

The Hindu Important News Articles & Editorial For UPSC CSE

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Page 01 : GS 2 : Polity and social justice

The Supreme Court of India has stayed an order passed by the Allahabad High Court on March 17, 2024. The High Court had concluded that mere physical assault and an attempt to remove a minor's lower garment were insufficient to constitute an "attempt to rape" under the Indian Penal Code (IPC) and the Protection of Children from Sexual Offences (POCSO) Act.

SC stays HC's 'inhuman' remarks on rape bid

Justice Gavai noted that parts of Allahabad High Court's March 17 order, which described a minor's trauma but concluded the accused lacked intent to rape, showed a 'complete lack of sensitivity' in handling the case; the Supreme Court judge said what made it worse was the order was not dictated by the judge on the spur of the moment

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Wednesday stayed an Allahabad High Court order of March 17, which concluded that "mere" grabbing the breasts of a minor victim, breaking the string of her pyjama to "bring down" her lower garment are not sufficient to constitute an offence of attempt to rape.

A day after the Supreme Court took *suo motu* cognizance of the order, a Bench headed by Justice B.R. Gavai said the observations made by a Single Judge Bench of Justice Ram Manohar Narayan Mishra of the High Court were "totally insensitive, inhuman" and "unknown to the

nets of law".

Justice Gavai pointed out that certain paragraphs of the order, which graphically recounted the trauma endured by the minor victim at the hands of the two accused persons only to conclude their actions did not show any determination on the part of the duo to rape her, showed a "complete lack of sensitivity".

'Thoughtful decision'

The Bench said what made it worse was the order was not dictated by the judge on the spur of the moment. The case was reserved for orders in November 2024. The order passed on March 17, almost four months later, was, even according to Justice

Trial trail

Timeline of key developments in the case



Nov. 10, 2021: Alleged incident takes place

Jan. 12, 2022: Victim's mother files an application before the Special Judge,

POCSO Act, Kasganj district, U.P.

March 21, 2022: Special Judge treats the application as a complaint

June 23, 2023: After recording statements, the Special Judge issues a summons to the accused

Nov. 13, 2024: Revision petition against the summons order is filed and reserved for judgment by the Allahabad HC

March 17, 2025: Judgment in question is pronounced

Mishra, after "thoughtful consideration and meticulous examination of the facts of the case".

Later, in the post-lunch session, a lawyer urged the Bench to restrict the media from reporting the top

court order. "No, the judge should have thought 10 times before writing such things," Justice Gavai retorted.

In the morning, the top court was assisted by Attorney-General R. Venkatara-

mani and Solicitor-General Tushar Mehta, who urged the Bench to examine the *suo motu* case with great care. The court issued notice to the Centre and Uttar Pradesh.

The mother of the minor victim involved was given liberty to implead herself in the case.

The court directed the Supreme Court Registry to convey its order to the Allahabad High Court Registry for placing it before the High Court Chief Justice for necessary action. The court listed the case after two weeks.

The March 17 order was based on a revision plea filed by the accused against a summons from the trial court on the charge of rape. Justice Gavai re-

marked about the incongruity and damage caused by making these remarks when the case was still at the nascent stage of issuance of summons to the accused. The three paragraphs the apex court found particularly distasteful referred to how the two accused had grabbed the breasts of the victim, broke the string of her pyjama and tried to drag her beneath a culvert before they fled when passers-by spotted them.

Justice Mishra had said these facts did not support a summons order on the charges of Sections 376 (rape), 511 (attempt to commit offences punishable with life imprisonment) or rape read with Section 18 of the Protection of Chil-

dren from Sexual Offences (POCSO) Act. Section 18 punishes an attempt to commit an offence under the POCSO law.

The Single Judge had modified the summons order after "thoughtful consideration and meticulous examination of the facts of the case" to note that "a prima facie charge attempt to rape is not made out against the accused".

"Instead they are liable to be summoned for minor charge of Section 354(b) IPC i.e. assault or abuse a woman with intent to disrobing or compelling her to be naked and Section 9 of POCSO Act provides punishment for aggravated sexual assault on a child victim," the March 17 order had read.

➔ This decision by the High Court was widely criticized for its insensitive and legally flawed reasoning, leading the Supreme Court to take suo motu cognizance of the matter.

Key Issues Highlighted by the Supreme Court:

1. Insensitivity in Judicial Interpretation:

- Justice B.R. Gavai, heading the Supreme Court Bench, strongly criticized the Allahabad High Court's reasoning, calling it "totally insensitive and inhuman."
- The graphic description of the minor victim's ordeal followed by a conclusion that there was no intent to rape was deemed highly inappropriate.

2. Judicial Delay and Thoughtful Consideration:

- The High Court had reserved its judgment in November 2024 but passed the order in March 2025 after "thoughtful consideration."
- The Supreme Court noted that this was not an impulsive error, but a deliberate interpretation, raising serious concerns about judicial sensitivity and understanding of sexual violence laws.
- 3. Flawed Legal Reasoning:
 - The Allahabad High Court ruled that there was no prima facie case for charges under:
 - Section 376 IPC (Rape)
 - Section 511 IPC (Attempt to commit offences punishable with life imprisonment)
 - Section 18 of the POCSO Act (Attempt to commit an offence under POCSO)
 - Instead, the High Court reduced the charges to Section 354(b) IPC (assault with intent to disrobe a woman) and Section 9 of POCSO (aggravated sexual assault on a child).
 - The Supreme Court found this legal interpretation problematic, as attempt to rape does not require completed penetration but a clear intent to commit the offence.

Legal and Constitutional Implications:

1. Definition of Attempt to Rape under Indian Law:

- The Indian Penal Code (IPC) and POCSO Act define "attempt to rape" as any act that demonstrates a clear intent to commit rape, even if the act remains incomplete.
- The breaking of the victim's clothing, touching inappropriately, and dragging her to a secluded place clearly indicate intent.
- The High Court's conclusion contradicts Supreme Court precedents that emphasize a broad and victim-centric interpretation of sexual violence laws.

2. Judicial Responsibility in Handling Sexual Assault Cases:

- The judiciary plays a crucial role in upholding victims' rights, especially in sexual violence cases involving minors.
- Insensitive judicial remarks can create secondary victimization, discouraging survivors from seeking justice.

3. Suo Motu Cognizance: A Rare Step by the Supreme Court:

- The Supreme Court's suo motu action (taking up a case on its own) indicates the seriousness of the issue.

- This intervention safeguards the credibility of the judiciary and ensures a victim-centric approach in sexual violence cases.

Broader Implications :

1. Importance of Gender Justice in Judiciary:

- This case highlights the critical need for gender sensitivity in judicial interpretation.

2. Strengthening POCSO and IPC Provisions:

- This case reinforces the importance of strict enforcement of POCSO and IPC provisions to protect child victims.
- The Supreme Court's stance aligns with global best practices in handling sexual offences.

3. The Role of Media in Judicial Accountability:

- The Supreme Court's refusal to restrict media reporting underscores the role of press freedom in judicial accountability.

Conclusion:

- The Supreme Court's intervention in this case underscores the importance of a sensitive, victim-centric, and legally sound approach in sexual violence cases. It reinforces the judiciary's responsibility to protect survivors, uphold constitutional values, and prevent misinterpretation of laws meant to safeguard vulnerable individuals.

UPSC Mains Practice Question

Ques : Discuss the importance of judicial sensitivity in handling cases related to sexual violence, especially against minors. How can the judiciary ensure a victim-centric approach in such cases? (250 words)

The U.S. Commission on International Religious Freedom (USCIRF) has released its 2025 Annual Report, recommending that India be designated as a "Country of Particular Concern" (CPC) due to alleged religious intolerance and misuse of laws against minorities. The Indian government has rejected the report as biased, politically motivated, and an attempt to misrepresent isolated incidents.

Centre slams 'biased' report by U.S. commission on religious freedom

Suhasini Haidar
NEW DELHI

The Union government on Wednesday lashed out at the U.S. Commission on International Religious Freedom (USCIRF) for its latest report that expresses concerns about "attacks and discrimination" against religious minorities in India and calls for sanctions against India's intelligence agency.

The 2025 Annual Report of the USCIRF has recommended again that the U.S. government designate India, along with 15 other countries, a "Country of Particular Concern" (CPC).

'Misuse of laws'

In its sharpest criticism thus far, the USCIRF, a congressional body that does not represent the U.S. government but is mandated to make recommendations to it, accused the Indian government of misusing



Randhir Jaiswal

laws such as the UAPA, FCRA, and CAA to "crack down" on religious minorities and civil society organisations, and even accused Prime Minister Narendra Modi of "hateful rhetoric and disinformation against Muslims and other religious minorities to gather political support".

For the first time, the USCIRF called for sanctions against the Research and Analysis Wing and Vikas Yadav, named in the Pannun assassination plot case. It also sought the ap-

plication of the Transnational Repression Act on India and a review of the sale of MQ-9B Predator drones for their potential use in "religious freedom violations" by Indian authorities.

'Politically motivated'

"The USCIRF's persistent attempts to misrepresent isolated incidents and cast aspersions on India's vibrant multicultural society reflect a deliberate agenda rather than a genuine concern for religious freedom," External Affairs Ministry spokesperson Randhir Jaiswal said in response to questions, calling the latest report a part of the "pattern of issuing biased and politically motivated assessments".

"Such efforts to undermine India's standing as a beacon of democracy and tolerance will not succeed. In fact, it is the USCIRF that should be designated as an

entity of concern," the spokesperson added, referring to the USCIRF's demands on designations and targeted sanctions.

This is the sixth time the USCIRF has recommended India's designation as a CPC along with countries such as China, Myanmar, Pakistan, Iran, Russia, and Saudi Arabia. However, on each occasion, the U.S. State Department has declined to add India to the CPC list.

Nevertheless, the government has reacted sharply to the USCIRF's annual reports, and except for once, in 2016, has not allowed its members to visit India.

The USCIRF is currently chaired by academic Stephen Schneck who was appointed in 2022 by the previous Biden administration, and who refers to himself as a "Catholic advocate in public life for social justice".

Key Issues Highlighted in the Report:

- ➔ **Allegations of Religious Discrimination:**
 - The report claims that the Indian government has used laws such as Unlawful Activities (Prevention) Act (UAPA), Foreign Contribution (Regulation) Act (FCRA), and the Citizenship Amendment Act (CAA) to target religious minorities and civil society organizations.
 - It criticizes Prime Minister Narendra Modi for allegedly using "hateful rhetoric" to gain political support.
- ➔ **Call for Sanctions on Indian Officials:**
 - For the first time, the USCIRF has recommended sanctions on India's Research and Analysis Wing (R&AW) and a specific individual, Vikas Yadav, for their alleged role in transnational repression (referring to the Pannun case).
 - It has urged the U.S. to review arms sales to India, particularly the sale of MQ-9B Predator drones, citing concerns over their potential misuse in human rights violations.
- ➔ **USCIRF's Persistent Recommendation for CPC Status:**
 - India has been recommended for CPC designation six times in recent years, but the U.S. State Department has consistently ignored this recommendation.
 - Other countries included in the CPC list are China, Pakistan, Iran, Myanmar, Russia, and Saudi Arabia.

India's Response:

- ➔ **Rejection of the Report:**
 - The Indian Ministry of External Affairs (MEA) dismissed the report as biased, politically motivated, and misleading.
 - MEA spokesperson Randhir Jaiswal accused USCIRF of following a deliberate agenda rather than expressing genuine concerns about religious freedom.
- ➔ **Accusations Against USCIRF:**
 - India argues that USCIRF itself should be designated as an "entity of concern" due to its repeated misrepresentation of India's democratic and multicultural society.
 - The Indian government has also refused USCIRF visits to India, except in 2016.

Key Takeaways

- ➔ **India-U.S. Relations and Foreign Policy**
 - The U.S. government has not acted on the USCIRF's recommendations, showing that India-U.S. ties remain strong despite such reports.
 - India has strategic importance in the Indo-Pacific, QUAD, and global trade, which outweighs human rights concerns in U.S. foreign policy decisions.

Daily News Analysis

- The recommendation to review arms sales (Predator drones) could affect defense cooperation.
- Internal Security and Religious Freedom Laws
 - The UAPA and FCRA have been criticized for curbing dissent, but the Indian government justifies them as essential for national security.
 - The CAA debate continues, with opponents claiming it targets minorities, while the government asserts it offers refuge to persecuted minorities from neighboring countries.
- Geopolitical Significance of the Report
 - The USCIRF is a non-governmental body, and its reports do not reflect official U.S. policy.
 - India is often clubbed with Pakistan and China, which dilutes the credibility of the report.
 - The U.S. administration's rejection of USCIRF's recommendations shows that economic and strategic interests shape U.S.-India relations more than human rights concerns.

Conclusion:

- The USCIRF report lacks diplomatic weight, as the U.S. government has repeatedly ignored its recommendations. However, it raises questions about India's international image on religious freedom and human rights. India must effectively counter such reports through strong diplomatic engagement and a transparent legal framework while ensuring national security and constitutional values.

UPSC Mains Practice Question

Ques: Critically analyze the role of international organizations and commissions in assessing human rights and religious freedom in sovereign nations. Should India engage with these reports or dismiss them? (250 words)

- GE Aerospace has delivered the first of 99 F404-IN20 jet engines to Hindustan Aeronautics Limited (HAL) for the Tejas Light Combat Aircraft (LCA) Mk1A, marking a significant milestone in India's indigenous fighter jet programme. This comes amid the Indian Air Force's (IAF) urgent need to expand its fighter fleet to address its squadron shortages.

GE Aerospace to deliver jet engines for Tejas LCA-Mk1A

IAF Chief Air Chief Marshal A. P. Singh had said that the force needs to add 35-40 fighter jets every year and that HAL has promised to produce 24 Tejas Mark-1A jets next year

Dinakar Peri
NEW DELHI

Engine manufacturer General Electric (GE) Aerospace on Wednesday announced the delivery of the first of 99 F404-IN20 engines to Hindustan Aeronautics Ltd. (HAL) for the Tejas Light Combat Aircraft Mark-1A fighter jet, marking the commencement of deliveries for the delayed programme. Defence sources said that 12 engines are expected to be delivered this year.

The first engine to power the LCA-Mk1A moved out of the GE facility on Tuesday and is expected to arrive in India in April, official sources in the know said. At Aero India in February, HAL Chairman and Managing Director D.K. Sunil said that 12 jets would be ready this year.

Once the engine arrives, more tests will be done at the HAL facility, sources said adding that a firm date of delivery to the IAF cannot be given yet. "We are on track to deliver to the latest schedule we have agreed with HAL," GE Aerospace said in response to a query from *The Hindu*.

Speaking at an event in February, IAF chief Air



The first engine to power the LCA-Mk1A is expected to arrive in India in April, official sources say. REUTERS

Chief Marshal A.P. Singh said the IAF needed to add 35-40 fighter jets every year to fill the shortage in numbers and that HAL had promised to produce 24 Tejas Mark-1A jets next year.

Shawn Warren, general manager, combat & trainer engines, GE Aerospace, in a statement, attributed the delays to restarting the production line that was dormant for five years.

Challenging process

By 2016, GE Aerospace delivered 65 F404-IN20 engines for the 40 Tejas jets ordered earlier and with no additional engine orders on the horizon, the production line for F404-

IN20 was shut down, the statement said. However, when HAL ordered an additional 99 engines in 2021 for the Tejas Mk1A LCA, the team began the complex task of restarting the F404-IN20 production line, which had been dormant for five years, and re-engaging the engine's global supply chain, Mr. Warren said. "Restarting a jet engine production line is a challenging process. Restarting the F404-IN20 engine line during the COVID pandemic was even more challenging," he said adding that they are working closely with their suppliers to ramp up production on parts and materials for the F404-IN20.

At Aero India, Mr. Sunil had said GE's supply chain issues had been resolved and the IAF would receive 12 F-404 engines for the LCA-Mk1A this year. "The GE has stabilised its manufacturing process for the F404 engines. We have already made three aircraft, and by the end of this year, 11 will be manufactured. As the engines start coming in, our delivery to the IAF will start," he had stated.

He said three Tejas Mk1A are flying and by the end of this year, one jet from Nasik and 11 from Bengaluru will be ready while stressing that the existing order for 87 LCA-Mk1A would be completed in three-and-a-half years and the additional order for 97 jets by FY 2031-32 with production rate going to 24 jets per year.

Early this month, a high-level empowered committee headed by Defence Secretary Rajesh Kumar Singh constituted to recommend ways for Capability Enhancement of the IAF identified key thrust areas and made recommendations for implementation in the short, medium and long-term in the report presented to Defence Minister Rajnath Singh.

Key Highlights of the News

1. Jet Engine Delivery & HAL's Production Schedule

- The first F404-IN20 engine for Tejas LCA Mk1A has been shipped from GE Aerospace and will arrive in India by April 2024.
- GE Aerospace is expected to deliver 12 engines this year as part of the 99-engine order signed in 2021.
- HAL has committed to producing 24 Tejas Mk1A jets per year, with 11 aircraft expected to be manufactured by the end of 2024.

2. IAF's Urgent Need for Fighter Jets

- IAF Chief Air Chief Marshal A.P. Singh has stated that the IAF needs 35-40 new fighter jets annually to meet its operational requirements.
- The IAF's fighter strength has dropped to 31 squadrons, well below the sanctioned strength of 42 squadrons needed to counter threats from China and Pakistan.
- The existing 83-unit LCA Mk1A order will be completed in 3.5 years, and the additional 97-unit order will be fulfilled by FY 2031-32.

3. Defence Ministry's High-Level Report on IAF Capability Enhancement

- A high-level empowered committee led by Defence Secretary Rajesh Kumar Singh has submitted a report on IAF capability enhancement to Defence Minister Rajnath Singh.
- The report outlines short, medium, and long-term plans to boost IAF's combat capabilities.

Significance of the Development for India's Defence Sector

1. Strengthening India's Indigenous Defence Capabilities

- The LCA Tejas programme is a key initiative under Atmanirbhar Bharat (Self-Reliant India) and Make in India in defence manufacturing.
- The timely production of Tejas Mk1A is crucial for reducing India's dependence on foreign fighter jets like Rafale and Sukhoi.

2. Addressing IAF's Fighter Jet Shortfall

- IAF is facing a severe shortage of fighter aircraft due to the phasing out of MiG-21 jets and delays in acquiring Rafale and Su-30MKI replacements.
- HAL's commitment to ramp up production to 24 jets per year will help bridge this gap.

3. Strengthening India's Air Power Against China & Pakistan

- ▶ China has deployed J-20 stealth fighters and is expanding air bases near India's borders.
- ▶ Pakistan continues to enhance its fleet with JF-17 fighters co-developed with China.
- ▶ The timely induction of Tejas Mk1A will be crucial in maintaining air superiority in the region.

4. Importance of Reliable Engine Supply

- ▶ India has long relied on foreign jet engines due to the lack of an indigenous engine.
- ▶ The delays in the Kaveri engine project forced India to continue using foreign engines like GE's F404-IN20.
- ▶ This underlines the need for India to accelerate the development of indigenous jet engines for future fighters like the LCA Mk2 and AMCA (Advanced Medium Combat Aircraft).

Challenges & Way Forward

- ▶ Overcoming HAL's Past Production Delays
 - HAL has faced challenges in meeting past production targets (e.g., delays in LCA Mk1 deliveries).
 - Ensuring timely production of Tejas Mk1A is critical for IAF's modernization plans.
- ▶ Reducing Dependence on Foreign Engines
 - India must accelerate the Kaveri jet engine development or collaborate with global firms (e.g., GE, Safran) to develop a 100% indigenous fighter engine.
- ▶ Scaling Up Manufacturing Capacity
 - HAL is setting up a new production line in Nasik to increase output, but achieving 24 jets per year remains a challenging target.
 - Increased private sector participation in defence production (as seen with Tata, L&T) could boost efficiency.

Conclusion

- ▶ The delivery of GE F404-IN20 engines for the Tejas Mk1A is a major milestone in India's indigenous fighter jet programme. However, challenges related to engine dependence, production delays, and fleet modernization remain. Moving forward, India must prioritize indigenous jet engine development, scale up defence production, and fast-track fighter jet acquisitions to ensure IAF's combat readiness in an evolving regional security environment.

UPSC Mains Practice Question

Ques :What are the major challenges India faces in developing an indigenous jet engine for fighter aircraft? What steps should be taken to overcome these challenges? (250 words)

On World Water Day (March 22, 2025), Prime Minister Narendra Modi emphasized collective action for water conservation. The Ministry of Jal Shakti launched the Jal Shakti Abhiyan: Catch the Rain 2025, focusing on community participation in water management.

The role of communities in conserving water

On March 22, World Water Day, Prime Minister Narendra Modi highlighted the need to conserve water for present and future generations through collective action. On the same day, the Ministry of Jal Shakti launched the Jal Shakti Abhiyan: Catch the Rain 2025, emphasising the importance of community participation in water conservation.

Issues for consideration

In the context of this occasion, it is important to take a panoramic view of India's water policies, with a focus on rural areas. New environmental challenges and renewed understandings of ecosystems underscore the need to recalibrate rural water policies. The following issues must be considered by policymakers.

First, policies should ensure effective participation from communities and mainstream their ecological practices. Indigenous and local communities carry rich knowledge of their immediate ecosystems. Existing policies provide for their participation, but it is limited to the management of water sources; decision-making powers remain with state authorities. Further, policies have overlooked the need to identify and empower communities' own ecological practices on water management. Rather, they have formalised water governance by introducing uniform practices. This is counter-intuitive to the objective of encouraging effective participation from communities.

Take, for example, Water User Associations (WUAs), which are statutory bodies set up in different States since the 1990s to further participatory irrigation management. Water users (or farmers) are members of these bodies. While the responsibility to manage irrigation sources has been transferred to them, they have little say in decision-making.

Second, water policies should consider the disproportionate



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vulnerability of certain groups to environmental crises. Subaltern social groups and economically marginalised individuals are more vulnerable to such crises than others. Within these groups, those located at the intersection of social and economic marginalisation are the most vulnerable. Therefore, it is crucial for policies to consider the interests of vulnerable groups. Concomitantly, policies must recognise their agency in managing water and ensure their participation in decision-making.

Third, policies must address the issue of fragmentation of water management. Here, fragmented management means that different parts of the ecosystem, such as forests, water, land, and biodiversity, are regulated by different policies and authorities. Such an approach fails to consider the interdependence of these constituents. While there have been some efforts towards taking an integrated approach, they are limited and ineffective. Since policies adopt a fragmented approach, they do not always achieve the desired goals, and in fact, adversely affect each other's potential to do so.

A good example of an integrated approach comes from the ecological practices of rural communities in western India. For example, the practice of establishing orans. Orans are sacred forests which hold deep religious and cultural significance to local communities. Some communities have been establishing orans to serve an additional purpose – water conservation. By augmenting tree and grass cover, orans trap surface runoff and support in-situ rainwater harvesting. Such an appreciation about the interdependence of water with other constituents of the ecosystem is key to effective water management and conservation.

Fourth, globally, there has been a thrust on adopting a more-than-human perspective in environmental governance. This means considering the interests of

the non-human environment in laws and policies that regulate the environment. This approach is based on the idea that the non-human environment has an intrinsic value, and so its interests must be considered in environmental policies. The judiciary has often subscribed to this approach and developed compelling jurisprudence recognising the rights of nature. However, water policies have overlooked this aspect. Their sole focus has been on human needs for water. Contrastingly, water management practices of some of the local communities in western India take a more holistic perspective to water governance. For example, the amount of water available for irrigation is partly dependent on its sufficient availability for animals.

A final issue is the impact of climate change on water. A recent report published in the journal *Nature* concluded that as global temperatures rise, the water gap in India will widen. Both climate and water policies must address the impact of climate change on water. Water policies must focus on creating climate-resilient water systems and increasing the climate resilience of existing systems; climate policies, particularly adaptation policies, should focus on building the resilience of ecosystems to water gaps.

Beyond the rhetoric

A common theme across these suggestions is that local and indigenous communities and their practices can support effective water management. Therefore, rural water policies should facilitate active engagement with communities. This means moving beyond the existing rhetoric of engagement, and centering communities' voices in the decision-making process. While doing so, we must be mindful that communities' practices may come with their own limitations which should be addressed through sensitisation and capacity building where required.

Water policies should centre communities' voices in the decision-making process

Key Issues in Water Conservation Policy

- Need for Community Participation & Indigenous Knowledge
 - Rural and indigenous communities have traditional water conservation techniques that are often ignored in modern water policies.
 - While Water User Associations (WUAs) exist, they lack decision-making powers, limiting their impact on water governance.
 - Example: Orans (sacred forests in western India) promote rainwater harvesting and ecosystem conservation.
- Vulnerability of Marginalized Groups
 - Socially & economically marginalized communities are most affected by water scarcity.
 - Policies must recognize their agency in water management and ensure their participation in decision-making.
- Fragmentation of Water Governance
 - Water management is divided between different departments & policies, leading to inefficiencies.
 - Example of Integrated Approach: Orans in Rajasthan help conserve water through forest cover and biodiversity conservation.
- Need for a More-than-Human Perspective
 - Current policies focus only on human water needs; they ignore the intrinsic value of water for the ecosystem.
 - Example: Some rural communities allocate water for wildlife before irrigation.
 - Judiciary recognizes "Rights of Nature" in some cases, but water policies lack this approach.
- Climate Change Impact on Water Resources
 - A Nature journal report warns that climate change will widen India's water gap as global temperatures rise.
 - Water policies should ensure climate-resilient infrastructure and ecosystem-based adaptation strategies.

Way Forward

- Shift from top-down to community-driven water governance.
- Recognize & integrate traditional water conservation practices.
- Empower marginalized communities in water decision-making.
- Adopt ecosystem-based approaches in water policies.

- Integrate climate adaptation measures into water governance.

UPSC Mains Practice Question

Ques :Community participation is key to effective water conservation in India. Critically analyze the role of local communities in managing water resources.(250 words)



In News :Financial Action Task Force

India will host the FATF Private Sector Collaborative Forum 2025 in Mumbai, addressing global priorities such as payment transparency, financial inclusion, and digital financial system transformation.

About Financial Action Task Force

- FATF is an intergovernmental policy-making and standard-setting body dedicated to combating money laundering and terrorist financing.
- Objective: To establish international standards and to develop and promote policies, both at national and international levels, to combat money laundering and the financing of terrorism.
- FATF develops and promotes policies across various countries and jurisdictions.
- **Origin:**
 - It was established in 1989 during the G7 Summit in Paris in response to a growing concern about money laundering.
 - In 2001, its mandate expanded to include terrorism financing.
- **Headquarters:** Paris, France.
- **Members:**
 - To become a member, a country must be considered strategically important (large population, large GDP, developed banking and insurance sector, etc.), must adhere to globally accepted financial standards, and be a participant in other important international organizations.
 - FATF members include 39 countries, including the United States, India, China, Saudi Arabia, Britain, Germany, France, and the EU as such.
 - In addition, more than 180 countries worldwide are affiliated with the FATF through a network of FATF-style regional bodies (FSRBs).
 - India became a member of FATF in 2010. India is also a member of two FATF Style Regional Bodies (FSRBs)-Asia Pacific Group (APG) and Eurasian Group of Combating Money Laundering and Financing of Terrorism (EAG).
- The FATF researches how money is laundered and terrorism is funded, promotes global standards to mitigate the risks, and assesses whether countries are taking effective action.
- FATF regularly publishes reports that raise awareness about the latest money laundering, terrorist financing, and proliferation financing techniques so that countries and the private sector can take the necessary steps to mitigate these risks.
- The FATF Recommendations are recognised as the global anti-money laundering (AML) and counter-terrorist financing (CFT) standard.
- Once a member, a country or organization must endorse and support the most recent FATF recommendations, commit to being evaluated by (and evaluating) other members.
- The FATF holds countries to account that do not comply with the FATF Standards.

- If a country repeatedly fails to implement FATF Standards, then it can be named a Jurisdiction under Increased Monitoring or a High-Risk Jurisdiction. These are often externally referred to as “the grey and black lists”.

What are FATF 'grey list' and 'blacklist'?

- **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put on the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.
- **Grey List:** Countries that are considered a safe haven for supporting terror funding and money laundering are put on the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.
- Three countries-North Korea, Iran, and Myanmar, are currently on FATF’s blacklist.

Consequences of being on the FATF blacklist:

- No financial aid is given to them by the International Monetary Fund (IMF), the World Bank, the Asian Development Bank (ADB), and the European Union (EU).
- They also face a number of international economic and financial restrictions and sanctions.

The issue is about the 'quality' of India's publications

At a public function, in February 2025, to commemorate National Science Day, the Union Minister for Science and Technology said that "India will overtake the U.S. in the number of scientific publications by 2029". He went on to say that China with 8,98,949 publications is in the lead followed by the United States with 4,57,335 publications, followed by India with 2,07,390 papers. The Chinese research output has both quantity and quality. China's figures are in parallel with the very heavy investments made in the spheres of education and science and technology, and are described in their impressive medium-to-long term plan (MLP) for the development of science and technology launched in several phases since 2006. Investments of a similar high order will be required in India for a significant breakthrough and difference.

An international comparison

The comparison between scientifically advanced countries and India in the matter of money spent on civilian research as a percentage of GDP is shocking. Here are the data for six countries: Israel 6.30%; South Korea 4.9%; Japan, 3.3%; the U.S., 3.46%; Germany 3.13%; China 2.4%, and India 0.67%. Can we even talk about Viksit Bharat 2047 with data like this? Releasing documents such as "India Rankings 2024" by the Department of Higher Education or "Expanding Quality Higher Education through States and State Public Universities" by NITI Aayog are just that – documents that are all sound and fury and signifying nothing.

The scholarly output of India's total publications in all disciplines including science and engineering for 2024 (Clarivate), on February 25, 2025, stands at 1,91,703; the corresponding number for the U.S. is 6,48,905. These numbers are slightly different from those given by the Minister, but the conclusion is the same. The fact is that India cannot overtake the U.S. by 2029. Clarivate further depicts the CNCI value (quality indicator of publications) and places India at just 0.879 as opposed to 1.12 and 1.25 for China and the U.S., respectively. Out of 30 ranked countries, India stands at a glorious 28.

The Minister's sense of delusory self-comfort in having 5,351 Indian scientists figure in the list of the top 2% of scientists across the world in 2023 is downright bizarre. Rankings of India's 5,351 scientists range from 163 (highest) to 68,55,948 (lowest). In contrast, in Japan, 5,608 scientists figure in the top 2%, with their ranks ranging from 79 to 26,24,763.

Similarly, Germany has 10,420 scientists in the list of top 2%, ranging in ranks from 6 to



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Science officials need to figure out why India's publications are so bad in terms of 'quality' rather than exhibit delusory self-comfort about 'quantity'

10,80,081. The numbers speak for themselves.

The real benchmarks

Quantity is not quality. What is the quality of Indian publications when they are held up against harsh international benchmarks such as the Hirsch Index (H-Index) of our scientists and the Impact Factor (IF) of the journals where we publish? What is important is whether a paper is read widely, is useful to others, and, in the ultimate test, whether it is cited by one's peers. When judged by these benchmarks, the Minister's remarks smack of smug narcissism, nothing more.

There are journals and journals. Bradford's empirical law of concentration of journal articles in scientific periodicals (1934) is applicable to the research productivity of ranked Higher Education Institutions (HEI). It states that articles in a given subject concentrate heavily in a relatively small number of highly productive journals.

One of us has been a research chemist for 50 years and a representative analysis using the ISI Thomson Web of Science, of papers published in the three top chemistry journals between 2017 and 2024 (both years inclusive) is revealing. The figures for the U.S., China and India (in that order) are: *Angewandte Chemie International Edition* (IF 16.60; numbers of papers: 4554, 10305, 501), *Journal of the American Chemical Society*, JACS, (16.38; 8503, 5521, 305), and *Chemical Communications* (6.22; 2553, 9820, 1347). The relative Indian contribution goes up as the impact factor (IF) of the journal goes down. In any event, India compares poorly with China and the U.S.

A more detailed look at these statistics shows that the Indian position is fundamentally flawed. Considering only papers in JACS, it is seen that the Chinese Academy of Sciences, CAS, (444) has nearly 15 times the number of papers as all the Council of Scientific and Industrial Research (CSIR) laboratories in India put together (29). The great breadth of the Chinese output in these CAS papers is also noteworthy.

Continuing with JACS papers between 2017 and 2024 (both years inclusive), not only do the prestigious CAS and Peking University (359) have high outputs but also the next tier of universities such as Tsinghua (289), Fudan (214), Nanjing (284), Nankai (258), Jilin (145), Xiamen (241) and Sun Yat-sen (145). All the Indian Institutes of Technology taken together have only 68 papers in this journal in the above-mentioned time period. All the IITs put together are five times less than just one second-tier Chinese university. Nothing in India measures up to the Chinese yardstick.

There will be a real pay-off only if India invests in

training young people in the universities well. This is where China has correctly placed its money, and where India is off track.

Even as the scope and spread of the malaise in Indian science is justified through quantifiable metrics, a sense of false security has crept in, entrenched by self-deluding statements such as this one from one of the highest officials in Indian Science and Technology, the Principal Scientific Adviser, that "India is rapidly becoming a global research powerhouse". Such statements deliberately mislead and obfuscate.

Questionable ethics and practices in India

The perverse incentives which characterise Indian science and technology have resulted in the cancerous growth of downright fraud and unethical practices. The scale of the problem has become all-pervasive, and has brought international ignominy to India. By 2020, the science and technology complex of India had degraded so rapidly that a wave of retractions, paid publications, publications in fake journals, and downright piracy began to inundate India's science and technology output. The existence of so many fraudulent papers is only possible when the entire system is clientelist and based on trading favours.

In 2019, the U.S. Ninth Circuit Court of Appeals affirmed a District Court decision against the Hyderabad-based Omics group arising from a suit instituted by the Federal Trade Commission (FTC). The FTC clinched a \$50 million fine against the group for, *inter alia*, misrepresenting its peer review practices, its editorial board members, its journals' impact factors, and deceptive indexing claims. All in all, around 69,000 articles were published by the Omics group with little or no peer review, polluting the global scientific corpus for years to come.

India has perfected the art of spurious, low quality, and potentially outright fabricated scientific output being accommodated in questionable journals, mostly as a means for scientists to justify their mandated minimum number of published research pieces. A study in 2018 estimated that 62% of all standalone fake journals in the world are published in India, and around 10% of the entire country's total research output may be fake to begin with.

It is better if the Minister asks the science departments to figure out why the quality of India's publications is so bad instead of dwelling on the quantity. As Einstein said, "Not everything that can be counted counts. Not everything that counts can be counted."

The views expressed are personal

Paper 03: Science & Technology

UPSC Mains Practice Question: India's research output is increasing, but concerns remain about its quality. Discuss the key challenges and suggest policy measures for improving research standards.

Context :

- ▶ On National Science Day (February 2025), the Union Minister for Science and Technology claimed that India would overtake the U.S. in scientific publications by 2029. However, concerns have been raised regarding the quality of India's research output, even if the quantity increases.

Key Issues in India's Research Quality

- ▶ **Low Research Investment Compared to Global Standards**
 - India's expenditure on civilian research as a percentage of GDP is 0.67%, far lower than countries such as:
 - Israel (6.30%), South Korea (4.9%), Japan (3.3%), U.S. (3.46%), Germany (3.13%), and China (2.4%).
 - High-quality research requires substantial investment in education, training, and infrastructure, which India currently lacks.
- ▶ **India's Research Output Lags in Quality Indicators**
 - According to Clarivate Analytics (2024):
 - India's CNCI (Category Normalized Citation Impact) score is 0.879, compared to China (1.12) and U.S. (1.25).
 - India ranks 28th out of 30 countries in terms of research impact.
- ▶ **The Misleading Use of Rankings & Metrics**
 - The Minister highlighted 5,351 Indian scientists in the world's top 2% scientists list (2023).
 - However, their rankings range from 163 to 68,55,948, showing a large quality gap.
 - In contrast, Japan (5,608 scientists) and Germany (10,420 scientists) have higher quality representation.
- ▶ **Indian Research in High-Impact Journals**
 - Research productivity in top chemistry journals (2017-2024) shows:
 - U.S., China, and India contributions:
 - Angewandte Chemie (Impact Factor 16.60): 4,554 (U.S.), 10,305 (China), 501 (India)
 - JACS (Impact Factor 16.38): 8,503 (U.S.), 5,521 (China), 305 (India)
 - Chemical Communications (Impact Factor 6.22): 2,553 (U.S.), 9,820 (China), 1,347 (India)

- India's contribution increases as journal quality decreases, showing a focus on quantity rather than impact.
- **Poor Institutional Performance Compared to China**
 - In JACS (2017-2024):
 - Chinese Academy of Sciences (CAS) alone published 444 papers, 15 times more than CSIR (29 papers) in India.
 - Second-tier Chinese universities (Tsinghua, Fudan, Nanjing, Nankai) outperform all IITs combined (68 papers).
 - India lacks well-funded and structured academic research programs, unlike China's long-term investments.
- **Unethical Practices & Fake Publications in India**
 - Rampant fraud and unethical research practices have led to:
 - Retractions, fake journals, and predatory publications.
 - U.S. Ninth Circuit Court (2019) fined Hyderabad-based Omics Group \$50 million for publishing 69,000 fake articles.
 - 2018 study: 62% of fake journals worldwide are based in India, and 10% of India's total research may be fraudulent.
 - These issues damage India's global scientific reputation and dilute genuine research contributions.

Way Forward

- **Increase Research Investment:** Raise R&D expenditure to at least 2% of GDP to improve quality.
 - **Strengthen University Research:** Invest in higher education institutions (HEIs) to improve global rankings.
 - **Focus on High-Impact Publications:** Encourage researchers to publish in top-tier journals.
 - **Improve Ethics & Peer Review:** Crackdown on predatory journals and ensure strict research integrity.
 - **Industry-Academia Collaboration:** Foster corporate funding and innovation-driven research.
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