food laws into a single regulator.
- **Ministry and location:** It functions under the Ministry of Health and Family Welfare and is headquartered in New Delhi.
- **Mandate:** It lays down science-based standards for food articles and regulates their manufacture, storage, distribution, sale and import, including labelling and display rules.

PREVIOUS YEAR QUESTION

[2024, GS2, 15 marks] In a crucial domain like the public healthcare system, the Indian State should play a vital role to contain the adverse impact of marketisation of the system. Suggest some measures through which the State can enhance the reach of public healthcare at the grassroots level.

20. The broken promise of right to work

Why in the News

Employment under India's rural work guarantee fell 68 per cent in July and August against the average of the preceding five years. The Viksit Bharat Guarantee for Rozgar and Aajeevika Mission (Gramin) (VB-GRAM G) Act, enacted by the Union government in December 2025 to replace the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA), came into implementation on 1 July. A three judge Supreme Court Bench led by the Chief Justice of India dismissed a petition on minimum wages in rural employment guarantee programmes on 21 August and sought a fresh one. The same Bench asked whether the right to work should be treated on par with Article 21, the fundamental right to life. The tension is that the right to work sits in the unenforceable Directive Principles, and the one statute that had converted it into a demand driven entitlement has been replaced by a law that caps funds and shifts cost onto the States.

What is the VB-GRAM G Act?

- **It replaced the 2005 employment guarantee law:** The Viksit Bharat Guarantee for Rozgar and Aajeevika Mission (Gramin) (VB-GRAM G) Act took over from MGNREGA with effect from 1 July.
- **Funding is capped rather than demand driven:** The Act places an arbitrary cap on funds instead of releasing money against work actually demanded.
- **The wage is not tied to a minimum wage:** The Act does not link its wage rate to any statutory minimum wage.

- **Areas can be denotified:** It carries provisions to denotify specified areas and exclude them from the scheme, which ends the universality MGNREGA carried.

What has happened to rural employment since 1 July?

- **Employment fell 68 per cent in July and August:** The comparison is with the average for those two months over the preceding five years.
- **The five year average was 3.44 crore households:** They generated about 44 crore person days of work in July and August.
- **This year the figures are 1.39 crore households and 14.94 crore person days:** The data are as on 31 August 2026 for 2026-27.
- **The decline predates the new law:** Households employed in those months fell steadily from 4.79 crore in 2021-22 to 2.44 crore in 2025-26 under MGNREGA itself.
- **Household earnings have halved:** Estimated total earnings of households in July and August fell to about half of the same months last year.

Why does the Constituent Assembly debate matter to the present dispute?

- **The disagreement was about placement, not value:** Most members agreed that a right to work was vital, and the argument was whether it belonged among the fundamental rights or in the Directive Principles of State Policy (DPSP), which are precepts for framing law rather than enforceable rights.
- **K.T. Shah argued for a fundamental right:** He held that the State needed a constitutional and positive legal mandate to guarantee socio-economic security to its citizens.
- **B.R. Ambedkar held it was not yet enforceable:** He treated the right to work as an essential goal whose immediate universal enforcement was not fiscally or institutionally viable in a newly independent India hollowed out of its resources.
- **The placement was aspiration, not abandonment:** Locating the right among the Directive Principles reflected a deliberate constitutionalism of aspiration rather than a rejection of the welfare ideal.

Which constitutional provisions carry the right to work?

- **Article 41 states the obligation:** The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work.
- **Article 39 covers livelihood and equal pay:** It directs the State towards an adequate means of livelihood and equal pay for equal work for both men and women.
- **Articles 42 and 43 cover conditions and wages:** They require just and humane conditions of work, and a living wage with a decent standard of life for all workers.

How did the aspiration become a statutory right?

- **Olga Tellis established the link to life:** In *Olga Tellis vs Bombay Municipal Corporation* (1985) the Supreme Court ruled that the right to livelihood was a necessary condition for the fundamental right to life.
- **Activists and rural workers drove the legislation:** The National Rural Employment Guarantee Act was passed in 2005 following their collective effort.
- **It made a pan-India right to work real for the first time:** The State carried a statutory obligation to provide employment at minimum wages.
- **The scope was always narrow:** The guarantee covered 100 days of work per rural household, and the programme was chronically underfunded.

What is wrong with the Bench's own remark on minimum wages?

- **The remark links a wage floor to fewer workers:** The Bench observed that if financial resources remained the same, a minimum wage threshold could reduce the number of workers who could be given employment.
- **It cuts against Sanjit Roy:** In *Sanjit Roy vs State of Rajasthan* (1983) the Supreme Court held that payment below minimum wages violates Article 23 of the Constitution and is akin to forced labour.
- **It assumes a fixed budget:** The reasoning rests on the resources for a welfare programme remaining unchanged and constrained.
- **Higher wages raise demand, not only cost:** Higher rural wages increase purchasing power and effective demand for

goods and services, producing a multiplier effect on productivity.

How did the wage fall behind in the first place?

- **Wages were delinked from the wage law in 2009:** MGNREGA wages ceased to be tied to the Minimum Wages Act, 1948.
- **They barely kept pace with inflation:** The daily wage in July and August rose from Rs 210 in 2021-22 to Rs 282.5 this year. Person days collapsed over the same period.
- **They stayed below agricultural minimum wages:** The MGNREGA rate remained lower than the minimum agricultural wage in most States.
- **Women are increasingly unpaid family workers:** Rural wages have been stagnant for a decade, and women are recorded in growing numbers as working without pay within the household.

Why does the new Act face a constitutional objection?

- **Non-retrogression bars rolling a realised right back:** Once the State has reached a level of progressive legislation and enforceability of a right, it cannot adopt measures that deliberately undo it.
- **The Supreme Court affirmed the doctrine in *Navej Singh Johar vs Union of India*:** It operates as a check on State power, ensuring that rights once realised are not diluted later.
- **The replacement appears to breach it:** Substituting a demand driven statutory entitlement with a fund limited mission dilutes a right that had already been realised in law.
- **The fiscal shift compounds the problem:** States already face curtailed borrowing limits under the Fiscal Responsibility and Budget Management (FRBM) framework, and the new Act adds to what they must fund.

Challenges to the rural employment guarantee

- **A capped budget converts a guarantee into a scheme:** Work can be refused once the allocation is exhausted, so the entitlement lapses at the point demand peaks. Eg. MGNREGA allocations were routinely spent before the fourth quarter, leaving States carrying negative opening balances into the next year. **The Fix:** Treat the allocation as a first charge revised at the supplementary budget stage against verified work demand.
- **Wage payment delay destroys the incentive to seek work:** A worker who waits months for payment stops applying, and the falling application count is then read as falling need. Eg. Delayed wage payments under MGNREGA drew repeated censure from the Supreme Court and from parliamentary committees. **The Fix:** Release the statutory delay compensation automatically from the central account rather than on an individual worker's complaint.
- **Work demand is registered by the body that must then supply it:** A gram panchayat under budget pressure has an incentive not to record demand, so the shortfall never appears in the data. Eg. Dated receipts against work applications are prescribed by law and are rarely issued in practice. **The Fix:** Allow demand to be registered through an independent time stamped channel outside the implementing agency.
- **Social audit units depend on the governments they audit:** Their staff and budgets come from the State administration, which limits what they are able to report. Eg. Social audit units in several States operate well below their sanctioned

staff strength. **The Fix:** Fund social audit units through a ring fenced central allocation and place their findings before the State legislature.

- **Asset creation is measured by expenditure rather than durability:** A work is closed on payment rather than on verified usefulness, so the durable asset the programme exists to create goes unchecked. Eg. Comptroller and Auditor General audits of MGNREGA have repeatedly reported incomplete and unusable works. **The Fix:** Make geo-tagged completion and a one year durability check the condition for closing a work in the management information system.

Conclusion

An unenforceable directive principle survives only through the statute that implements it. India now has a rural work law that no longer carries the features which made the earlier one a right, and the collapse in employment is the first measurable consequence of that. What must change is that the wage be linked to a living wage standard, that payment be made on time, and that social audits be run by panchayati raj institutions holding real powers. These are the minimum conditions under which a work guarantee functions as a guarantee at all.

Back2Basics: Minimum Wages Act, 1948

- **Purpose:** It empowers the appropriate government to fix and revise minimum rates of wages payable in scheduled employments.
- **Dual authority:** Both the Centre and the States act as appropriate governments, each notifying rates for the employments within its own sphere.
- **Components of the wage:** A minimum wage may combine a basic rate with a cost of living allowance, so it moves as prices move.
- **Current status:** It has been subsumed into the Code on Wages, 2019, which extends a statutory floor wage across all employments rather than scheduled ones alone.

PREVIOUS YEAR QUESTION

[2011] Among the following who are eligible to benefit from the “Mahatma Gandhi National Rural Employment Guarantee Act”?

- (a) Adult members of only the scheduled caste and scheduled tribe households
- (b) Adult members of below poverty line (BPL) households
- (c) Adult members of households of all backward communities
- (d) Adult members of any household

Answer: (d)

INTERNATIONAL RELATIONS

21. [Editorial] Take Bishkek to BRICS

Why in the News

The Prime Minister addressed the **26th summit of the Shanghai Cooperation Organisation (SCO)** in Bishkek, Kyrgyzstan, with a speech built on two issues, connectivity and terrorism. The address comes as the five Central Asian states diversify their partnerships in every direction, away from sole dependence on their Soviet past and their economic links with Russia. India has strategic partnerships with every Central Asian country except Turkmenistan, which maintains permanent neutrality. The tension is that India's two priorities run into the SCO's own limits: geography denies India a land route, and the forum's political will against terrorism has weakened. The editorial's answer is to treat the multilateral forum as a venue for bilateral deals, and to carry that approach to the BRICS summit India will host.

Why is Central Asia's diversification an opening for India?

- **A region loosening one dependence:** Central Asia was shaped by its Soviet past and still maintains economic links with Russia, but its five countries no longer treat Moscow as their sole partner.
- **China, Iran and the Gulf as alternatives:** The region now looks to China for trade, investment and infrastructure, and to Iran and the Gulf for access to the south. The ongoing conflict complicates the southern route.
- **Shared security concerns:** The region's growing strategic importance and shared concerns, including terrorism, are what led India and all Central Asian states except Turkmenistan to establish **strategic partnerships**, which gives India standing before the summit began.

How can India build connectivity without a land route?

- **Geography blocks the direct routes:** There is no overland access through Pakistan, and Afghanistan's airspace remains beset by security risks. The absence of direct land access has constrained trade and wider economic and cultural engagement.
- **Connectivity as strategic geography:** Connectivity goes beyond roads and railways. It shapes the economic and strategic geography of Eurasia, so India must expand engagement in ways that overcome the limits geography imposes.
- **Start with what does not travel by road:** The starting point is products and services that do not depend on roads, namely services, digital systems and technological investments.

Why is the SCO a weak platform for India's terrorism agenda?

- **What India asked for:** The Prime Minister called on the international community to collectively dismantle the **ecosystem of terror**, including its financing and recruitment networks.
- **The will has weakened:** International political will against terrorism has weakened over the past year, and the forum reflects that shift.
- **Pakistan's recovered standing:** Over the past year Pakistan has largely overcome its diplomatic isolation, and it is set to assume the SCO's **rotational chairmanship**.
- **A forum that could not agree on words:** In June last year the SCO defence ministers could not agree on the references to terrorism in their joint statement.
- **China's financial weight:** China possesses greater financial resources than any other member and is heavily investing in Central Asian infrastructure under the Belt and Road Initiative, which sets the forum's centre of gravity.

Why should bilateral ties be the objective inside a multilateral forum?

- **Weight on individual partnerships:** Given the forum's limits, Delhi should place greater weight on its individual partnerships with member states.
- **The Uzbekistan uranium agreement:** The agreement with Uzbekistan on the **long-term supply of uranium** is a step in that direction.
- **Multi-vector actors want options:** Central Asian countries are emerging as multi-vector actors. They seek multiple options to improve market access rather than choosing between competing powers, and India should become one of those options.
- **The forum as a venue:** A multilateral forum like the SCO is best used to advance bilateral relationships, and that is the strategy to carry forward to BRICS as India prepares to host its **18th summit**.

Conclusion

The SCO no longer delivers on India's terrorism agenda, and geography limits what it can deliver on connectivity. What remains useful is the room the summit gives India to sign with individual member states. The test of that approach is whether the BRICS summit in New Delhi produces bilateral agreements of the Uzbekistan uranium kind rather than only a joint declaration.

Back2Basics: Shanghai Cooperation Organisation

- **Origin:** Founded in 2001 in Shanghai, growing out of the Shanghai Five grouping of 1996 that settled border issues between China, Russia and three Central Asian states.
- **Membership:** Ten members, China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, India, Pakistan, Iran and Belarus. India and Pakistan joined in 2017, Iran in 2023 and Belarus in 2024.

- **Structure:** The Secretariat is in Beijing and the Regional Anti-Terrorist Structure is in Tashkent. The chairmanship rotates annually among members, and the chair hosts the next summit.

PREVIOUS YEAR QUESTION

[2026, GS2, 10 marks] "IPMDA (Indo-Pacific Partnership for Maritime Domain Awareness) bridges the gap between India's SAGAR (Security and Growth for All in the Region) vision and the Quad's collective Indo-Pacific strategy." Make a critical assessment of the statement focusing on IPMDA.

22. India rejects Hague court's Indus Waters Treaty ruling, says it has no jurisdiction

Why in the News

The Permanent Court of Arbitration at The Hague has held that the Indus Waters Treaty, 1960 remains "fully in force". The award directs India to observe its obligations under the treaty, including those on the design and operation of its hydro-electric projects on the Western Rivers. It also imposes interim measures barring India from concreting the Ratle Hydro-Electric Plant dam wall and power intake structure above certain levels until 90 days after the Neutral Expert's final decision, expected in July 2027. The award answers India's decision to hold the treaty in abeyance after the Pahalgam terror attack, a decision the tribunal examined and found unsupported by any of the grounds advanced. The Ministry of External Affairs has rejected the award in full and described the tribunal as illegally constituted in breach of the treaty. The tension is that the award's own expiry is keyed to the Neutral Expert, the one forum India does take part in, so two processes now govern the same dam on incompatible terms.

What did the arbitral award decide?

- **The treaty was held to remain in force:** The Court of Arbitration found that the Indus Waters Treaty, 1960 continues to bind both parties in full.
- **No ground for abeyance was accepted:** It examined the reasons India advanced for placing the treaty in abeyance and held that none of them could justify suspension or termination.
- **The award covers status and interim relief together:** It was issued as the Status of the Indus Waters Treaty and Order on Interim Measures concerning the Ratle Hydro-Electric Plant.
- **The construction limits were unanimous:** The Court decided without dissent to bar concreting of the Ratle dam wall and power intake structure above specified levels.
- **The relief was granted on Pakistan's application:** The tribunal was acting on Pakistan's plea both on the status of the treaty and on measures concerning the Ratle project.

On what grounds does India reject the tribunal?

- **The tribunal's establishment is itself called a treaty violation:** The Ministry of External Affairs holds that the very establishment of the arbitral body is a grave violation of the Indus Waters Treaty, 1960.
- **The World Bank is said to have acted beyond the treaty:** The Ministry states that the court was constituted by the World Bank in patent breach of the terms of the treaty.
- **Non-participation has been consistent:** India has never recognised this body in law. It has never appeared before the tribunal and takes no cognisance of its pronouncements.

- **Jurisdiction over a sovereign decision is denied:** The Ministry holds that the court cannot pronounce on India's sovereign decisions, and that its orders will have no effect on the projects India is undertaking.
- **The abeyance decision stands:** India has reiterated that its decision to hold the treaty in abeyance remains in force.

Why does the treaty's dispute ladder produce two forums at once?

- **The Permanent Indus Commission is the first step:** The treaty requires the commissioners of both countries to take up a question before any external forum is approached.
- **A Neutral Expert settles a technical difference:** Article IX sends a listed technical question to a Neutral Expert appointed by the World Bank, whose decision is final and binding on the points referred.
- **A Court of Arbitration settles a legal dispute:** A matter outside the Neutral Expert's list goes to a seven member Court of Arbitration under Annexure G, with two arbitrators named by each country and three umpires.
- **Both forums were seized of the same projects:** The World Bank appointed a Neutral Expert and constituted a Court of Arbitration in 2022 over the Kishenganga and Ratle projects, on separate requests made by India and by Pakistan.
- **The award defers to the forum India accepts:** The tribunal tied the expiry of its own interim measures to the Neutral Expert's ruling, so the body India rejects has made its order run on the timetable of the process India joined.

Challenges to India's abeyance of the Indus Waters Treaty

- **The treaty text carries no exit or suspension clause:** Article XII permits termination only through a ratified treaty between both governments, so abeyance is a position asserted outside the instrument rather than a right within it. Eg. The treaty survived the conflicts of 1965, 1971 and 1999 without either side suspending it. **The Fix:** Convert the position into a formal proposal for modification under Article XII and open the negotiation that article provides for, so the claim rests on a treaty route rather than outside one.
- **Storage capacity does not exist to give the position effect:** India's permitted storage on the Western Rivers is largely unbuilt, so withholding water is not physically available even where it is legally asserted. Eg. The Indus system carries roughly 135 million acre feet a year, and India's live storage on the Western Rivers is a small fraction of that volume. **The Fix:** Complete the permitted storage and flushing works on the Chenab and the Jhelum first, so the legal position is matched by works that can act on it.

- **Non-appearance leaves the record to one side:** A tribunal proceeding in the absence of a party decides on the evidence only the other party filed. Eg. India did participate in the Kishenganga arbitration, and the 2013 award fixed a minimum environmental flow India was able to build to. **The Fix:** Enter a limited appearance contesting jurisdiction alone, which preserves the objection and still puts India's technical record before the tribunal.
- **India is a lower riparian on another transboundary system:** A precedent for unilateral suspension by an upper riparian is one India is exposed to on the rivers that reach it from Tibet. Eg. The Brahmaputra rises in Tibet and India has no water sharing treaty with China, only memoranda on hydrological data sharing. **The Fix:** Pair the treaty position with a push for a binding flow and data guarantee on the Brahmaputra, so the standard India asserts is one it also demands.
- **The first cost of restricting flows lands inside India:** Holding back water without storage backs it up in Jammu and Kashmir and Punjab rather than in Pakistan. Eg. Reservoir flushing at Salal and Baglihar in May 2025 altered flows on the Chenab for a matter of days before normal releases resumed. **The Fix:** Confine any restriction to the desilting and flushing operations the treaty already permits, which recover generation capacity without creating an upstream flood risk.

Conclusion

India and the tribunal are now operating on premises that cannot both hold. One holds that the treaty binds and that the abeyance changes nothing. The other holds that the tribunal has no legal existence and that its orders change nothing. The unresolved tension is that both positions point at the same dam, and neither side controls a mechanism that can make the other's position irrelevant.

Back2Basics: Permanent Court of Arbitration

- **Establishment:** Created by the Hague Convention for the Pacific Settlement of International Disputes, 1899, making it the oldest standing institution for international dispute settlement.
- **Seat:** It is headquartered at the Peace Palace in The Hague, Netherlands.
- **What it is not:** It is neither a court with sitting judges nor a United Nations body. It supplies a registry and a panel of arbitrators for tribunals the parties themselves constitute.
- **India's link to it:** India is a party to the 1899 Convention, and the institution provides registry services for tribunals formed under the Indus Waters Treaty, 1960.

PREVIOUS YEAR QUESTION

[2016, GS1, 12.5 marks] Present an account of the Indus Water Treaty and examine its ecological, economic and political implications in the context of changing bilateral relations.

23. 'Bihar's concerns on Ganga treaty will be considered'

Why in the News

The External Affairs Minister has written that India will decide on the renewal of the **Ganga Water Treaty, 1996** with Bangladesh while keeping Bihar's interests in consideration. The letter answers a Janata Dal (United) Member of Parliament, a former Bihar Water Resources Minister, who had called on the government not to renew the treaty on the ground that it had negatively impacted the State. The treaty expires on **31 December 2026**, and its renewal is one of the major items on this year's diplomatic calendar for the two countries. The tension is that a bilateral instrument negotiated as a foreign policy commitment is now being contested by the riparian State that says it carries the domestic cost of that commitment.

What is the India-Bangladesh Ganga Water Treaty, 1996?

- **What it does:** It governs the sharing of Ganga waters between India and Bangladesh at the **Farakka Barrage** in West Bengal during the dry season, from **1 January to 31 May** each year, when flows are lowest and competition for water is sharpest.
- **How the sharing works:** Availability at Farakka is measured in **ten day cycles**, and the water is divided between the two countries according to a formula fixed to the flow observed in that cycle rather than to a fixed annual quantity.
- **Its term and oversight:** The treaty was signed for **30 years**, and a **Joint Committee** of officials from both countries observes flows at Farakka and reports on implementation.

What is Bihar's objection to renewal?

- **The State says the costs fall upstream:** Maintaining the assured flow at Farakka is held to have contributed to **silt accumulation upstream** in Bihar's stretch of the Ganga, raising the riverbed and worsening flooding.
- **The demand is framed as an entitlement, not a concession:** Bihar is described as asking only for what its own scientific assessment establishes, so that **13 crore people** are not left short of water for drinking, irrigation and industrial supply for another 30 years.
- **The characterisation of the original bargain:** The treaty is described as a remnant of the **Gujral Doctrine** era, which projected a generous image of India in the neighbourhood without serving Bihar's interests.
- **The demand itself:** Reading the data across the treaty's 30 years, the State's position is that India should allow the treaty to lapse rather than renew it.

How does the Centre say the decision will be taken?

- **The process is inter ministerial, not purely diplomatic:** Consultations involving relevant stakeholders have been held under the leadership of the **Ministry of Jal Shakti** to ensure broad based consultation on the future of the treaty.
- **Bihar was represented in them:** An authorised representative of the Government of Bihar participated in consultations held on **22 August 2023, 30 October 2023, 15 March 2024 and 31 May 2024**.

- **No decision has been announced:** The stated position is that the government will take the appropriate decision while keeping these factors in focus.

Why does the renewal question arrive at a difficult bilateral moment?

- **Political contact between the two governments has thinned:** The renewal is in focus partly because top level political meetings between India and Bangladesh have not been taking place.
- **A planned visit collapsed:** Talks for a New Delhi visit by Bangladesh's Prime Minister broke down over a virtual press conference given in New Delhi by the deposed former Prime Minister of Bangladesh.
- **The clock is fixed while the diplomacy is not:** The expiry date is unaffected by the state of political contact, so the negotiating window narrows regardless of whether high level engagement resumes.

Challenges to renewing the Ganga Water Treaty

- **The treaty measures flow but does not allocate sediment:** A water sharing formula fixed to discharge at a barrage says nothing about the silt that the same regime deposits upstream. Eg. Bihar's objection turns on riverbed aggradation upstream of Farakka rather than on the volume of water it receives. **The Fix:** Add a sediment management protocol to the renewed instrument, with joint measurement of bed levels upstream and downstream of the barrage.
- **A riparian State bears the cost of a Union treaty with no channel to price it:** Foreign affairs is a Union subject while water is a State subject, so the State that absorbs the consequence has no formal standing in the negotiation. Eg. Bihar's participation here was through inter ministerial consultations, which are advisory and produce no binding record of its position. **The Fix:** Institutionalise a standing riparian States consultation under the Ministry of Jal Shakti for every transboundary river negotiation, with its recommendations placed on record before signature.
- **The lean season formula does not survive a drying trend:** A sharing arrangement written around observed historical

flows becomes unworkable when the flows themselves decline. Eg. Reduced Himalayan glacier melt contribution and increased upstream withdrawal both cut dry season discharge in the Ganga basin. **The Fix:** Build a variable review clause into the renewed treaty, triggering renegotiation when measured dry season flow falls below a defined threshold for consecutive years.

- **The basin is shared by more than two countries:** Bilateral treaties on a river rising in Nepal and China cannot govern the augmentation that would actually solve the shortage. Eg. Proposals to augment lean season Ganga flow depend on storage in Nepal, which is not a party to this treaty. **The Fix:** Pursue a basin level arrangement in parallel, beginning with data sharing and joint storage feasibility studies with Nepal.
- **Non renewal is not a costless option:** Allowing the treaty to lapse removes the only agreed mechanism regulating dry season flows and hands the issue to unilateral action. Eg. The pre 1996 period saw recurring disputes over Farakka withdrawals with no settled sharing formula. **The Fix:** Treat renegotiation on revised terms, rather than lapse, as the fallback position, so the sharing mechanism survives while the formula changes.

Conclusion

The dispute is not really about whether the treaty is renewed. It is about the absence of a mechanism to price a domestic cost inside a foreign policy decision. A State that carries the physical consequence of a river agreement participates only through consultations that leave no binding record of what it asked for and no obligation to answer it. What to watch is whether the scientific assessment Bihar rests its case on is placed on the record of the negotiation, since a claim that is never formally examined cannot be formally rejected either.

PREVIOUS YEAR QUESTION

[2026, GS1, 10 marks] "Water resources are both an asset and a source of conflict in South Asia." Examine this statement giving examples.

24. Released: New 'Raksha' framework for defence diplomacy over next decade

Why in the News

The Defence Minister has released Raksha, a strategic framework setting out India's road map for defence diplomacy and global defence partnerships over the next ten years. It seeks to align national security objectives with international cooperation, and lays down an actionable vision aimed at long term stability, stronger partnerships and a larger Indian role in an evolving global security environment. Defence diplomacy has until now been conducted visit by visit and agreement by agreement. A published decade long framework fixes the objective and the pillars, and the document carries no stated budget, owner or reporting duty against which it can be measured.

Pillars of the Raksha framework

- **Bilateral and multilateral defence partnerships:** Deepening defence relationships with individual states and within groupings is the first stated pillar.
- **Joint military exercises:** The framework provides for expanding the scale and range of joint exercises with partner forces.
- **Capacity building with friendly countries:** Training and capability assistance to partner militaries is treated as a distinct instrument rather than a by-product of exercises.
- **Indigenous defence exports and maritime security:** Promoting exports of indigenously developed systems under Make in India, and strengthening maritime security, complete the set of pillars.

How does the framework use defence exports as a diplomatic instrument?

- **The industrial objective is tied to the diplomatic one:** Export promotion is placed inside a diplomacy document, so a sale is treated as a partnership rather than as a transaction.
- **The positioning sought:** The framework seeks to establish India as a reliable global defence manufacturing partner.
- **The route named:** International cooperation is to be expanded around indigenously developed defence technologies, rather than around licensed or assembled platforms.

What does the net security provider role commit India to?

- **A first responder duty:** The framework places India as a net security provider and first responder in the Indian Ocean Region, which requires capacity to act before a partner state formally requests help.
- **A stated regional commitment:** The road map records a commitment to ensuring peace, stability and security across the region.
- **Maritime security as the operating theatre:** The Indian Ocean Region framing makes the maritime domain the principal arena in which the other pillars are exercised.
- **A decade long planning horizon:** A ten year design replaces case by case engagement, which changes what can be promised to a partner and over what period.

Challenges to India's defence diplomacy

- **Exports remain concentrated in low value items:** Much of India's defence export value is components and subsystems supplied to foreign manufacturers rather than complete platforms. Eg. Aerostructures, forgings and subsystems account for a substantial share of the export figure India reports each year. **The Fix:** Set platform level export targets by category in the framework's review, reported separately from the aggregate value.
- **Capacity building commitments outrun training capacity:** Offering training slots to partner militaries requires physical capacity at Indian institutions, which is finite and allotted well in advance. Eg. Foreign officer vacancies at Indian staff and war colleges are limited and booked years ahead. **The Fix:** Fund dedicated foreign trainee capacity at named institutions inside the framework, rather than from existing service training budgets.
- **First responder assets are committed elsewhere:** The same ships and aircraft carry out relief, escort and patrol tasking in overlapping waters. Eg. Naval units deployed for anti piracy

escort in the western Indian Ocean are the units nearest to most regional relief tasks. **The Fix:** Ring fence a standing humanitarian assistance and disaster relief task group with pre positioned stores in the region.

- **Export promotion collides with partner sensitivities:** A sale to one regional state can strain relations with its rival, which turns a commercial decision into a political one. Eg. India's supply of BrahMos missiles to the Philippines drew objections from China. **The Fix:** Publish a case by case political clearance process for defence exports, so industry can price the risk of refusal before bidding.
- **A framework document carries no reporting duty:** A ten year horizon with no interim review point cannot be tested against performance at any stage before it ends. Eg. The document states pillars without naming an annual reporting mechanism against them. **The Fix:** Fix a mandatory annual report against each pillar, carrying indicators for exercises held, officers trained and export value.

Conclusion

Defence diplomacy has been run through individual visits, exercises and agreements decided one at a time. A published decade long framework changes the planning horizon and states the objective, and it does not by itself create an institution to execute it. The marker to watch is whether the framework acquires a named owner and an annual review reporting against each pillar, or remains a statement of direction.

Back2Basics: Net security provider

- **What the term means:** A state that supplies security to others in its region, rather than only securing itself, through presence, capability and assistance extended to partner states.
- **How India uses it:** The formulation entered Indian strategic vocabulary around 2009 and is applied to the Indian Ocean Region, where India's navy is the largest resident force.
- **What it involves in practice:** Anti piracy patrols, humanitarian assistance and disaster relief, evacuation of nationals, hydrographic survey support and maritime domain awareness shared with partner states.
- **The policy vehicles:** The Security and Growth for All in the Region (SAGAR) vision, the Indian Ocean Naval Symposium, and coastal radar chains built for partner countries.

PREVIOUS YEAR QUESTION

[2025, GS3, 15 marks] Why is maritime security vital to protect India's sea trade? Discuss maritime and coastal security challenges and the way forward.

25. 'UN Convention on the Law of the Sea is still the constitution of oceans'

Why in the News

The United Nations Convention on the Law of the Sea (UNCLOS) remains the governing framework for the world's oceans, in the assessment of Tommy Koh. He presided over the Third United Nations Conference on the Law of the Sea, and led more than 150 nations to adopt the Convention in 1982. He is among this year's Ramon Magsaysay award winners. He puts the number of parties at 172 and treats that as near universal. The United States has never ratified the Convention and still regards it as the authoritative law of the sea. Iran is not a party either, and the regime of transit passage binds it as customary international law. The Convention's authority is therefore being tested in the Strait of Hormuz against a state that never accepted the treaty.

What is UNCLOS?

- **What it is:** A comprehensive treaty setting the legal order for the world's oceans, adopted in 1982 after nine years of negotiation and in force since 1994.
- **What it allocates:** It fixes the maritime zones a coastal state may claim and the rights it holds in each, running outward from the territorial sea to the exclusive economic zone, the continental shelf and the high seas.
- **What it does with the deep seabed:** Part XI treats the deep seabed and its minerals as the "common heritage of mankind", to be administered for all states rather than claimed by any one of them.
- **Why it is described as a constitution:** It settles jurisdiction, resource rights and dispute settlement in one instrument, so later ocean agreements are negotiated inside its framework rather than beside it.

Why has the United States never ratified UNCLOS?

- **The objection was to the seabed regime, not to the law of the sea:** The Reagan Administration rejected Part XI as incompatible with free enterprise and private property norms.
- **It reversed an earlier American position:** The stance taken during the Carter Administration was changed under President Reagan, and the demands that followed were rejected by the developing countries.
- **The 1994 repair did not change the outcome:** A separate agreement in 1994 revised the Part XI arrangements to meet those objections, and ratification still did not follow.
- **Non ratification is not confined to one objector:** Iran and a number of other states have also stayed outside the Convention.

What binds a state that is not a party?

- **The count itself does the work:** With 172 parties, the Convention's rules describe general state practice rather than the internal arrangements of a treaty club.
- **Custom reaches the non party:** Transit passage through international straits has passed into customary international law, so it binds Iran although Iran never joined the Convention.
- **The dispute is political rather than legal:** There was no trouble in the Strait of Hormuz before the war, so the priority is ending the war rather than rewriting the law that governs the strait.

- **A fourth conference answers the wrong question:** Reopening the Convention to bring the remaining states in would put a settled architecture back on the negotiating table, and near universal participation already exists without it.

Where does the Convention not reach?

- **Dark fleet enforcement is happening outside it:** States are designating vessels as a "dark fleet" and taking punitive material action against them, including on the high seas.
- **The forum named for that problem is the IMO:** The International Maritime Organization, rather than a law of the sea conference, is where the practice should be addressed.
- **Boundary disputes are read as application, not failure:** Exclusive economic zone and seabed contests in the South China Sea and over Indian Ocean boundaries are treated as arguments inside the Convention's architecture rather than as evidence that the architecture has stopped working.

Conclusion

A treaty honoured by states that never signed it is strong in one sense and weak in another. Its rules describe how states actually behave, which is precisely what turns them into custom. It carries no way of compelling a state that decides to behave differently, because the states outside it are the ones its dispute settlement machinery cannot reach. That gap is where a closed strait sits, and no further round of accessions would close it.

Back2Basics: International Maritime Organization

- **What it is:** The United Nations specialised agency responsible for the safety and security of shipping and for preventing marine pollution by ships.
- **When it was established:** It was created by a convention adopted in 1948, began functioning in 1959, and is headquartered in London.
- **What it produces:** Its principal instruments are the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL).
- **How it enforces:** It sets standards that flag states then apply to ships registered with them, so it regulates through member state implementation rather than by direct enforcement at sea.

PREVIOUS YEAR QUESTION

[2022] With reference to the United Nations Convention on the Law of Sea, consider the following statements :

1. A coastal state has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baseline determined in accordance with the convention.
2. Ships of all states, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.
3. The Exclusive Economic Zone shall not extend beyond 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Which of the statements given above are correct ?

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

Answer: (d)

26. 'Early Harvest' - larger but not necessarily safer

Why in the News

An **"Eight Points of Outcomes and Consensus"** released a day after the **25th round of India-China Special Representatives (SR) talks** in Beijing revived the phrase **"Early and Substantial Harvest"** on the boundary question, which the readouts issued on the evening of the talks had avoided. Point 3 tasked the **Expert Group on Boundary Delimitation** and the **Working Group on Border Management** with advancing those discussions (The Hindu, 3 September 2026).

About the Special Representatives mechanism

- **What it is:** The designated political channel for the India-China boundary question, set up in 2003; India is represented by the **National Security Adviser** and China by its Foreign Minister.
- **Working Mechanism for Consultation and Coordination (WMCC):** The official level channel, set up in 2012, that manages border affairs between the two foreign ministries; the Expert Group and the Working Group were created under it a year ago and have yet to agree on their own terms of reference.
- **Early Harvest:** India's own coinage for an early settlement of the less contested stretches, chiefly the **Sikkim sector**, ahead of the Western (Ladakh) and Eastern (Arunachal Pradesh) sectors.

PREVIOUS YEAR QUESTION

[2026, GS2, 15 marks] "China's Belt and Road Initiative (BRI) has transformed South Asia from a regional space into a theatre of great power competition." Analyse the strategic implications of the BRI for India's security and regional influence in South Asia.

ENVIRONMENT

27. [Op-ed] The two balance sheets behind every e-waste decision

Why in the News

Governments and companies replace thousands of computers, servers, networking devices and storage systems every few years, and this discarded equipment holds copper, aluminium, gold, silver, palladium and critical minerals. Advanced recycling of such equipment has still not become the default choice in India. The reason is that procurement in both the public and private sectors rewards the lowest visible cost at the point of disposal. Every disposal decision creates two balance sheets, one financial and closed with the transaction, the other strategic and open long after it. The lowest-price principle that secures transparency and fiscal discipline in public procurement now sits in tension with the lifetime cost of decisions in electronics, batteries and renewable energy.

What is urban mining?

- **Definition:** Urban mining is the recovery of valuable materials from products that have already served their purpose, in place of extracting fresh ore from the earth.
- **The ore body:** Discarded IT equipment is among the largest untapped sources of strategic raw materials as economies digitise, and it is hazardous waste when poorly handled.
- **What safe recovery needs:** Sophisticated technology, secure data destruction, environmentally compliant processing and traceable supply chains, with collection and segregation adding to the cost.

Why has advanced recycling not become the default choice in India?

- **Procurement rewards the lowest visible cost:** Public and private buyers maximise resale value and minimise processing cost when they dispose of equipment.
- **Strategic value stays off the invoice:** Recovery of critical minerals, secure data destruction, environmental benefit and domestic industrial capability rarely appear in the price that decides the contract.
- **The gains accrue to others:** Less virgin mining, stronger domestic supplies of critical materials, lower import dependence and responsible handling of hazardous components are benefits the disposing organisation does not book.

What are the two balance sheets every disposal decision creates?

- **The first, financial and immediate:** Purchase price, resale value and savings achieved, all measurable, auditable and reflected in annual budgets.
- **The second, strategic and open ended:** It stays open long after the transaction and records resource security, environmental sustainability, industrial capability, supply-chain resilience, public health and national competitiveness.

- **Good governance manages both:** Some investments look expensive at first and later transform economies. Eg. Fifteen years ago solar power struggled to compete with conventional electricity on cost and governments that invested early were criticised for paying too much. Scale and learning have since made solar one of the world's cheapest sources of electricity, and countries that built manufacturing capacity early hold advantages a cost comparison could not have predicted.

How do the costs left off the invoice return later?

- **Recovery priced against disposal:** Investment in urban mining infrastructure looks expensive when judged only against the cost of disposing of a computer. The calculation changes when recovered materials, avoided imports, environmental safeguards, data security and future industrial capability are counted together.
- **Pollution becomes health-care expenditure:** The public health cost of unsafe processing lands on the exchequer years after the disposal saving was booked.
- **Resource depletion becomes import dependence:** Metals not recovered at home are bought abroad, raising manufacturing costs.
- **Weak domestic capability becomes strategic vulnerability:** An economy without recovery capacity depends on others for the materials its industry runs on.
- **Environmental costs turn economic:** Governments spend more on remediation, businesses face higher compliance costs and citizens pay through taxes and lost productivity. The costs are delayed or redistributed and rarely avoided.

What should an organisation ask before selecting a recycler?

- **Secure data destruction:** Whether sensitive data on the equipment is securely destroyed before any material moves.
- **Refurbishment before recycling:** Whether working equipment is refurbished for reuse before it is broken down for materials.
- **Efficient and transparent mineral recovery:** Whether critical minerals are recovered efficiently and the recovery is traceable.
- **The cost of skipping the questions:** A marginal gain today becomes tomorrow's cybersecurity risk, import dependence, reputational damage and permanent loss of strategic resources.

Can the lowest-price principle survive in sectors where acquisition cost is not lifetime cost?

- **What the principle protects:** Governments have relied on the lowest-price rule to ensure transparency and fiscal discipline in public spending.
- **Where it fails:** Renewable energy systems, batteries, electronics and advanced manufacturing are sectors where the lowest acquisition cost is rarely the lowest lifetime cost.

- **The alternative many countries have adopted:** Life-cycle costing (pricing an option across purchase, operation, disposal and recovery rather than at purchase alone) and value-based procurement ask which option delivers the greatest long-term public value. Procurement then becomes a tool of industrial policy that shapes which technologies scale and which capabilities are built.
- **The same logic in compliance markets:** Judging Extended Producer Responsibility (EPR, the obligation on a producer to finance the collection and recycling of the products it sells) compliance on the cheapest available certificate rewards the lowest-cost provider over the highest-quality outcome. Rewarding traceability, recovery efficiency and technological capability would instead draw investment into advanced recycling and strengthen India's domestic supply of critical minerals.

Challenges to urban mining of e-waste in India

- **Fake certificates break traceability:** An EPR certificate market cannot reward quality when the certificates themselves are unverified. Eg. The Central Pollution Control Board (CPCB) found over 600,000 fake recycling certificates in 2023 across Gujarat, Maharashtra, Karnataka. **The Fix:** Digitise certificate tracking against audited mass balance at each registered recycler, with cancellation of registration for a fake certificate.
- **A floor price too low to sustain formal recycling:** EPR pricing set below the cost of compliant recovery pushes material to informal and fraudulent channels. Eg. In April 2025 Daikin, Hitachi and Samsung sued the government opposing the mandated minimum recycler price. **The Fix:** Index the floor price to the audited cost of compliant recovery and revise it annually through a published formula.
- **Inefficient recovery loses the minerals the policy exists to secure:** Crude recycling wastes lithium, cobalt, nickel, copper, gold and silver. Eg. Improper battery handling alone could cost India over USD 1 billion in foreign exchange by 2030. **The Fix:** Fund research in advanced shredding, bioleaching and non-thermal recovery and tie EPR credit to recovery efficiency rather than to tonnage collected.
- **No domestic refining of precious metals:** Indian recyclers dismantle equipment and export the printed circuit boards, so the highest-value step happens abroad. Eg. Circuit boards from Indian dismantlers are shipped to integrated smelters in Belgium, Japan and South Korea for gold and palladium refining. **The Fix:** Mandate a minimum domestic refining share within EPR targets and treat integrated refining as eligible infrastructure under the critical mineral recycling incentive.

Conclusion

India's discarded IT equipment will become either a strategic reserve or an environmental liability, and the deciding instrument is the procurement rule rather than the recycling technology. The reform that follows is to score public disposal tenders on lifetime value. That means amending the General Financial Rules, 2017, the rules for central procurement, so that a tender can weigh quality of recovery against the immediate price. The unresolved question is who pays: the buyer who funds advanced recycling is not the one who gains from resource security, and no mechanism yet closes that gap.

E-Waste Management in India

- **Scale:** As per the CPCB, India generated 14,14,645 metric tonnes (about 1.41 million tonnes) of e-waste in 2025-26 till March 2026, of which 9,79,080 metric tonnes (about 0.98 million tonnes) was recycled.
- **Global standing and growth:** India is the third largest generator behind China and the United States. Volumes surged over 150 percent in six years from 0.71 million tonnes in 2017-18 and are projected to nearly double by 2030.
- **Formal capacity:** 386 registered recyclers across 19 States and Union Territories offer a capacity of about 34.66 lakh metric tonnes per annum.
- **Concentration:** Just 65 cities generate over 60 percent of total e-waste, and 10 States account for around 70 percent.

Laws and Rules Governing E-Waste Management

- **Environment (Protection) Act, 1986:** The parent statute under which every set of e-waste rules is notified.
- **E-Waste (Management) Rules, 2016:** Introduced the Producer Responsibility Organisation (PRO) concept.
- **E-Waste (Management) Rules, 2022:** Make EPR the core engine, mandate registration of all producers, refurbishers and recyclers on the CPCB portal, and expand coverage from 21 to 106 electrical and electronic equipment items.
- **E-Waste (Management) Second Amendment Rules, 2023:** Added provisions for safe, sustainable refrigerant management in refrigeration and air-conditioning manufacturing.
- **E-Waste (Management) Amendment Rules, 2024:** Enabled CPCB supervised platforms for trading EPR certificates, priced between 30 percent and 100 percent of the environmental compensation for non-compliance.
- **Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2025:** Introduced an EPR framework for non-ferrous metal scrap, with targets rising from 10 percent in 2026-27 to 75 percent in 2032-33.
- **Basel Convention, 1989:** India is a signatory to this treaty limiting the transboundary movement of hazardous waste, including e-waste.

Challenges in E-Waste Management

- **Informal-sector dominance:** Over 50 percent of e-waste is handled informally through open-air burning and acid leaching, exposing workers and residents to respiratory illness, neurological damage and DNA damage. Eg. Acid leaching of circuit boards in Moradabad releases toxic slurry into the Ramganga and local groundwater. **The Fix:** Train waste-pickers as certified green collar technicians with protective gear, certification and links to healthcare, insurance and pensions.
- **Illegal imports:** Developed nations export e-waste to India under cover of used goods. Eg. 29 illegal-import instances were identified during 2019-22 across Tamil Nadu, Maharashtra, Gujarat, West Bengal and Uttar Pradesh. **The Fix:** Pre-shipment inspection of used electronics consignments at ports under the Basel Convention notification procedure.
- **Low awareness in the trade itself:** The people who handle discarded electronics first do not know the rules. Eg. A 2021 Delhi study found 70 percent of repair workers and 79 percent of scrap dealers unaware of e-waste rules. **The Fix:** Run registration and awareness campaigns through resident

welfare associations and self-help groups linked to registered collection points.

- **Uneven infrastructure:** Recycling capacity and expertise are concentrated in a few States. Eg. Telangana has built formal capacity, and Chandigarh lacks formal facilities. **The Fix:** Set up decentralised recycling hubs in every State with a collection target tied to the State's generation share.

PREVIOUS YEAR QUESTION

[2026, GS3, 15 marks] What are the challenges to solid waste management in India? Discuss the governmental policy framework on solid waste management. Discuss the success/failure cases of Delhi and Indore cities highlighting the salient feature of their solid waste management initiatives.

28. [Editorial] Deadly span

Why in the News

Electrocution on India's expanding power infrastructure is emerging as a threat to vultures capable of overtaking the chemical poisoning that caused their collapse. India's vultures crashed by 99.5 per cent by 2007 from a high of around four crore in the 1980s, after a painkiller given to cattle destroyed the kidneys of birds feeding on treated carcasses. Bans on that drug and on related non-steroidal anti-inflammatory drugs (NSAIDs) answered a threat that had one identifiable cause and one regulatory lever. Electrocution has neither. The tension is that the new threat is spreading across a population already reduced to a fraction of its former size, and the deaths it causes are not being counted.

How far did the chemical crash take India's vultures?

- **The loss was among the world's worst recorded:** Numbers fell by 99.5 per cent by 2007 from a high of around four crore in the 1980s.
- **Three species were nearly wiped out:** The white-rumped, Indian and slender-billed vultures were the worst affected.
- **The cause was a veterinary painkiller:** Diclofenac administered to cattle destroyed the kidneys of vultures that fed on the carcasses.
- **The regulatory response came in stages:** The government banned diclofenac first, then added bans in 2023 on aceclofenac and ketoprofen among other NSAIDs.
- **The population has not returned:** One official survey reported in 2025 that vultures were nesting at only 50 per cent of their historic nesting sites.

What did the collapse cost beyond the birds?

- **Carcasses stayed exposed for longer:** The loss of scavengers left livestock carcasses in the open, which supported feral dog populations.
- **Rabies outbreaks followed:** The growth in feral dog numbers led to outbreaks of rabies.
- **Human mortality rose 4 per cent:** A 2024 study in the American Economic Review estimated that increase as a consequence of the vulture decline.
- **The damages were valued at 69.4 billion dollars a year:** The same study put the associated cost to India at that figure.

Why does power infrastructure kill vultures specifically?

- **A wingspan can bridge two conductors:** A large individual can contact two conductors at once, which is what completes the circuit through the bird.
- **The birds seek elevated perches:** Vultures habitually perch on elevated structures and are drawn to open landscapes, which is what a transmission corridor provides.

- **Predictable food concentrates them:** Vultures congregate where food availability is predictable, and dumping of food waste around electrical installations creates exactly that draw.
- **Medium-voltage lines are also lethal:** An assessment prepared for the State Climate Resilient Power System Development Project recorded an Egyptian vulture and steppe eagles electrocuted on medium-voltage rather than high-voltage lines.

Why is the evidence on electrocution weaker than the threat?

- **The deaths are removed before they are recorded:** Avian electrocution is likely under-documented in India, since a dead bird can be taken by people or eaten by scavengers.
- **The comparison with drugs understates the risk:** Electrocution has not become as deadly as NSAIDs were, and the population it now acts on is a fraction of the one the drugs acted on.
- **A local population can be lost to it alone:** Research has noted that persistent mortality from electrocution by itself could render a local population extinct.
- **Waiting for the data repeats the first failure:** The fragility of the surviving population and the proliferation of unsafe power infrastructure are together the case for acting before the mortality record matures.

Which interventions has the evidence actually tested?

- **Moving the food source worked:** Relocating a livestock carcass dump 2.4 km away from high-tension power infrastructure near Dehradun in Uttarakhand may have saved these scavengers from electrocution, per a recent study in the Journal of Threatened Taxa.
- **Separation is the cheapest measure available:** Keeping vulture feeding sites away from power infrastructure is a siting decision rather than a capital works programme.
- **Insulating conductors removes the contact risk:** Covering energised components stops a bird bridging them.
- **Increasing clearances answers the wingspan:** Widening the gap between energised and grounded components has to be sized against vulture wingspans rather than against smaller birds.
- **Safe perches redirect the birds:** Installing perches that carry no current gives raptors an alternative to the energised structure.

Challenges to vulture conservation in India

- **Human formulations substitute for the banned veterinary drug:** Multi-dose human vials of diclofenac remain on sale and are diverted to cattle, so the ban is defeated at the pharmacy counter. Eg. India capped the human diclofenac vial at 3 ml in 2015 because larger vials were being used on livestock. **The Fix:** Make sale of injectable diclofenac without a veterinary prescription an enforceable offence policed by drug inspectors rather than by forest staff.
- **New painkillers enter the market faster than they are tested:** A molecule is approved for cattle without a vulture safety trial, so each ban is followed by the next drug. Eg. Nimesulide has been shown to be toxic to Gyps vultures and remains in veterinary use. **The Fix:** Require safety testing on Gyps vultures as a condition of veterinary marketing approval for any NSAID, with meloxicam as the reference safe alternative.
- **Captive breeding cannot outpace adult mortality:** Vultures lay a single egg a year and mature slowly, so releases add birds far more slowly than a landscape threat removes them. Eg. The Jatayu Conservation Breeding Centre at Pinjore has released birds only in small annual batches. **The Fix:** Certify the release landscape as safe before any release, with drug residue sampling and line insulation audited as the precondition.
- **The food base has been engineered away:** Rendering and burial of livestock carcasses removes the open food supply that once sustained large scavenger populations. Eg. Vulture restaurants in Maharashtra and Punjab exist because the traditional open carcass dump has disappeared from many districts. **The Fix:** Fund supplementary feeding sites from State animal husbandry budgets and site them by rule away from transmission corridors.
- **No agency is answerable for bird deaths on power lines:** Transmission and distribution utilities carry no reporting duty for wildlife mortality, so the threat has no dataset behind it. Eg. Bird deaths on power lines in the Thar landscape became visible only after Great Indian Bustard litigation forced surveys. **The Fix:** Make wildlife mortality reporting a licence condition for transmission and distribution licensees, with the returns published by the State electricity regulator.
- **Bird safe design is not written into line standards:** Construction standards specify electrical clearances, not

clearances sized for large raptors. Eg. Directions on undergrounding power lines in Great Indian Bustard habitat were later narrowed on feasibility and cost grounds. **The Fix:** Write raptor safe pole and cross-arm geometry into the national electricity standards for new lines in identified vulture landscapes.

Conclusion

The chemical crash was answerable on paper, because a single molecule could be identified and banned. Electrocutation offers no such lever, since the killing agent is ordinary infrastructure doing what it was built to do. The unresolved tension is that conservation authority sits with forest departments. The hazard sits with the power sector, and no rule connects the two. Until that link is made, the threat will keep being measured only after the fact.

Back2Basics: White-rumped Vulture

- **Status:** Listed as Critically Endangered on the International Union for Conservation of Nature (IUCN) Red List and protected under Schedule I of the Wild Life (Protection) Act, 1972.
- **Identification:** It carries a white neck ruff and a white rump against black and brown plumage.
- **Range and nesting:** It is found near human settlements across northern and central India, nesting in tall trees and on cliffs.
- **Ecological role:** It is a social scavenger that feeds in flocks on carrion, garbage and slaughterhouse waste, which is how a small population clears waste across a wide landscape.

PREVIOUS YEAR QUESTION

[2012] Vultures which used to be very common in Indian countryside some years ago are rarely seen nowadays. This is attributed to:

- (a) the destruction of their nesting sites by new invasive species disease among them
- (b) a drug used by cattle owners for treating their diseased cattle persistent and fatal
- (c) scarcity of food available to them
- (d) a widespread, persistent and fatal disease among them

Answer: (b)

29. [Editorial] Cauvery needs a distress-sharing pact

Why in the News

The Tamil Nadu Chief Minister has opened the sluice gates of the Mettur Dam, giving some relief to Cauvery Delta farmers after a delayed irrigation season. The Tamil Nadu government has ascribed the delay to a deficit in the southwest monsoon and to Karnataka's failure to honour its water sharing obligation under the Supreme Court's 2018 verdict. The dispute between the lower and upper riparian States ignited political tensions over the past three months and returned to the Supreme Court, where the impasse was not resolved. The 2018 verdict settled how the river is shared in a normal year. It codified no formula for the years when the rains fail, which is when the two States actually collide.

What is the Cauvery Management Authority?

- **What it was set up to do:** The Authority was constituted to oversee the implementation of the Supreme Court's 2018 verdict on the sharing of the Cauvery's waters.
- **Its statutory basis:** It was created under the Inter-State River Water Disputes Act, 1956, following the Court's direction that a scheme be framed to give effect to the award.
- **How it operates:** A regulation committee assesses storage, inflows and crop water requirements and advises the Authority, which then directs releases between the basin States.
- **Where it works:** The Authority has functioned during normal monsoon years, when the allocation the verdict fixed can simply be applied.

Why did this year's Mettur schedule slip?

- **The normal calendar:** In a normal year the dam opens on 12 June and its gates are shut on 28 January, giving the region's agriculturists a 230 day irrigation window.
- **The schedule is not self executing:** That calendar is contingent on the monsoon and on the release of water in the Cauvery's upstream by Karnataka.
- **What went wrong this year:** The Tamil Nadu government attributed the delay to the southwest monsoon deficit and to Karnataka not meeting its release obligation.
- **What the opening actually buys:** With the rainfall deficit narrowing in August, the Tamil Nadu government has leeway to release water for 45 days, well short of a full season.

What does the 2018 verdict not settle?

- **No distress sharing formula:** The Court did not codify a formula for water sharing in years when the rains play truant, so a deficit year has no rule to fall back on.
- **The sustainability direction did not bind:** The Court's emphasis on sustainable water use was lost on the two States, which continued to plan as though the allocation were guaranteed.
- **The gap shows up on the first bad monsoon:** The dispute flared again in 2023, the first below par monsoon after 2018, and the same pattern has repeated this year.
- **Litigation is the default, not the exception:** Tamil Nadu has said it will continue legal efforts to secure its share, which returns the question to a forum that has already declined to write a distress rule.

Why has the Mekedatu proposal deepened the deadlock?

- **The proposal:** Karnataka's push for the Mekedatu Dam on the river has reignited old fears downstream.
- **Karnataka's case:** The Karnataka government argues the dam would primarily serve Bengaluru's water needs while allowing better regulation of releases.
- **Why it has not landed:** That argument has found no takers in Tamil Nadu, where a storage structure upstream reads as an instrument of control rather than of regulation.
- **The underlying shift:** The Cauvery today has to meet the competing demands of agriculture and urbanisation, and the two States sit on opposite sides of that shift.

What would a negotiated settlement have to contain?

- **A move away from the courtroom:** Rather than lean on the judiciary, the Cauvery dependent States would do well to come together and plan for the efficient use of the river's waters.
- **Demand side measures:** Solutions range from disincentivising water intensive crops to encouraging decentralised water management.
- **The expertise required:** Any such plan will need inputs from hydrologists, economists, agricultural scientists and farmers' organisations.
- **The political precondition:** Representatives of the two States will need to sit together, understand each other's fears and shed confrontationist attitudes.

Challenges to the Cauvery Management Authority

- **No enforcement machinery of its own:** The Authority depends on the two State governments to execute its release directions and holds no independent field administration. Eg. Its directions in the deficit year of 2023 were contested by Karnataka and taken back to the Supreme Court. **The Fix:** Give the Authority operational control over gate operations at specified control points for the duration of a declared distress period.
- **Storage and inflow data are State reported and contested:** Each State submits its own figures on realisable flows, so the Authority arbitrates between rival datasets before it can decide anything. Eg. The two States have filed conflicting inflow estimates for the same periods at Biligundlu, the inter State measuring point. **The Fix:** Place telemetry at every control point under a jointly audited third party gauge network publishing real time readings.
- **Groundwater sits outside the allocation:** The award divides surface flows alone, so competing extraction continues unregulated on both sides of the border. Eg. The Central Ground Water Board classifies several assessment units in the Cauvery basin as over exploited. **The Fix:** Notify a joint basin wide extraction cap alongside the surface allocation, so a shortfall in releases is not simply pumped out of the aquifer.
- **Electoral cycles set State positions:** Water release becomes an electoral question in both States, which raises the political cost of any concession to the point where none is offered. Eg. Assembly resolutions and shutdowns in Karnataka have followed release orders in successive dispute years. **The Fix:** Shift the release decision to a pre agreed rule curve triggered by reservoir storage, so no government has to announce a discretionary concession.

Conclusion

A river shared by two States needs a rule for the bad years, not only for the good ones. The Cauvery has one for the good years, and every deficit season is therefore litigated afresh. The forward step is a negotiated distress sharing pact between the basin States, agreed before the next failed monsoon rather than during it, and covering the cities as well as the fields. Until such a pact exists, each shortfall will keep arriving at a court that has already declined to supply the formula the States will not write for themselves.

Back2Basics: Mettur Dam

- **Where it is:** The dam is built across the Cauvery at Mettur in the Salem district of Tamil Nadu, at the point where the river enters the plains.
- **When it was built:** It was completed in 1934 and is one of the oldest large dams in India.
- **What it holds:** Its reservoir is known as the Stanley Reservoir, and it serves irrigation, drinking water and hydroelectric generation.
- **What it commands:** Releases from Mettur irrigate the Cauvery delta districts, which is why the date on which its gates open sets the cropping calendar for the region.

PREVIOUS YEAR QUESTION

[2013, GS2, 10 marks] Constitutional mechanisms to resolve the inter-state water disputes have failed to address and solve the problems. Is the failure due to structural or process inadequacy or both? Discuss.

30. [Editorial] Warning on warming

Why in the News

The United Nations Environment Programme (UNEP) has found that breaching the 1.5 degrees Celsius global warming limit brings irreversible losses that adaptation cannot undo. Its report, Limiting Overshoot, accepts that the limit has already been breached. Full delivery of every existing national climate pledge still puts the world on course for 1.8 degrees Celsius, and current policies point to 2.6 degrees Celsius. The report's new emphasis falls on greenhouse gases other than carbon dioxide, and on methane above all. The disagreement it reopens is between assessments that measure climate progress by mitigation and major developing economies that measure it by the finance and technology they receive. That disagreement now reaches India directly, because a smaller neighbour hit by a glacial disaster has named India among the emitters responsible.

What is the “overshoot, peak and decline” pathway?

- **What it describes:** Average global temperatures rise above the 1.5 degrees Celsius limit, countries hold that peak as low as they collectively can, and temperatures are brought back below the limit by the end of the century.
- **Why the peak is the variable that matters:** Neutralising the heating effect of even a tenth of a degree is far harder than preventing that rise in the first place, so every fraction avoided at the peak is a fraction that never has to be reversed.
- **What it refuses to concede:** The pathway accepts the scientific reality of a 1.5 degrees Celsius world and rejects the conclusion that nothing further can be done once the threshold is crossed.

Why has the report shifted attention to gases other than carbon dioxide?

- **Methane carries a large share of present warming:** It is responsible for about 0.5 degrees Celsius of current warming, so cutting it changes the temperature curve within years rather than decades.
- **It is the fastest available brake:** Action on methane is treated as the most effective way to slow warming in the near term, which is precisely the window in which the peak is decided.
- **The collective instrument already exists:** More than 155 countries have joined the Global Methane Pledge, committing to cut anthropogenic methane at least 30 percent below 2020 levels by 2030.
- **India stands outside it:** India has not joined the Pledge, so the single fastest near term lever is not one the country has committed to pull.

Why do major developing economies resist a mitigation first framing?

- **They claim the transition is already under way:** These economies argue that they are moving away from fossil fuels and should not be assessed as though they were not.
- **The damage they face comes from someone else's stock:** Their vulnerability arises from historical accumulations of carbon released by richer developed countries, which is the basis of their claim to greater financial support and affordable technology.

- **The report is silent where they are loudest:** Limiting Overshoot has little to say on adaptation finance, so the question these economies bring to every negotiation goes unanswered in the assessment they are asked to act on.

How does the Bhotekoshi disaster complicate India's position?

- **A vulnerable neighbour has named India:** Nepal's Foreign Affairs Minister has said that major industrial emitters such as China, the United States and India must consider the impact of rising temperatures on small countries such as Nepal.
- **The victim framing no longer holds unchallenged:** India's per capita emissions remain below the world average, and a section of the world nonetheless now places India within the group causing the problem rather than the group suffering it.
- **The next negotiation is dated:** Countries convene in Türkiye in November for COP31, where the familiar disagreements over mitigation and finance are expected to resurface with this new complication attached.

Challenges to the overshoot, peak and decline pathway

- **The return leg depends on removal capacity that does not exist at scale:** Bringing temperatures back below the limit assumes large volumes of carbon dioxide will be removed from the atmosphere later in the century. Eg. The direct air capture plants operating in Iceland remove tens of thousands of tonnes a year at most, against annual global emissions measured in tens of billions of tonnes. **The Fix:** Treat removal as a supplement to be verified and funded now, and set peak temperature targets that assume no removal beyond capacity already demonstrated.
- **Some losses do not reverse when the temperature does:** Ice sheets, coral reefs and glaciers respond to the peak rather than to the eventual average, so returning below 1.5 degrees Celsius does not restore what the overshoot destroyed. Eg. The August 2026 glacial collapse on the Nepal China border destroyed valleys that no later cooling will reconstitute. **The Fix:** Attach separate thresholds for irreversible systems to the pathway, so peak height is judged against them rather than against the century end average alone.
- **The methane lever sits with countries that have not pulled it:** The largest sources of anthropogenic methane are concentrated in a handful of economies outside the Pledge. Eg. India's methane arises chiefly from livestock and paddy cultivation, which are livelihood activities rather than industrial infrastructure that can be shut down. **The Fix:** Fund livestock feed and paddy water management programmes that cut methane without cutting output, so the reduction is not paid for by farm incomes.
- **The pathway offers nothing to those already past adaptation:** A framework organised around peak management assumes adaptation absorbs the interim, and for the most exposed countries it does not. Eg. Nepal contributes a negligible share of global emissions and has lost roughly a tenth of its economy to a single event. **The Fix:** Pair every overshoot pathway with a stated adaptation finance figure, so the interim period carries a costed obligation rather than an assumption.

Conclusion

The threshold argument is over and the argument about who pays for its consequences is not. India has spent three decades arguing that historical responsibility sits elsewhere, and that argument is now being made about India by a country downstream of the Himalayas. Refusing the mitigation frame no longer settles the question, because the objection is arriving from the Global South rather than from the West. What to watch is whether India carries a methane position and an adaptation finance demand into COP31 as a single package, or continues to press the second while declining the first.

Back2Basics: United Nations Environment Programme

- **What it is:** The United Nations body responsible for setting the global environmental agenda and coordinating environmental work across the UN system.
- **When it was created:** It was established in 1972, following the United Nations Conference on the Human Environment held at Stockholm that year.

- **Where it sits:** Its headquarters are at Nairobi, making it the first UN agency headquartered in a developing country.
- **What it publishes:** Its recurring assessments include the Emissions Gap Report, the Adaptation Gap Report and the Global Environment Outlook.

PREVIOUS YEAR QUESTION

[2025, GS3, 15 marks] Write a review on India's climate commitments under the Paris Agreement (2015) and mention how these have been further strengthened in COP26 (2021). In this direction, how has the first Nationally Determined Contribution (NDC) intended by India been updated in 2022?

31. [Explainer] Inside Jharkhand & Bihar's 25-year Sone river dispute

Why in the News

Bihar and Jharkhand have signed an inter State memorandum of understanding dividing Sone river water, with 5.75 million acre feet (MAF, the volume that would cover a million acres to a depth of one foot) going to Bihar and 2 MAF to Jharkhand. The allocation fills a vacuum created when Jharkhand was carved out of Bihar in November 2000, since the 7.75 MAF that undivided Bihar held under the 1973 Bansagar Agreement had no formula for division between the successor States. The dispute was never about the quantity of water available but about the absence of a rule for splitting an entitlement that had outlived the State it was granted to. That absence held back the full operation of a barrage built in the late 1960s and the canal network it feeds.

Why did a 1973 allocation stop working after 2000?

- **The river's course:** The Sone flows generally northward from its upper catchments in Madhya Pradesh, passes through Uttar Pradesh, runs along the Jharkhand Bihar boundary and joins the Ganga in Bihar.
- **The original entitlement:** The Bansagar Agreement of 1973, a tripartite agreement involving Madhya Pradesh and Uttar Pradesh, allocated 7.75 MAF of Sone water to undivided Bihar out of the total basin yield.
- **Bifurcation split the basin unevenly:** Jharkhand inherited the major upper catchment areas and the tributaries, and the lower riparian agricultural hubs stayed with Bihar.
- **No formula followed the division:** After the State was divided, no binding formula existed to apportion that allocation between the two successor States.
- **Two decades of stalled mediation:** Committees attempted mediation over the last two decades, and talks repeatedly broke down over reservoir height, land submergence and volumetric splits.

What does the new agreement actually settle?

- **Jharkhand's concession:** Jharkhand agreed to specified reservoir water levels to minimise land submergence, backed by clear rehabilitation provisions.
- **Bihar's gain:** Bihar receives additional water from the Indrapuri Barrage to irrigate farmland in its existing command.
- **Jharkhand's return:** The pact enables new canal networks in the drought prone Palamu and Garhwa districts.
- **What it unblocks:** Long delayed irrigation, reservoir and river linking projects in the drought prone regions of both States are expected to move forward.

What does the pact unlock on the ground?

- **The diversion structure:** The Indrapuri Barrage across the Sone in Rohtas district, built in the late 1960s, is the primary structure diverting water into the canal system.
- **The canal command:** The Sone canal network irrigates the Shahabad agricultural belt of Rohtas, Bhojpur, Buxar and Kaimur districts.
- **The southern belt:** The agreement guarantees critical irrigation supplies to the Magadh belt of south Bihar, including Aurangabad.
- **The constraint was legal, not physical:** The barrage and its canals already existed, so what was holding back their full use was the missing share rather than any limit of the structure.

Why did the dispute stay politically live?

- **No formal confrontation:** The two States never reached a major State level confrontation over the water.
- **An election season issue in Bihar:** Leaders across party lines in the Shahabad and Magadh belts targeted the State government over water shortages in the Sone canal system during the summer sowing season.

- **A displacement issue in Jharkhand:** Leaders from Palamu and Garhwa raised the fear that raising the Indrapuri Dam's height would submerge agricultural land and displace thousands without fair compensation.

Challenges to the Sone water sharing arrangement

- **A memorandum is not an award:** The States have signed an administrative understanding rather than obtained a tribunal award under the Inter-State River Water Disputes Act, 1956, so no adjudicated instrument stands behind it. Eg. The Punjab Termination of Agreements Act, 2004 showed that a State legislature can move to repudiate water sharing agreements it had signed. **The Fix:** Constitute a joint control board with gauged and publicly reported releases at the barrage, so compliance is a matter of record rather than of assertion.
- **A fixed volumetric split against a variable yield:** The shares are stated in absolute volume even though the Sone is rain fed and its annual yield swings with the monsoon. Eg. The parent entitlement was itself fixed on basin yield estimates made in the early 1970s. **The Fix:** Convert the split into proportional shares of the actual annual yield, with a stated rule for how a deficit year is shared.
- **Canal efficiency decides who receives water:** An allocation at the barrage does not survive conveyance losses, so tail end farmers get less than the head reach whatever the agreement says. Eg. The Sone canal system dates from the 1870s and still delivers through long unlined earthen channels. **The Fix:** Line and modernise the main and distributary canals and meter deliveries at outlet level before the new water is credited to the command area.
- **Rehabilitation commitments outrun delivery:** Submergence limits rest on rehabilitation provisions whose record in Indian reservoir projects is poor. Eg. Families displaced by the Sardar Sarovar project on the Narmada were still contesting resettlement decades after the dam was cleared.

The Fix: Publish a dated rehabilitation schedule with land for land entitlements settled before reservoir levels are raised.

- **Groundwater has filled the gap:** Farmers in the command have substituted diesel pumped groundwater for unreliable canal supply, and the pact says nothing about that substitution. Eg. Water tables across south Bihar fall sharply in the summer months when canal supply is weakest. **The Fix:** Sequence canal restoration with conjunctive use planning so surface deliveries replace pumping instead of adding to it.

Conclusion

An administrative understanding has closed a gap that two decades of mediation could not, and it has done so without creating any body able to enforce it. Compliance now rests on the continued willingness of two State governments, which is the same condition under which the previous arrangement failed. The marker to watch is whether releases are gauged and published, since an unmeasured share is what allows a settled formula to unravel quietly.

Back2Basics: Sone river

- **Source and course:** The Sone rises on the Amarkantak plateau in Madhya Pradesh, close to the source of the Narmada, and flows north east to meet the Ganga.
- **Its rank:** It is the second largest of the Ganga's southern tributaries after the Yamuna.
- **Its regime:** The river is rain fed, so it carries heavy monsoon flow and shrinks sharply through the dry season.
- **Its tributaries:** The North Koel, the Rihand and the Kanhar are among its principal tributaries.

PREVIOUS YEAR QUESTION

[2024, GS3, 15 marks] What are the major challenges faced by Indian irrigation system in recent times? State the measures taken by the government for efficient irrigation management.

32. What two districts can teach us about dealing with rural waste

Why in the News

The Supreme Court has pulled up the Union and State governments for not institutionalising the Solid Waste Management Rules, 2026, and has ordered that regulatory bodies be notified, staffed and provided with the infrastructure to function. Those Rules place solid waste management and the data collection that goes with it on urban and rural local bodies, and those bodies rarely record either the volumes they handle or what they spend. India generates 1.7 lakh tonnes of waste a day according to the Central Pollution Control Board (CPCB), of which 22 per cent reaches landfills and 17 per cent is unaccounted for. Rural waste is not counted at all. Two districts have built working collection systems outside that machinery, with Majuli in Assam and Tawang in Arunachal Pradesh now segregating, transporting and selling waste through community organisation rather than through a municipal workforce. The tension is that rural waste management fails at operation rather than at construction, since Majuli's collection sheds stood built and unused for years before anyone was funded to run them.

Why does India's waste system not see the countryside?

- **Rural waste data are not collected:** Waste data for rural areas do not exist, according to the Centre for Science and Environment (CSE), a New Delhi based research and advocacy body.
- **The duty sits with bodies that do not discharge it:** Urban and rural local bodies are tasked with solid waste management and with recording volumes and expenses, and they rarely do the needful.
- **The gap is global and overwhelmingly rural:** Around 2.7 billion people worldwide have no waste collection, and 2 billion of them live in rural areas, per an analysis by the United Nations Environment Programme (UNEP).
- **Uncollected waste goes to land, water or fire:** Where people cannot manage waste, they dump it on land or in rivers, streams and seas, or they burn it, which is a major concern in India.

Why has rural waste grown without collection following it?

- **Rural spending has risen:** Data show a rise in per capita spending in India's rural areas, and more consumption produces more waste.
- **Packaging reached the remotest markets:** Food, beverages and personal care or hygiene products are almost all wrapped in plastics or multi layered packaging, and those goods have penetrated the remotest rural markets.
- **Waste management did not follow the goods:** Collection systems did not extend into those markets alongside the products that created the waste.
- **Organic waste had a use and mixed waste does not:** Organic waste fed livestock or served as manure for centuries, and plastics and other non-biodegradable materials have produced a mixed waste that is harder to decompose.

What did Majuli change after its facilities went unused?

- **The sheds were built years before the system was:** The Swachh Bharat Mission and the Public Health Engineering Department built Central Material Collection Facilities (CMCFs), the village level sheds where sorted waste is received and stored, in 19 of 20 panchayats between 2017 and 2022, along with mini collection facilities in most of the 160 villages.
- **Neither the sheds nor the workers were put to use:** The tin sheds went unused and the workers were not mobilised until the departments teamed up with the waste management non-profit Sahaas in 2024.
- **The missing components were operational rather than physical:** Funding, staffing and training of sanitation workers, vehicles for transport, operation of the collection facilities and buyers for the sorted material all had to be arranged.
- **Participation was organised before collection began:** Village leaders, homestay and hotel owners, schools and self-help groups (SHGs) ran awareness programmes and handed out bags for storage and segregation.
- **Collection now runs in 19 of 20 panchayats:** Garbage is now collected across them, in a district that faces flooding and erosion every year.
- **Staffing remains thin against the population:** Majuli's 1.67 lakh people are served by 37 sanitation workers and 19 sorting staff.
- **The fleet was funded only recently:** The district departments purchased 21 e-vehicles and 15 tricycles and approved funds for the collection crew.
- **The first river crossing was in April 2025:** A tonne of waste left Majuli by boat across the Brahmaputra, the first time the island's waste crossed the river instead of being dumped into it.
- **The tonnage is now measurable:** Majuli has collected 82.4 tonnes of waste since 2024, and it transferred 16.78 tonnes and earned Rs 1.47 lakh between April 2025 and May 2026.

How does Tawang collect waste without sanitation workers?

- **Scattered settlements rule out door to door collection:** Households in these land-locked mountain villages sit too far apart for a sanitation worker to cover on a route.
- **The pilot began in one village in 2024:** Local officials and village leaders piloted a community led model in Chullyu in Keyi Panyor district through the Himalayan Fringes Project of the Further and Beyond Foundation.
- **It spread across three districts in two years:** A third of Tawang district and parts of Keyi Panyor and Upper Siang districts have adopted the model.
- **Households store their own waste:** Every household segregates biodegradable from non-biodegradable waste and keeps it at home until the collection day.
- **Collection is a monthly village event:** Each village organises a Swachhata Divas, or Cleanliness Day, at a designated point where residents arrive with sacks and sort the waste into 22 categories.
- **The volumes are recorded:** 26 villages in the project have organised more than 150 Swachhata Divas and collected 30 tonnes of waste.
- **Secondary sorting happens at recovery facilities:** The waste moves to material recovery facilities (MRFs), the sites where it is received, sorted and processed, at Zemithang, Lumla and Daporijo, with smaller community run facilities at Chullyu and Gobuk.
- **Sorting deepens to 35 categories there:** 12 full time MRF operators and dozens of women from self-help groups perform that second sort.
- **Sanitary waste is handled rather than dumped:** Sanitary napkins and diapers are washed, dried and stored at the facilities, and more than 20 tonnes have been sold to recyclers for Rs 3.53 lakh.
- **One residue stream found a local use:** About two tonnes of multi layered plastics went to a processing plant at Lhou in Jang sub-division and were used to make paver blocks.
- **The first consignment left on Independence Day 2024:** Villagers from Zemithang Circle, settled between 6,900 and 8,000 feet, sent 4.4 tonnes of garbage on a 390 km lorry journey of over 12 hours to scrap dealers in Tezpur in Assam.

Who pays for rural collection, and who is accountable for it?

- **Collection is the most expensive step in the chain:** Crew wages, vehicle fuel and maintenance, insurance and other indirect costs make it the costliest link, per UNEP.
- **Indian cities show the same cost structure:** Primary collection and transportation account for the bulk of costs, per a CSE report on plastic waste management.
- **Manpower dominates the rural cost:** Nearly 50 per cent of the primary collection cost in rural Dharamshala was attributed to manpower.
- **The Tawang model removes that cost line:** Eliminating sanitation workers and door to door collection took the largest single expense out of the system.
- **Households pay a monthly fee:** Each household pays Rs 50 a month and shops and cafes pay Rs 100.
- **Authority is vested in a village committee:** A gaon bura, or village head, and a treasurer lead committees that draft waste management policies and set the rules, responsibilities and fines.

- **A regional committee sits above them:** Each region has a central committee chaired by a Circle Officer with a Lama, an influential religious leader, as secretary, and the committees meet every quarter.
- **Financing remains the binding constraint:** Money is the biggest problem in running such a system, per the officer who led the Zemithang effort.

Where does the chain still break?

- **Distance sets the transport economics:** Waste travels farther from rural areas to reach recyclers, which renders the task less attractive for scrap dealers.
- **One truckload costs Rs 45,000:** Sending a truckload from Arunachal Pradesh to Assam costs that much, and fuel and the driver still cost Rs 20,000 a trip after State officials donated a truck.
- **Boat transfers proved too costly to repeat:** Majuli made three transfers across the Brahmaputra and now sells to local scrap dealers as well.
- **Two streams have no buyer at all:** Black polythene and textile scrap have found no takers.
- **Storage is filling faster than offtake:** Many CMCs are filling up quickly, and rural collection facilities are commonly found full of baled waste with few takers.
- **Processing capacity sits idle:** Majuli's long defunct plastics management facility is undergoing repairs.
- **Segregation compliance is not universal:** About 30 households in every 100 still hand over mixed waste.

Challenges to rural solid waste management

- **Panchayats have no funded sanitation establishment:** A rural local body carries the duty without a permanent staffing line or a recurring budget head for waste, so the work depends on scheme money and an outside partner. Eg. Solid and liquid waste management money for gram panchayats arrives through Swachh Bharat Mission Grameen allocations and tied Fifteenth Finance Commission grants rather than through an own-source revenue stream. **The Fix:** Make a collected user fee a mandatory own-source revenue head for the panchayat, and release the matching grant only against fee actually collected.
- **Legacy rural dumps are not inventoried:** Remediation and bio-mining targets are written for urban dumpsites, so village dumps sit outside any list anyone is accountable for clearing. Eg. Dumpsite remediation targets under the second phase of the Swachh Bharat Mission are set for urban local bodies. **The Fix:** Require every gram panchayat development plan to carry a mapped inventory of existing dump points with a dated clearance commitment.
- **Producer responsibility is verified on paper:** A packaging producer discharges its obligation by buying a recycling certificate, and the certificate is easier to obtain than the collection is to perform. Eg. The CPCB has cancelled extended producer responsibility certificates issued by recyclers whose claimed processing capacity could not be verified. **The Fix:** Tie certificate issue to plant level input and output data reported from the processor's own weighbridge.

- **Rural sanitation work carries no protection:** Workers handle mixed waste, including sanitary and medical items, without the equipment, registration or insurance that municipal employment carries. Eg. Rural collection crews are engaged on scheme funds rather than on a municipal payroll, which leaves them outside standing occupational safety obligations. **The Fix:** Register every rural sanitation worker on a State database and make supply of protective equipment a condition of releasing collection funds.
- **Reported waste figures have no verification layer:** Where a local body does report a number, no independent audit checks it against what a facility actually received. Eg. Swachh Survekshan Grameen scoring rests substantially on self-declared and observation based inputs rather than on weighed tonnage. **The Fix:** Make weighbridge or facility receipt records the reporting unit, and publish district level tonnage every month.

Conclusion

Rural India's waste problem is not that the assets were never built. It is that the operating layer beneath them, meaning staff, money, a route and a buyer, was never assembled. Both districts show that layer can be put together locally without a municipal workforce, and neither has solved the end of the chain, where someone has to pay to take sorted material away. The marker to watch is whether the regulatory bodies the Court has ordered are actually constituted and staffed, since without them no authority answers for the part of the chain that runs beyond the village boundary.

Back2Basics: Solid Waste Management Rules, 2016

- **Legal basis:** Notified by the Union Ministry of Environment, Forest and Climate Change under the Environment (Protection) Act, 1986, replacing the Municipal Solid Wastes (Management and Handling) Rules, 2000.
- **Coverage beyond municipalities:** They extend to census towns, notified industrial townships, and areas under railways, airports, defence establishments, special economic zones and places of pilgrimage.
- **Source segregation is mandatory:** A waste generator must separate waste into wet, dry and domestic hazardous streams and hand it to an authorised collector.
- **Producers carry a post-consumer duty:** Brand owners and manufacturers of non-biodegradable packaging must arrange to collect that packaging back from the market.

PREVIOUS YEAR QUESTION

[2019] As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct?

- (a) Waste generator has to segregate waste into five categories.
- (b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.
- (c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.
- (d) It is mandatory on the part of waste generator that the waste generated in one district cannot be moved to another district.

Answer: (c)

33. Pichavaram mangroves valued at ₹2,485 crore: study

Why in the News

A study of the **Pichavaram mangrove ecosystem** in Tamil Nadu has put its **total economic value (TEV)** at **₹2,485.38 crore**, with a per hectare value of **₹1.83 crore**. The valuation covers ecological, economic and social benefits together, and includes a separate blue carbon assessment of what the forest stores. The study was carried out at the Centre for Ecological Economics and Natural Resources, Institute for Social and Economic Change, Bengaluru, and was funded by the Forest Genetics Division, Coimbatore. The tension it identifies is that most of what a mangrove supplies is non market in nature, so it never enters the accounts that development planning actually uses.

What is ecosystem service valuation?

- **About:** Ecosystem service valuation attaches a monetary figure to the benefits a natural system supplies, so that those benefits can be compared against the returns from converting the same land to another use.
- **The four service categories:** Mangrove systems supply provisioning, regulating, supporting and cultural ecosystem services. Provisioning covers physical output such as fish, regulating covers functions such as storm buffering and climate regulation, supporting covers processes such as nutrient cycling, and cultural covers non material benefits.
- **Total economic value:** TEV is the aggregate of all these service flows expressed in one figure, rather than only the marketed output the system yields.

What did the valuation measure?

- **The headline value:** The total economic value of the Pichavaram mangrove ecosystem stands at **₹2,485.38 crore**, and the per hectare value at **₹1.83 crore**.
- **Sediment holds more carbon than the trees:** The analysis found that mangrove sediments constitute a more substantial carbon reservoir than the vegetation.
- **Soil carbon density:** Average soil organic carbon stock was estimated at **251.14 tonnes of carbon per hectare**, generating an economic value of **₹90.24 lakh per hectare**.
- **Combined blue carbon asset:** With vegetation and soil carbon pools taken together, the total blue carbon asset value of the ecosystem is **₹1,612.40 crore**. Blue carbon is the carbon captured and stored by coastal and marine vegetation and the sediment beneath it.

Why do these benefits stay out of development planning?

- **The services are non market:** Several ecological benefits are non market in nature and are not reflected in market transactions, so they generate no price a planner can read.
- **Undervaluation is the consequence:** Many ecosystem services remain undervalued in conventional development planning even where their contribution to ecological sustainability and human well being is established.
- **Valuation is the bridge:** A single expressed figure allows a non market service to be set against a marketed alternative use of the same coastal land.

What makes Pichavaram ecologically significant?

- **Status:** It is deemed one of the most ecologically significant coastal wetland ecosystems in India.
- **Biodiversity and fisheries:** It supports biodiversity conservation and fisheries productivity.

- **Coastal protection and climate regulation:** It provides coastal protection, climate regulation and blue carbon sequestration.
- **Livelihood security:** It underpins livelihood security for the coastal communities that depend on it.

How was the study built?

- **Primary and secondary data:** The assessment combined primary field data with secondary sources rather than relying on modelled estimates alone.
- **Household survey base:** Primary information was collected from **302 households** across five mangrove dependent villages.
- **The villages covered:** The five are MGR Thittu, Kalaigai Nagar, Chinnavaikal, Patriadi and Mudasalodai.

What does the study recommend?

- **Valuation inside planning:** Ecosystem service valuation should be integrated into coastal development planning and environmental decision making.
- **Mangroves as nature based solutions:** Mangroves should be recognised as key nature based solutions for climate adaptation and disaster risk reduction.
- **Finance instruments:** Blue carbon financing mechanisms, carbon credit programmes and Payment for Ecosystem Services schemes should be developed for these systems.

Challenges to using ecosystem service valuation in coastal planning

- **A non market service produces no cash flow:** A protective service is realised only when the hazard it guards against actually occurs, so it never appears in a project's financial statement. Eg. Mangrove storm buffering shows up as damage avoided during a cyclone landfall, which no project account records. **The Fix:** Require the ecosystem service value of the land to be entered as a stated line item in the cost benefit statement of every coastal infrastructure clearance.
- **Valuation methods are contested:** Survey based techniques such as willingness to pay measure what nearby residents can afford rather than what the service is worth to the wider economy. Eg. Household surveys in poor mangrove dependent villages return low willingness to pay figures for the same service that protects a city downstream. **The Fix:** Publish the method, the sample and the confidence range alongside every headline valuation figure so the number can be contested on its assumptions.
- **Aquaculture and land conversion drive mangrove loss:** The land use that competes with mangrove is profitable, immediate and privately captured, while the service lost is diffuse and public. Eg. Shrimp pond expansion along the Tamil Nadu and Andhra Pradesh coast has cleared mangrove and adjoining back swamp. **The Fix:** Tie Coastal Regulation Zone enforcement to satellite based mangrove cover monitoring with annual public reporting at the district level.
- **Blue carbon credits lack a settled soil accounting standard:** Sediment carbon is the largest pool and the least standardised, so the same forest yields different credit volumes under different protocols. Eg. Soil carbon is measured to one metre depth in some protocols and deeper in others. **The Fix:** Adopt a single national measurement protocol for mangrove soil organic carbon before any credit is issued against Indian mangrove land.
- **Restoration often replaces hydrology with planting:** Plantation drives on sites that were never mangrove habitat

produce low survival and no service recovery. Eg. Monoculture planting on open mudflats has repeatedly failed where tidal flushing was never restored. **The Fix:** Restore tidal connectivity and creek hydrology first, and allow natural regeneration to determine species composition.

Conclusion

A valuation changes nothing by itself. It changes outcomes only when the figure enters the document that decides land use, and coastal zone plans in India are still written without one. Tamil Nadu's coastal clearances are the place this will show. The marker to watch is whether an approval order for coastal land begins citing a per hectare service value against the project it is approving.

Back2Basics

- **Location:** The Pichavaram mangrove forest lies in Cuddalore district on the Tamil Nadu coast.
- **Setting:** It sits in the estuarine complex formed between the Vellar and Coleroon rivers, adjoining the Killai backwater.
- **Scale:** It is among the largest mangrove forests in India and is made up of a network of islets separated by tidal creeks.
- **Composition:** Avicennia and Rhizophora are the dominant mangrove genera across the forest.

PREVIOUS YEAR QUESTION

[2023, GS3, 15 marks] Comment on the National Wetland Conservation Programme initiated by the Government of India and name a few India's wetlands of international importance included in the Ramsar Sites.

AGRICULTURE

34. [Editorial] Many layers

Why in the News

Onion price management has again run through a sequence of export restrictions and post collapse procurement, and neither has protected the farmer or the consumer. Since the 1960s Indian food policy has balanced affordable consumer prices against remunerative producer prices, with state intervention aimed at managing short term volatility rather than the underlying cause. Erratic weather and the absence of long term relief have made that balancing act harder to hold. The tension is that every corrective step arrives after farmers have already made production decisions and after prices have already collapsed, so the intervention reaches neither all farmers nor all grades of produce.

What has the Centre's onion trade policy been since 2023?

- **The export ban:** The government banned onion exports from **December 2023 to May 2024**.
- **The price floor that replaced it:** A **minimum export price of \$550 per tonne** was imposed, which sets the lowest price at which a consignment may legally leave the country and works as a soft restriction on exports. A **40 per cent export duty** was imposed alongside it.
- **The rollback:** The duty was reduced to **20 per cent in September 2024** and abolished in **April 2025**.

Why does intervention after the event fail farmers?

- **Policy changes after the sowing decision:** The government often changes its position after farmers have made production decisions based on the price they expected.
- **The procurement price was below cost:** During the rabi harvest, onion farmers in Maharashtra, the country's principal supplier, argued that the Centre's procurement price of **₹12.35 per kg** would not cover cultivation costs.
- **The correction came too late for many:** The Centre subsequently raised the price to up to **₹26.45 per kg**. Many farmers could not capture the higher value, including some who had already sold at **₹1 per kg** because of low quality and lack of storage.
- **Coverage is partial by grade:** Intervening after prices have already collapsed does not reach all farmers or all grades of produce.

What pressures exposed the flaw this year?

- **Rainfall at the wrong point in the cycle:** Abnormal rainfall at the time of harvest hit the crop directly.
- **A kharif shortfall in the main supplying State:** Maharashtra recorded a **5 per cent to 7 per cent** drop in the kharif crop.
- **Onion resists buffering:** The known difficulties of storing onion and of maintaining large buffers compound every supply shock rather than absorbing it.
- **Manipulation is the secondary issue:** The government has alluded to some price manipulation, and the dominant

problem remains that policy keeps reacting rather than acting in advance.

What proactive measures does the record point to?

- **Storage:** Improving storage options is the first named measure, since it is what allows a crop to be held past a price trough.
- **Trade policy stability:** A less erratic trade policy would let farmers price the export channel into their sowing decisions.
- **Inter regional movement:** Moving stock more efficiently between regions addresses the distribution failure rather than the production one.
- **Price shock protection:** Protecting farmers against price shocks is the fourth measure, and it operates before a collapse rather than after it.

Does Tamil Nadu's targeted subsidy resolve the problem or move it?

- **The design:** Tamil Nadu will buy **1,000 tonnes of onions** to distribute **1 kg per ration card at ₹35**.
- **What it gets right:** The design discourages hoarding while allowing private retail prices to cool down.
- **The delivery channel is the risk:** Distribution runs through a dry grain public distribution system network, which was not built for a crop that spoils quickly.
- **The economic case has a threshold:** That case could collapse if post harvest losses exceed **10 per cent to 15 per cent**, and onion is more susceptible to such losses than wheat or rice.
- **Persistence is the second risk:** The case also weakens if the subsidy has to be continued rather than used once.
- **Replication would exhaust the buffer:** If other States adopt similar measures, the Central buffer could be quickly exhausted, more so given this year's high storage losses of around **30 per cent**.
- **Pressure transfers to the Centre:** The State scheme will impose pressure on the Centre to maintain a steady supply behind it.

Challenges to stabilising onion prices

- **Onion is bulky, perishable and stored without a cold chain:** Farm level storage relies on ventilated structures whose losses rise sharply in a wet post monsoon. Eg. The traditional onion chawls of Nashik are open sided sheds with no humidity control. **The Fix:** Link the storage capital subsidy to a verified ventilation and moisture standard rather than to built area alone.
- **Production is geographically concentrated:** A weather event in one district cluster moves the national price because supply is not spread across regions. Eg. Lasalgaon in Nashik sets the reference price for the country's onion trade. **The Fix:** Build procurement and modern storage capacity in Madhya Pradesh, Karnataka and Gujarat so the national price is not set by one belt.
- **Sudden trade restrictions cost long term market access:** Buyers who lose supply once diversify permanently, so the export channel is thinner when the surplus returns. Eg.

Bangladesh and Sri Lanka shifted to Chinese, Pakistani and Egyptian onion during the Indian export restrictions. **The Fix:** Announce any trade measure with a fixed minimum notice period and a stated expiry date written into the notification.

- **Procurement covers only a buffer, not the crop:** Agency purchase is sized to stabilise consumer supply, so the price the farmer receives is still set by the open market. Eg. National Agricultural Cooperative Marketing Federation of India (NAFED) buying is confined to buffer accumulation and market release. **The Fix:** Add a deficiency price payment triggered on the mandi price falling below assessed cultivation cost, paid directly rather than through purchase.
- **Farmers sow without a forward price signal:** Acreage decisions are made months before the price is known, which is what produces the alternating glut and shortage. Eg. A remunerative rabi price pulls extra acreage into the next kharif sowing and depresses that crop's price. **The Fix:** Publish an official pre sowing advisory each season carrying expected national acreage and an indicative price band.

Conclusion

Onion policy is being run as a series of corrections applied after the price has already moved. What remains unreconciled is that every correction reaches the farmer after both the sowing decision and the distress sale are complete. Storage capacity and orderly movement of stock are the only interventions that operate before a collapse rather than after it. Whether the Centre holds one trade regime steady through a full price cycle is the test of whether the approach has changed.

PREVIOUS YEAR QUESTION

[2026, GS3, 10 marks] Explain the factors responsible for inefficiency of agri-produce marketing. How e-commerce helps to reduce inefficiency of agri-produce marketing? Explain.

GEOGRAPHY AND DISASTER MANAGEMENT

35. [Explainer] Nepal's Rasuwa floods: the Himalayan warning, hydropower exposure and the climate compensation claim

Why in the News

A glacial collapse and avalanche near **Langtang Lirung**, on the Chinese controlled side of the glaciers, sent a **glacial lake outburst flood (GLOF)** down the Lhende, Bhotekoshi and Trishuli rivers into Nepal's **Rasuwa district** on 26 August. It killed over **1,200 people**, left thousands missing, and destroyed villages, highways, bridges and at least **13 hydropower projects**, with more than 15 damaged along the Trishuli alone. Within a week the disaster had opened four debates: the exposure of Himalayan hydropower, the absence of transboundary early warning, the distance between local responders and capital based institutions, and Nepal's demand for direct climate compensation from the United States, China and India. The tension is that the damage is transboundary in origin and in consequence, and every institution answerable for it is organised inside a single national jurisdiction.

Why is the Himalayan system already fragile?

- **A naturally unstable mountain system:** The Himalayas are prone to earthquakes, landslides, avalanches and flash floods before any human intervention is added, and much of the arc falls in **seismic zones IV and V**.
- **The topography concentrates risk:** Lakes formed by melting glaciers sit above fast flowing rivers and steep slopes, so a single breach travels far and fast.
- **Warming acts on the pace of natural processes:** The **Hindu Kush Himalaya**, called the "Third Pole", is warming at nearly twice the global average and its glaciers are melting at 10 times their historical norms, which raises the frequency of GLOFs.
- **The driver is remote, not local:** Warming in the North Eurasian Arctic disrupts planetary waves and the stratospheric polar vortex, which in turn destabilises the South Asian monsoon.
- **Attribution and risk are separate questions:** Linking any single disaster to climate change still requires scientific assessment, and the overall level of risk is rising regardless.

What did the flood do to Nepal's power system and economy?

- **It struck the sector the country had bet on:** Nepal's strategy for economic sovereignty rested on harnessing **43,000 MW** of commercially viable hydropower to become a regional energy exporter, and it had only recently achieved net exporter status.
- **A tenth of installed capacity is gone:** The floods crippled about **10 per cent** of installed capacity, wiping out older surface level plants such as Devighat and burying under construction projects in mud.
- **India's oldest stake on the river is destroyed:** India's Central Water and Power Commission initiated the first hydel project on the Trishuli in 1953, and the 21 MW run of the river plant

commissioned at Tuphe in 1972 supplied Kathmandu for decades. It is now largely decimated.

- **The trade position reversed overnight:** A country banking on power exports to narrow its trade deficit with India halted exports and began importing power for the winter.
- **The bill is a tenth of the economy:** Damages are estimated at **4 to 7 billion dollars**, roughly a tenth of Nepal's gross domestic product, and climate resilient underground engineering will raise future project costs by 10 to 12 per cent.
- **The cascade crosses four countries:** Effects in Nepal, China, India and Bangladesh can disrupt cross border energy trading and regional power pools.
- **Highways were built along the river belts:** China built highways to Kathmandu, including the 115 km Kathmandu to Kodari road of 1967, run through valleys sited for strategic reasons and easy access to sand and boulders, and ribbon settlements grew along them in the river's path.

Why does the response arrive from the wrong place?

- **The first responder is the first victim:** The impact falls on residents of a thinly populated district of 48,000 people, and the response comes from distant institutions in Kathmandu.
- **Sikkim recorded the same pattern in 2023:** Calving from the **South Lhonak glacier** triggered a GLOF in North Sikkim in October 2023, and the Teesta rose 15 to 20 metres within hours, burying townships in Sikkim, West Bengal and Bangladesh.
- **The loss was 60 per cent of a State's output:** Damage exceeded **Rs 25,000 crore**, close to that share of Sikkim's 2022 to 23 Gross State Domestic Product, with generation loss from 1,800 MW of destroyed capacity alone crossing Rs 19,000 crore.
- **No agency owned the warning function:** Municipalities and panchayats had no training, preparedness or means to cope, and no agency was responsible for creating an early warning system.
- **The remedy named is relocation of capacity:** National institutions and resources need to sit at the valley level rather than in the capital.

How extensive is Himalayan dam building, and why is it geopolitical?

- **Across the Tibetan region:** One recent study identified at least **193 dams** built or planned across the wider Tibetan region since 2000, and a Nepal hydropower database lists **more than 570 projects** at different stages.
- **The largest single project:** China is building the **Medog dam** at the **Great Bend** of the **Yarlung Tsangpo**, where the river turns sharply south before entering Arunachal Pradesh as the **Siang**. It is slated to deliver **300 billion kWh** a year, well above the Three Gorges dam, making it the largest hydro project anywhere in the world.

- **A fault beneath it:** In July, Chinese researchers flagged the active **Paizhen Fault** directly beneath the site, so a major earthquake could send a massive discharge of water and debris into India, with sediment starvation downstream for India and Bangladesh in normal operation.
- **Infrastructure as a sovereignty marker:** China treats dam building in Tibet as a marker of sovereignty, and India, Nepal and Bhutan have answered with their own dams, so project decisions answer each other rather than the basin's hydrology.
- **Construction alters the geology:** Drilling and tunnelling disturb the geology and make the area more prone to slope failure and earthquakes, and infrastructure build up plus tourist footfall together compounded the toll.

What is missing in transboundary cooperation?

- **No water sharing treaty:** India and China have none, and hydrological data on the Brahmaputra and Sutlej rests on renewable **Memorandums of Understanding** (first signed in 2002) and an **Expert Level Mechanism** on transboundary rivers set up in 2006, limited to monsoon flow data at defined stations.
- **Sharing follows the state of relations:** Data sharing lapsed after the 2017 Doklam standoff, which shows that safety information is treated as a diplomatic favour.
- **China supplied forecasts, not lake data:** Nepali officials asked Beijing in May 2026 for real time data on glacial lakes and avalanches in Tibet and received only heavy rain forecasts, so the absence of transboundary early warning proved fatal.
- **Transparency differs across the border:** Nepal publishes detailed project and licensing information, and Chinese project level information stays scattered across separate documents rather than in a comparable public database.
- **No arbitration route:** Downstream countries lack the consensus to build alliances that can deal with China, and even a signed agreement faces a state that does not follow such norms, as the South China Sea dispute shows.
- **What cooperation would require:** Continuous sharing of hydrological, weather and glacial lake data, downstream co investment in upstream observation systems, automated public warning, joint studies and regular emergency exercises.

Why has Nepal demanded climate compensation?

- **Its own contribution is negligible:** Nepal accounts for **0.1 per cent** of global greenhouse gas emissions and generates almost all its electricity from renewable hydropower.
- **The demand is a liability claim, not an aid appeal:** Six days after the disaster Nepal's Foreign Minister named the United States, China and India, framing the country as paying the price for a crisis it did not create.
- **The case against the United States is cumulative:** America accounts for over 20 per cent of cumulative global emissions since 1850, which anchors the claim in historical liability.
- **The case against China is proximity and data:** China is the current top annual emitter and the upstream state that withheld glacial lake data.
- **The case against India inverts India's own argument:** New Delhi has long invoked low per capita emissions and **common but differentiated responsibilities** against the West, and Nepal now applies that logic regionally to South Asia's largest emitter. India's refusal to buy power from Nepali projects built by Chinese contractors is part of the charge.

- **The major powers answered with relief, not liability:** China and India sent helicopters, rescue teams and medicines, which supplies assistance while conceding no legal responsibility.

Why can the Loss and Damage Fund not answer the demand?

- **What the fund is:** The **Fund for Responding to Loss and Damage** finances climate damage that has already occurred and cannot be adapted to. Vulnerable nations secured it at **COP27 (2022)**, it was operationalised at **COP28 (2023)**, and it is temporarily hosted by the **World Bank**.
- **It is smaller than one country's damage:** It holds about **700 million dollars** in pledges against a single catastrophe costing several billion.
- **The grant ceiling makes the arithmetic absurd:** Pilot phase rules cap individual grants at 5 to 20 million dollars, a fraction of one per cent of the loss.
- **Speed is the second failure:** Nepal's out of cycle demand on 1 September forces the fund's board to decide whether it can respond to a live emergency at all.
- **Compensation may arrive as debt:** Money routed through a development lender risks converting into loans.
- **The treaty framework rules out liability:** The decision adopting the Paris Agreement records that loss and damage provisions do not provide a basis for any liability or compensation, language developed countries insisted on in 2015.

Why is there no common Himalayan climate policy?

- **The scientific warning is already published:** The **International Centre for Integrated Mountain Development (ICIMOD)**, the Kathmandu based intergovernmental centre for the Hindu Kush Himalaya, has published evidence based reports warning of tipping points in the region's glaciology.
- **India's instruments are national and sectoral:** The **National Action Plan on Climate Change** has eight missions, including the **National Mission for Sustaining the Himalayan Ecosystem**, and States have their own action plans.
- **The regional treaty exists on paper:** The **SAARC Convention on Cooperation on Environment** took effect in 2013 and has produced no standing hazard machinery.
- **The problem is fragmentation rather than absence:** Local, national and regional instruments have to be brought onto a common platform.

Challenges to disaster preparedness and hydropower in the Himalaya

- **Disaster money is triggered by damage, not by risk:** Spending flows to relief and compensation after an event rather than to monitoring and evacuation capacity. Eg. A separate National Disaster Mitigation Fund had to be created under the Disaster Management Act, 2005 because response funds were not being spent on mitigation. **The Fix:** Ring fence a fixed share of the mitigation fund for high altitude monitoring and evacuation infrastructure, with utilisation published State by State.
- **No single agency owns glacier hazard:** Glacier and glacial lake monitoring is split across geological, polar research and university institutions, so no body publishes a standing national risk list. Eg. India's glacial lake inventories have been compiled by different agencies using different thresholds. **The Fix:** Designate one nodal agency to maintain and annually publish a national inventory of high risk glaciers and lakes.
- **Transboundary rivers carry no data obligation:** Upstream flow, lake level and slope data are treated as strategic information rather than a safety input owed downstream. Eg. India China sharing covers defined seasons and stations only. **The Fix:** Negotiate a Hindu Kush Himalaya data protocol with automatic sensor level transmission and an alert threshold, so readings do not depend on bilateral relations.
- **Cascade layouts convert one failure into several:** Projects built in series on the same river mean an upstream breach delivers debris straight into the next structure. Eg. The 2021 Chamoli flood destroyed the Rishiganga project and then struck Tapovan Vishnugad downstream. **The Fix:** Assess clearances at the level of the whole river cascade, so cumulative failure is evaluated once rather than project by project.
- **Tunnelling destabilises slopes and drains aquifers:** Long headrace tunnels cut through fractured rock and remove support from slopes above. Eg. Land subsidence in Joshimath in 2023 followed years of tunnelling in the same valley. **The Fix:** Publish spring discharge and slope movement monitoring for every tunnelled project, with construction halted on a defined trigger.
- **Reconstruction rebuilds the same exposure:** Post disaster funding restores roads and power projects on their original alignments. Eg. Assets damaged in the 2013 Kedarnath floods were substantially rebuilt along the same valley routes. **The Fix:** Make a relocation or redesign assessment a condition of releasing reconstruction funds for any asset in a hazard zone.
- **Attributing a single collapse to named emitters is contested:** Attribution science produces probabilities rather than the causal certainty a liability claim needs. Eg. The International Court of Justice advisory proceedings on climate obligations turned substantially on whether such a link can ground state responsibility. **The Fix:** Commission an independent forensic attribution study of the 26 August collapse before the claim reaches any forum.

Conclusion

The Himalaya is administered as four national jurisdictions and behaves as one physical system. The Rasuwa flood repeats the Sikkim lesson of 2023: absent local capacity, absent warning authority, and upstream data withheld as strategic information. Nepal's compensation claim will not be paid, and that was never the whole point; it converts a disaster into a legal argument that lands on India as well as the West, and establishes that differentiated responsibility runs downward as well as upward. What to watch is whether the India China expert level mechanism is widened past monsoon flow data to glacial lake and reservoir conditions, and whether the Loss and Damage Fund board answers an out of cycle demand or shows that it handles paperwork rather than emergencies.

Back2Basics: International Centre for Integrated Mountain Development

- **Formation:** An intergovernmental knowledge and learning centre established in 1983, headquartered at Kathmandu.
- **Membership:** Eight regional member countries: Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan.
- **Function:** It produces regional assessments on glaciers, water, biodiversity and mountain livelihoods, including the Hindu Kush Himalaya Assessment reports.

Back2Basics: Common But Differentiated Responsibilities

- **What the principle holds:** All states share responsibility for the global environment, and obligations differ by historical contribution and present capacity.
- **Where it is written:** Principle 7 of the 1992 Rio Declaration and Article 3.1 of the **United Nations Framework Convention on Climate Change**, 1992.
- **How it evolved:** The Kyoto Protocol, 1997 split Annex I parties with binding targets from non Annex I parties; the Paris Agreement, 2015 restated it "in the light of different national circumstances" through nationally determined contributions.

PREVIOUS YEAR QUESTION

[2024, GS3, 15 marks] What is disaster resilience? How is it determined? Describe various elements of a resilience framework. Also mention the global targets of the Sendai Framework for Disaster Risk Reduction (2015-2030).

[2023, GS3, 10 marks] Dam failures are always catastrophic, especially on the downstream side, resulting in a colossal loss of life and property. Analyze the various causes of dam failures. Give two examples of large dam failures.

[2019, GS3, 10 marks] Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help in disaster mitigation in the case of landslides.

[2017, GS3, 15 marks] 'Climate Change' is a global problem. How India will be affected by climate change? How Himalayan and coastal states of India will be affected by climate change?

SCIENCE AND TECHNOLOGY

36. [Op-ed] Typhoid control needs more vaccine, less antibiotic

Why in the News

Typhoid cases in India are mounting without attracting the attention that influenza and swine flu currently draw, and every suspected case becomes a trigger for inappropriate or unnecessarily broad-spectrum antibiotic use. The disease is bacterial and vaccine preventable, yet it continues to be diagnosed imperfectly and treated empirically. The reason is the absence of a simple, reliable and accessible diagnostic test, which leaves the clinician with suspicion rather than confirmation. The tension is that the same empirical prescribing that substitutes for a diagnosis also generates the antimicrobial resistance in *Salmonella typhi* that makes future typhoid harder to treat, and it destroys the case data needed to see that resistance building.

What is the typhoid conjugate vaccine?

- **What it is:** The typhoid conjugate vaccine (TCV) links the Vi capsular sugar coat of *Salmonella typhi* to a carrier protein. The conjugation produces a durable immune response, including in children under two, which the older unconjugated vaccine did not.
- **India's manufacturing position:** India produced the world's first World Health Organization (WHO) prequalified typhoid conjugate vaccine, Typbar-TCV, in 2017. Additional Indian products have achieved WHO prequalification since then.
- **Where WHO places it:** The WHO has prioritised introduction of the vaccine in countries carrying a high typhoid burden or high levels of antimicrobial resistance.

Why does typhoid get treated without being diagnosed?

- **A single Widal test settles nothing:** The Widal test measures antibodies against *Salmonella typhi*, and one result is not sufficient to establish a diagnosis of acute typhoid.
- **Endemicity corrupts the reading:** In an endemic country such as India, background antibodies and previous exposure or vaccination make the result difficult to interpret. In routine practice a positive Widal result may still be treated as confirmation.
- **The laboratory standard is only half sensitive:** Blood culture remains the conventional laboratory standard. The latest WHO typhoid guidance puts the sensitivity of a single blood culture at only around **55 to 60 per cent**.
- **What the yield depends on:** Sensitivity is influenced by the volume of blood collected and, critically, by prior exposure to antimicrobials.
- **The vicious cycle this creates:** A patient develops prolonged fever and takes an antibiotic before seeking care. The blood culture drawn afterwards returns negative, and the clinician responds to unresolved suspicion by escalating or changing the antibiotic.

What does empirical treatment cost beyond the individual patient?

- **Every course adds selection pressure:** India already faces increasing resistance in *Salmonella typhi*, and each unnecessary antibiotic course creates additional selection pressure on the organism.
- **Every missed case blanks the record:** A patient treated without microbiological confirmation never enters the resistance data, so the surveillance that should guide prescribing is undermined by the prescribing itself.
- **Breadth compounds the damage:** The response to diagnostic uncertainty is a broader spectrum agent, which acts on organisms far beyond the one suspected.

Why is a vaccine preventable disease being fought with antibiotics?

- **The capability is not the constraint:** The scientific and manufacturing capability exists and the vaccine exists. What remains inadequate is the scale and the rigour of its use.
- **India is the case WHO describes:** India is one of the countries where the combination of disease burden and resistance makes the case for typhoid vaccination compelling.
- **Vaccination does not displace the basics:** It cannot be treated as a substitute for clean water, sanitation, food safety or better diagnostics. It has to be one component of an integrated typhoid control strategy.

What would an integrated typhoid control strategy require?

- **Surveillance triggered by the case rise:** Reports of increasing typhoid should themselves trigger strengthened surveillance. Hospitals and laboratories should systematically document suspected and culture confirmed cases, antimicrobial susceptibility patterns and prior antibiotic exposure.
- **Diagnostic stewardship inside antimicrobial stewardship:** Blood cultures should ideally be obtained before antibiotics are started, with adequate blood volume and appropriate laboratory practices.
- **A test that works at the point of care:** India needs investment in a better point of care or rapid diagnostic test for typhoid.
- **A settled place for the vaccine:** The position of the typhoid conjugate vaccine in the public health strategy needs to be revisited rather than left to individual prescribing decisions.

Challenges to scaling the typhoid conjugate vaccine

- **It sits outside the routine immunisation schedule:** The vaccine is not part of the Universal Immunisation Programme, so uptake depends on the private market and on paying households. Eg. Coverage is concentrated in urban private paediatric practice rather than in the dense settlements where typhoid transmission is highest. Fix. Introduce it in a phased manner in high burden urban districts first, with the introduction decision anchored to culture confirmed case data.
- **The vaccine does not cover the whole disease:** Enteric fever is also caused by *Salmonella paratyphi A*, against which the conjugate vaccine gives no protection. Eg. A vaccinated patient presenting with prolonged fever still requires the same diagnostic workup. Fix. Fund development of a bivalent conjugate covering both organisms alongside scale up of the existing product.
- **Introduction cannot be measured without a denominator:** Without culture confirmed case counts there is no baseline against which to judge whether the vaccine reduced disease. Eg. Resistance data in India is heavily skewed towards tertiary hospitals rather than the community. Fix. Make enteric fever notifiable with mandatory laboratory reporting so introduction and impact are both measurable.
- **Catch-up campaigns are the expensive part:** A single dose given from six months of age is cheap, and a mass campaign across older cohorts is not. Eg. The cold chain and session load of a campaign compete directly with routine immunisation days. Fix. Attach the catch-up to existing school health programmes rather than running a parallel delivery system.

Conclusion

India has the vaccine and the manufacturing base to use it widely. What it does not have is a count of who actually has typhoid, because most cases are treated on symptoms and never confirmed in a laboratory. That missing count is exactly what would tell the government where to vaccinate first and whether it worked. The marker to watch is whether the typhoid conjugate vaccine enters the Universal Immunisation Programme, or stays held up waiting on data the country has not begun collecting.

What is Antimicrobial Resistance?

- **About:** Antimicrobial resistance (AMR) occurs when bacteria, viruses, fungi and parasites evolve and stop responding to medicines that once treated them. It is often termed the silent pandemic.
- **The One Health scope:** Human medicine, animal husbandry and the environment form one reservoir, since resistant organisms move between them through food, water and waste.

Laws and Rules Governing Antimicrobial Resistance

- **Drugs and Cosmetics Act, 1940:** The parent statute regulating manufacture and sale of medicines in India.
 - **Schedule H1:** Requires a prescription and a sale register for listed antibiotics and second line drugs.
- **Ban on irrational fixed dose combinations:** The government banned 156 irrational fixed dose combinations in 2024, several being antibiotic cocktails with no scientific basis.

Government Initiatives for Antimicrobial Resistance

- **National Action Plan on AMR 2.0 (2025 to 2029):** Sets sectoral targets across human health, animal health and the environment.
- **Red Line Campaign:** Marks prescription-only antibiotic packs with a red vertical stripe for buyer identification.
- **Indian Council of Medical Research (ICMR) AMR Surveillance Network:** Collects susceptibility data from tertiary care hospitals.

Key Facts about Antimicrobial Resistance

- **Consumption pattern:** 59 per cent of antibiotics consumed in India in 2022 were in the WHO Watch category, meant to be used sparingly.
- **Animal use ranking:** India is the fourth largest consumer of antibiotics for animals, with an 82 per cent rise projected by 2030.
- **Newborn burden:** More than 50,000 newborn deaths a year in India are attributed to resistant sepsis.

Challenges in Antimicrobial Resistance

- **Antibiotics still move over the counter:** Retail enforcement of the prescription requirement is weak, so a course is bought like a painkiller. Eg. The pill popping habit widened after the COVID-19 pandemic, with antibiotics taken for viral illness. Fix. Make the Schedule H1 register a digital point of sale entry so it can be audited rather than inspected.
- **Manufacturing effluent seeds resistance in rivers:** Untreated effluent from drug production enters water bodies and selects for resistant organisms outside any clinic. Eg. The Musi river near Hyderabad shows antibiotic levels a thousand times above safe limits. Fix. Tie public procurement preference to plants certified for zero liquid discharge.
- **Farm use is a growth strategy, not a treatment:** Antibiotics are given routinely in poultry and aquaculture to accelerate weight gain, not to treat disease. Eg. Shrimp samples have shown up to 100 per cent ampicillin resistance. Fix. Subsidise animal vaccines and enforce farm to fork traceability so residue traces to a producer.

PREVIOUS YEAR QUESTION

[2020] What is the importance of using Pneumococcal Conjugate Vaccines in India?

- (1) These vaccines are effective against pneumonia as well as meningitis and sepsis.
- (2) Dependence on antibiotics that are not effective against drug-resistant bacteria can be reduced.
- (3) These vaccines have no side effects and cause no allergic reactions.

Select the correct answer using the code given below:

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

Answer: (b)

37. [Explainer] Why India took 16 years to acquire fire-and-forget Javelin missiles

Why in the News

India has finalised a deal to purchase the Javelin anti-tank guided missile (ATGM) system from the United States through its Foreign Military Sales (FMS) process. The purchase closes a process that began in 2010 and was shelved and revived several times in between. The original attempt collapsed over the American refusal to release the missile's core seeker technology, and the alternative India turned to in its place, Israel's Spike system, also failed to convert into a contract. The tension is that the deal has now closed on terms India rejected sixteen years ago, since co-production of a finished round is a different thing from the full transfer of technology that was demanded the first time.

What is the Javelin anti-tank guided missile?

- **What it is:** A third generation, man portable anti-tank guided missile produced in the United States, designed to be carried and fired by a two person infantry team.
- **Fire and forget guidance:** The operator locks the missile onto the target before launch and the missile then guides itself to impact. The firing team can leave the position immediately, which a wire guided missile does not allow.

Why did India want the Javelin in 2010?

- **The stated intent:** In August 2010 the Defence Minister told Parliament that the government intended to procure third generation Javelin missiles through the FMS route, and that the procurement would include a transfer of technology.
- **The inventory gap:** The move was driven by a shortage of anti-tank guided missiles in the Indian Army's inventory.
- **The indigenous programme slipped:** The original timelines for the indigenous systems being developed by the Defence Research and Development Organisation (DRDO) had been delayed.
- **What it was meant to replace:** The idea was to replace the ageing Milan-2T and Konkurs missile systems then in use with the Army.
- **Where the preference came from:** United States forces actively showcased the system during the 2009 bilateral exercise Yudh Abhyas, after which it was highlighted as the choice to immediately fill the gap.

Why did the first attempt collapse?

- **The technology restriction:** The acquisition was shelved because of stringent technology transfer restrictions imposed by Washington.
- **The specific component withheld:** The United States refused to share the missile's core seeker technology, the imaging sensor that identifies and tracks the target, under a 100 per cent transfer of technology model.
- **The consequence:** The refusal caused India to pivot to Israel's Spike missile system, manufactured by Rafael Advanced Defense Systems, in 2014.

What happened to the Spike alternative?

- **Why Spike was chosen:** In 2014 India went ahead with Spike over the Javelin, on the understanding that it could offer greater flexibility of technology transfer and local production.
- **The order cleared:** The Defence Acquisition Council cleared the purchase of over 8,000 Spike missiles.
- **Why it was cancelled:** Concerns over the system's performance in trials, over technology transfer, and over progress in India's own man portable missile programme led to cancellation of the **\$500 million** order in 2017.
- **Revived and shelved again:** The deal was revived in 2018 following the Israeli Prime Minister's visit, and was subsequently shelved again.
- **The stopgap purchase:** India undertook an emergency purchase of a limited quantity of the fourth generation Spike-LR missiles in 2019 to meet an immediate operational gap.
- **What did get built:** In August 2023 Kalyani Rafael Advanced Systems, a joint venture between the Kalyani Group and Rafael, said it had won a **Rs 287.51 crore** order from the Defence Ministry for the supply of the missile systems.

What changed to make the second attempt succeed?

- **A different bilateral setting:** The Javelin reappeared in India United States strategic discussions at a point when defence cooperation between the two countries had deepened.
- **Co-production replaced technology transfer as the ask:** A United States Congressional Research Service report updated in 2025 noted that co-production discussions involving the missile were ongoing.
- **The industrial tie-up:** In February 2025 the Javelin Joint Venture, a partnership between Lockheed Martin and Raytheon, said it was exploring co-assembly and co-production in India. It signed a memorandum of understanding with Bharat Dynamics Limited.
- **The operational trigger:** Discussions gained pace after Operation Sindoor in May 2025.
- **The two track negotiation:** By July 2025 India was negotiating for the systems both as an emergency procurement and through a long term contract, the latter likely involving co-production of the weapon systems.
- **The clearance:** Washington officially cleared the sale in November 2025.

Challenges to the Javelin acquisition

- **A government to government sale surrenders schedule control:** Under Foreign Military Sales the buyer contracts with the United States government rather than with the manufacturer, so delivery follows the seller's production queue. Eg. GE Aerospace's F404 engine deliveries for the Tejas Light Combat Aircraft programme ran late as European demand for American systems surged after 2024. Fix. Write dated delivery milestones with defined penalties into the Letter of Offer and Acceptance rather than relying on the standard schedule.
- **Co-assembly is not the technology that was withheld:** An arrangement to assemble finished rounds in India leaves the guidance package as an imported item, which is the precise gap that stalled the 2010 attempt. Eg. Indian co-production of imported systems has historically stopped at airframe and integration work. Fix. Tie offset credit to manufacture of the seeker and its imaging components rather than to assembly hours.
- **Unit cost limits how deep the stock can go:** A fire and forget round with an imaging seeker costs many times what a wire guided round costs, which restricts the number of rounds a formation can hold. Eg. The 2019 purchase of Spike-LR was a limited emergency buy rather than an inventory replacement. Fix. Pair the import with volume production of DRDO's Man Portable Anti-Tank Guided Missile so the expensive round is reserved for the hardest targets.
- **Four missile families in one role:** The Army would operate legacy Milan and Konkurs stock, Spike, Javelin and the indigenous system together, multiplying training pipelines and spares chains. Eg. The Kalyani Rafael line and a Bharat Dynamics Limited line would produce competing rounds for

the same infantry task. Fix. Fix a role split by range band and phase the legacy systems out on a published timetable.

Conclusion

India has been short of man portable fire and forget anti tank missiles for more than a decade. The purchase answers that operational gap rather than any shift in acquisition policy, and the indigenous programme's repeated slippage is what left the gap open. The marker to watch is whether the domestic arrangement moves past final assembly into seeker manufacture, since that is the component the first attempt broke on. If it does not, the deal has bought rounds rather than capability, and a one time exception starts to look like the practice.

Back2Basics: Foreign Military Sales

- **What it is:** The United States government's programme for selling defence articles, services and training to foreign governments and international organisations.
- **How the transaction runs:** The buyer contracts with the United States government, which then places the order with the manufacturer on the buyer's behalf, so there is no direct commercial contract with the company.
- **Who administers it:** The Defense Security Cooperation Agency, under the Department of Defense, runs the programme under the Arms Export Control Act, 1976.
- **The Congressional step:** Sales above set value thresholds must be notified to the United States Congress before a Letter of Offer and Acceptance is issued to the buyer.

PREVIOUS YEAR QUESTION

[2021, GS3, 10 marks] How is S-400 air defence system technically superior to any other system presently available in the world?

SPACE AND INTERNATIONAL MISSIONS

38. ISRO launches advanced imaging satellite EOS-05

Why in the News

ISRO launched the 2,367 kg advanced earth observation satellite **EOS-05 (GISAT-1A)** aboard **GSLV-F17** from the second launch pad at Sriharikota, placing it in a sub geosynchronous transfer orbit about 18 minutes after lift off. It is India's first imaging satellite designed to operate from **geosynchronous orbit**, and the flight, the **19th GSLV mission**, ends the pause that followed the PSLV-C62 failure of January 2026 (The Hindu, 5 September 2026).

About EOS-05 (GISAT-1A)

- **What it is:** A **Geo Imaging Satellite** designated EOS-05 under ISRO's revised nomenclature; it replaces **GISAT-1 (EOS-03)**, launched in 2021, which missed its orbit after the cryogenic upper stage failed to ignite.
- **Purpose:** Near real time imaging of large areas of interest at frequent intervals from about 36,000 km, for monitoring natural disasters and tracking agriculture and forestry, with multi band capability.
- **Mission life:** About **nine to ten years**.
- **Launch vehicle:** GSLV Mk II with an indigenous cryogenic upper stage; sub geosynchronous transfer orbit is a staging

orbit from which the satellite raises itself using its own propulsion.

PREVIOUS YEAR QUESTION

[2018] With reference to India's satellite launch vehicles, consider the following statements:

1. PSLVs launch the satellites useful for Earth resources monitoring whereas GSLVs are designed mainly to launch communication satellites.
2. Satellites launched by PSLV appear to remain permanently fixed in the same position in the sky, as viewed from a particular location on Earth.
3. GSLV Mk III is a four-stage launch vehicle with the first and third stages using solid rocket motors, and the second and fourth stages using liquid rocket engines.

Which of the statements given above is/are correct?

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

39. 'To find the rare & unusual': NASA launches new space telescope

Why in the News

The National Aeronautics and Space Administration (NASA) has launched the **Nancy Grace Roman Space Telescope** aboard a **Falcon Heavy** rocket from the Kennedy Space Center. The telescope cost **4.3 billion dollars** and is named after NASA's first chief astronomer. It is bound for an observation point **1.6 million kilometres** from Earth, the same location that already hosts the James Webb Space Telescope, and takes **more than three months** to reach it. A wide survey instrument is therefore being added to a fleet built around narrow and deep observation.

What does the Roman Space Telescope add to the existing fleet?

- **The field of view:** Roman's field of view is more than **100 times wider** than that of the **Hubble Space Telescope**, which has been in orbit for **36 years**.
- **The survey speed:** A month of Milky Way observations by Roman would take Hubble a **century** to complete.
- **The division of work with Webb:** Webb observes a narrower field and can reach objects almost as old as the Big Bang. Roman spots new worlds first, and Webb then targets them to fill in the detail.
- **The wider observing network:** Roman joins Hubble and Webb alongside the European Space Agency's **Euclid** spacecraft and the National Science Foundation's **Vera C. Rubin Observatory** in Chile.

What is the mission set up to observe?

- **The expected catalogue:** The telescope is expected to record **thousands of supernovae, tens of thousands of planets, billions of galaxies** and **tens of billions of stars**.
- **The unseen components:** It is expected to shed light on the **dark matter** and **dark energy** that make up most of the universe and remain concealed.
- **The rate of expansion:** Its catalogue of galaxies will let scientists establish how quickly the universe is expanding under those forces.
- **The centre of the galaxy:** It will scan the **galactic bulge** at the dead centre of the Milky Way, giving the deepest view yet of the heart of the galaxy.

Conclusion

The telescope is in transit and its survey work begins only on reaching its observation point. The next marker is the first release from its galaxy catalogue, since the expansion rate measurement rests on that catalogue rather than any single observation.

Back2Basics: Dark Matter and Dark Energy

- **Dark matter:** Matter that emits no light and is detected only through its gravitational effect. It is inferred from the rotation speeds of galaxies and from the bending of light by galaxy clusters.
- **Dark energy:** The name for whatever drives the accelerating expansion of the universe. It was inferred in 1998 from observations of distant Type Ia supernovae.

- **Their share of the universe:** Ordinary matter accounts for about 5 per cent of the universe's content, dark matter for about 27 per cent and dark energy for about 68 per cent.
- **Why supernovae carry the measurement:** A Type Ia supernova has a known intrinsic brightness, so its observed brightness gives its distance. That property makes it the standard yardstick for measuring expansion.

PREVIOUS YEAR QUESTION

[2022, GS3, 15 marks] Launched on 25th December, 2021, James Webb Space Telescope has been much in the news since then. What are its unique features which make it superior to its predecessor Space Telescopes? What are the key goals of this mission? What potential benefits does it hold for the human race?

ART, CULTURE AND HISTORY

40. Restoration work on temple in Goa island unearths relics from 14th to 16th century

Why in the News

Restoration work at the old site of the Saptakoteshwar temple on Divar island in Goa has uncovered relics dated between the fourteenth and the sixteenth centuries. The Goa Chief Minister stated that the remains lie along the old pathway between Koti Tirth and Madhavachi Talli and indicate an ancient temple complex and a sacred corridor. The recovered material includes a Kirtimukh motif and the carved capital of a temple pillar. The finds emerged from restoration work rather than from a planned excavation, which is what makes their context fragile. The significance is that the pre Portuguese temple landscape on the island was larger than the single surviving shrine had suggested.

What was recovered, and where?

- **A guardian motif:** A Kirtimukh motif is among the finds, and its presence marks a formal temple entrance rather than an open air shrine.
- **A structural element:** A carved capital of a temple pillar was also recovered, which is the load bearing head of a column and part of a built temple rather than a portable object.
- **The find spot:** Both were recovered along the old pathway running between Koti Tirth and Madhavachi Talli.
- **The dating:** The relics and remains have been dated to between the fourteenth and the sixteenth centuries.

Why do the finds change the reading of the site?

- **Distribution carries the argument:** The elements sit along a pathway, so it is their placement rather than the value of any single object that supports the inference.
- **A complex rather than a shrine:** Architectural members of this kind, found together, indicate a temple complex rather than one isolated structure.
- **A sacred corridor:** The alignment links the site's water body with its associated structures into a processional route.
- **The extent is revised:** The understood extent of the island's pre Portuguese temple landscape is now larger than the surviving remains indicated.

Why does Saptakoteshwar matter in Goa's religious history?

- **A principal Shaiva site:** Saptakoteshwar is counted among Goa's principal Shaiva sites and its deity is a form of Shiva.
- **Kadamba patronage:** The Kadamba rulers of Goa held Saptakoteshwar as their tutelary deity, and the name appears on their coinage.
- **Displacement in the Portuguese period:** The Divar temple was destroyed in the sixteenth century, and the deity was moved off the island to Narve in Bicholim, which lay outside Portuguese control at the time.
- **A later rebuilding:** The temple at Narve was rebuilt in 1668 by Chhatrapati Shivaji Maharaj, and worship has continued at that site since.

Conclusion

The value of these finds lies less in the objects than in the boundary they redraw around a site long assumed to end at its surviving shrine. Whether that reading holds depends on a systematic survey along the corridor rather than on further chance recovery during repair work. The step to watch is whether the pathway and its surroundings are brought under a protected category before restoration continues over them.

Back2Basics: Kirtimukh

- **What it is:** Kirtimukh is a fierce swallowing face carved as an architectural motif, the name meaning face of glory.
- **Where it is placed:** It is set above temple doorways, over deity niches and at the apex of arches, as a guardian of the threshold.
- **Its origin story:** Puranic accounts describe a devouring being created by Shiva that consumes its own body at his command and is then placed at the entrance to be honoured first.
- **Its reach:** The motif runs across Hindu and Buddhist architecture in India and into Southeast Asia, so its presence signals a formal temple structure.

PREVIOUS YEAR QUESTION

[2018, GS1, 10 marks] Safeguarding the Indian art heritage is the need of the moment. Discuss.