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# ANALYSIS

# Topics

## Detailed Analysis for Prelims & Mains:

1. Supreme Court's reliance on suo motu cognisance - Pg 8
2. The next chapter in India - Canada relations - Pg 6
3. Towards a dialogue on adolescent sexuality - Pg 7
4. Nepal PM sparks row over border dispute with India - Pg 1
5. AUKUS deal revised - Pg 16

## Prelims:

1. Beta-carotene - Pg 5
2. CDS & Chief of Naval Staff take charge - Pg 10
3. Beaufort Castle - Pg 16
4. Padma Barrage - Pg II
5. WASP-94A b exo-planet - Pg II
6. Extremely Large Telescope - Pg II

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# The apex court rings its own chain

The Supreme Court's reliance on *suo motu* cognisance has turned a once 'rare but highly visible' jurisdiction into a recurring instrument shaped by primetime attention and media reports; while it keeps 'ringing' its own chain through televised listings and supervision, the trial courts below it continue doing the work

## LETTER & SPIRIT

V. Venkatesan

In 1605, on his accession, the Mughal Emperor Jahangir fastened a chain outside his palace. Any subject denied justice by his administration could pull the chain and reach the emperor directly. The chain was, in conception, a remedy against the bureaucracy. The Indian Supreme Court is now, in its *suo motu* cognisance of individual criminal cases, the bureaucracy itself, ringing its own version of the chain. Each televised listing is the sound of the apex court calling attention to itself.

### Media and motive

The latest instance is the court's *suo motu* cognisance of Twisha Sharma's death, registered under the title 'In Re Alleged Institutional Bias and Procedural Discrepancies in the Unnatural Death of a Young Girl at Her Matrimonial Home'.

The title pre-judges its own inquiry. Institutional bias has not been judicially established at any level. The apex court's own office report, signed by the Assistant Registrar on May 23, records the basis of registration. The case was registered, the document says, 'based on media reports and other attending circumstances'. Two days later, the same bench appealed to the media to refrain from recording statements of witnesses. A court that acts on press reports while admonishing the journalists who filed them is, at the same moment, both consumer and critic of the



GETTY IMAGES

## THE GIST

▼ The ground on which the apex court arrived was not vacant, with the magistrate, the High Court, the Bar Council of India and the State government already acting in the Twisha Sharma case.

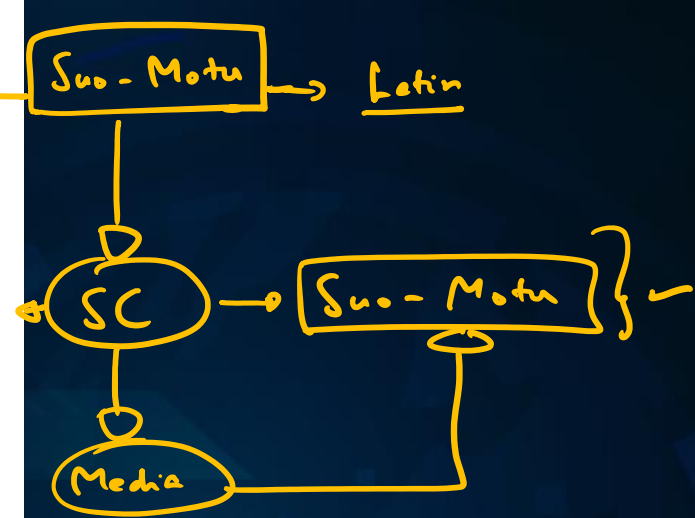
▼ The harder path before the apex court is the slow, unspectacular work of reforming the judiciary through better case management, trial-court infrastructure, appointments and training.

▼ Judicial attention is a scarce resource, but sustained primetime attention is increasingly followed by cognisance, raising questions about the use of that attention.

# Media and motive

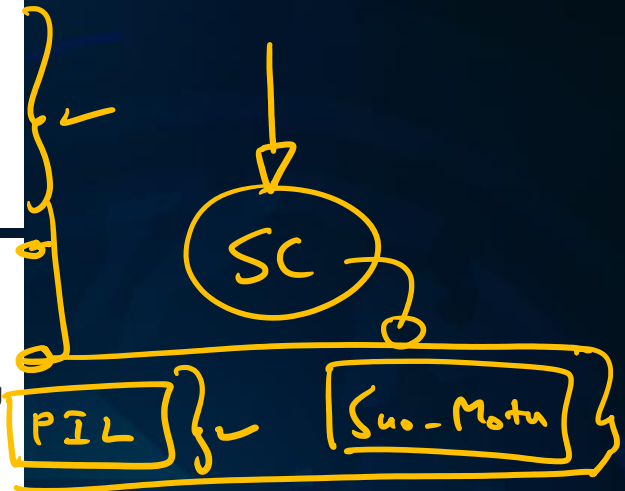
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The ground on which the apex court arrived was not vacant. A magistrate in Bhopal had remanded the husband, a practising advocate, to seven days of police custody. The Madhya Pradesh High Court had directed a second autopsy by an AIIMS Delhi team. The Bar Council of India had suspended the husband's licence. The State government had proposed transferring the investigation to the Central Bureau of Investigation (CBI) before the apex listing. The institutions whose bias the apex title alleges had been moving against the accused for nearly a fortnight.

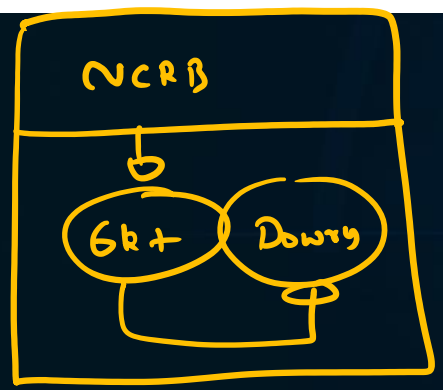


**Suo motu cognisance** (often spelled *suo moto*) is a Latin legal term meaning "on its own motion". In the Indian legal system, it refers to a court's or tribunal's power to independently initiate legal proceedings, investigate issues, or seek accountability without a formal petition or lawsuit being filed by an outside party. Lloyd Law College +3

As scholar Mark Galanter has shown (see citation below), Supreme Court judges developed the Court's *suo motu* jurisdiction in the aftermath of Emergency. Its development coincided with the emergence of 'public interest litigation' in the early 1980s. The Court actively began admitting cases with an aim of delivering justice to more disadvantaged groups. It even started the practice of allowing citizens to file cases by writing letters to the Court (letter petitions). Given this context, it was perhaps only natural that judges began to institute cases of their own motion.

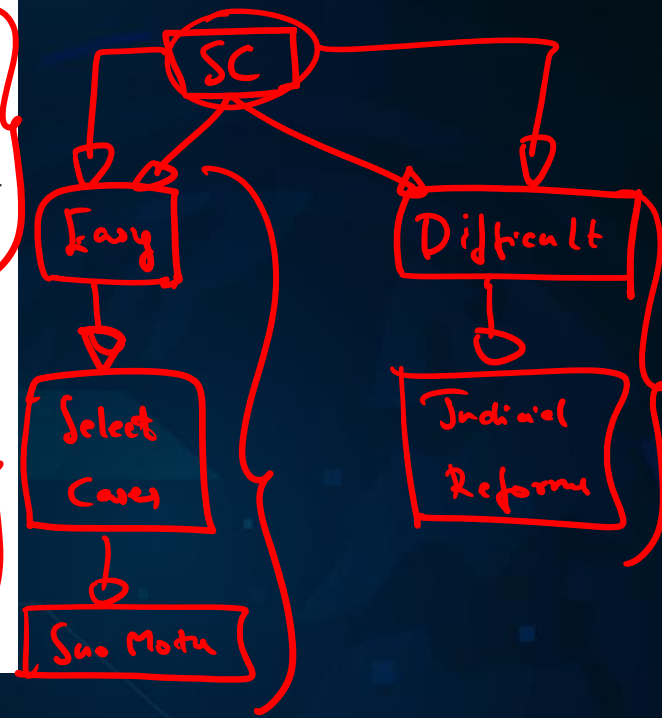


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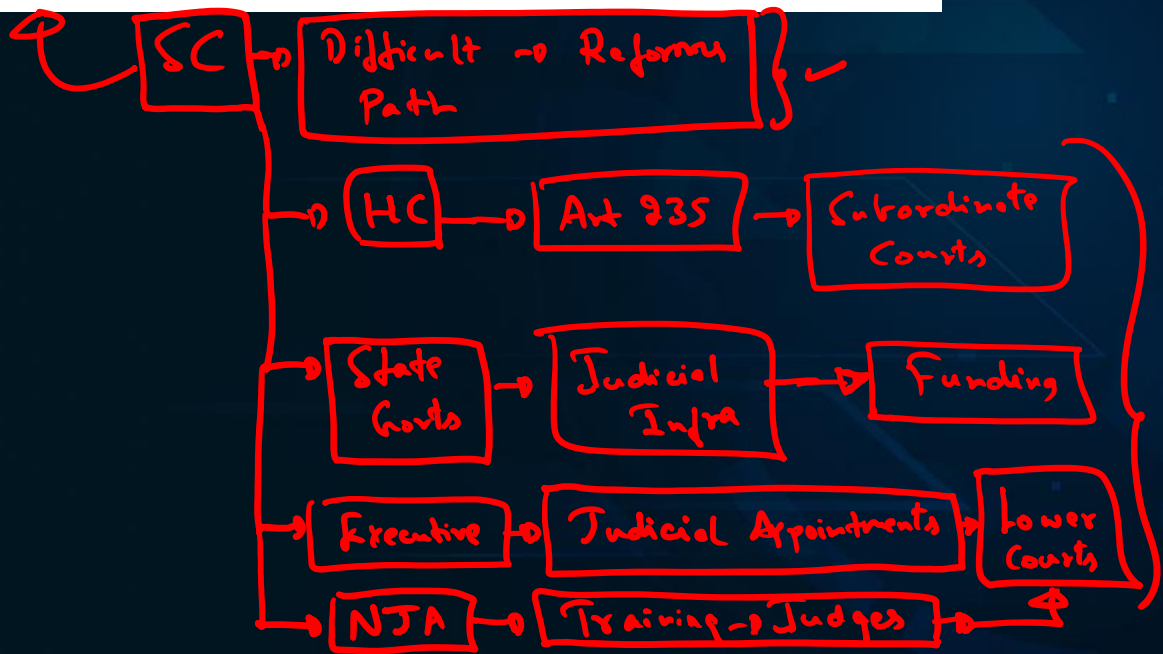


The post-2019 record is unkind to the pro-*suo-motu* case. In the R.G. Kar matter, the Supreme Court registered cognisance on August 18, 2024. Sanjay Roy had been arrested by the Kolkata Police eight days earlier. The Calcutta High Court had handed the probe to the CBI on August 13, 2024. The Sealdah trial court convicted Roy in January 2025 and sentenced him to life imprisonment. The trial judge did the work. Apex monitoring of CBI status reports did not.

Hathras is closer to the Bhopal facts and more instructive. The Lucknow bench of the Allahabad High Court registered the case *suo motu* in October 2020. The Supreme Court, after entertaining transfer petitions, handed monitoring back to the High Court within weeks. That earlier bench saw the architectural point: the High Court was already in motion and the apex role was supervisory. In July 2024, following the Hathras Satsang stampede that claimed 121 lives, the court declined a PIL. The bench said that the High Court was equipped to deal with the case. The same principle applies in Bhopal too.



*Suo motu* cognisance, in matters of this kind, is the **easier of the two paths** open to the apex court. The harder path is the slow, unspectacular work of **reforming the judiciary** it heads. The first requires only the bench's decision to list the matter. The second requires sustained cooperation: with the **High Courts on case management and supervision under Article 235 (control over subordinate courts)**, with **State governments on funding trial-court infrastructure**, with the **executive on judicial appointments**, and with the **National Judicial Academy on training**. The asymmetry between the energies devoted to the two paths is what produces the diagnosis Galanter and Ram named.



The numbers since the chapter, authored by Galanter and Ram, went to press confirm the rule. The Supreme Court Observer, working from the apex court's own Case Status records, counts **35 *suo motu* matters in the five years from 2020 to 2024**. The preceding **fifteen years had seen only 31 in total**. The annual figures, excluding contempt, were **10 in 2020, eight in 2021, one in 2022, four in 2023, and 12 in 2024**. The trend continues. In **2025, the court's numbering reached 10 civil *suo motu* writs and three criminal matters**. Nine of the 10 civil matters are publicly listed. By **May 25 this year, the count already stood at four civil and four criminal matters**. Both totals exclude *suo motu* transfer and contempt, which exercise distinct constitutional powers. The criminal count, in particular, has risen sharply. Four months and three weeks have already exceeded the criminal count for all of 2025.



**Judicial attention is a scarce resource.** The **National Crime Records Bureau** recorded **6,450 dowry deaths in 2022**, with **convictions in only 11 to 17 per cent of cases**. The court has the capacity to list one. The criterion of selection is, on the present record, temporal rather than legal. Galanter and Ram closed their chapter with a question. They asked whether *suo motu* was 'an instance of effective use of the scarce resource of judicial attention'. The seven years since they wrote have not produced an easier answer.

**None of this is to deny the seriousness of the Twisha Sharma matter.** The accused's mother is a retired judge. The husband is a lawyer. The family of the deceased has reason to fear local proximity. The constitutional response to that fear is independent investigation under judicial supervision, conducted promptly. The court, however, disposed of the matter on the first day after taking note of the "narrative" in the media that a fair investigation was being denied on account of the involvement of the judiciary.

The chain Jahangir hung was a remedy against an unaccountable bureaucracy. The apex court is now that bureaucracy. Each televised listing is the sound it makes to draw attention to a failure it has the power, and the constitutional duty, to repair. Until the harder of its two paths is walked with the energy now devoted to the easier one, the chain will keep ringing. The trial courts below it will keep doing the work.

## Mains Practice Question

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Q. The Supreme Court's reliance on suo-motu cognisance has turned a once 'rare but highly visible' jurisdiction into a recurring instrument shaped by primetime attention and media reports. Critically examine. (250 words; 15 marks)

Ind - Canada

2023 - 2025

Revised → 2026

# Shaping the next chapter in India-Canada relations

India and Canada are turning the page together, opening a vibrant new chapter as two democratic, multicultural, and innovation-driven nations. Both governments are signalling a fresh resolve to deepen cooperation and pursue common goals. Canadian Prime Minister Mark Carney's recent trip to India (February 27-March 2, 2026) and the just-concluded visit of India's Commerce and Industry Minister, Piyush Goyal, to Canada highlight the importance both nations attach to their relationship in an evolving global order. These engagements reflect the growing strategic depth of the India-Canada bilateral partnership, built around four strategic pillars - economic cooperation, technological collaboration, energy security, and people-to-people connectivity.

The economic promise of a stronger India-Canada partnership has never been brighter. Mr. Carney's visit also reignited talks for a Comprehensive Economic Partnership Agreement (CEPA), and both nations' determination to finalise it by the end of 2026, along with the ambitious target of reaching \$50 billion in bilateral trade by 2030, signals a new era of economic confidence.

### The view from Ottawa

For Canada, India represents not only a vast consumer market but also a cornerstone in its Indo-Pacific diversification ambitions. As shifting supply chains and global uncertainties reshape trade, India offers Canada a gateway to new opportunities and a chance to deepen ties with a vibrant economy. India's surging appetite for energy, infrastructure, technology, and advanced manufacturing dovetails with Canada's expertise in natural resources, clean energy, critical minerals, agriculture, and innovation. Moreover, India's rapid ascent as a global growth engine pairs strongly with Canada's wealth of resources, cutting-edge technologies, world-class universities, and robust investment capital. The



**Chandrajit Banerjee**

Director General, Confederation of Indian Industry

Trade, technology and trust mark a revitalised partnership

ongoing talks on uranium, critical minerals, clean energy, and resilient supply chains further highlight just how strategically vital this partnership has become.

To this end, Mr. Goyal's visit to Canada comes at a particularly significant juncture in the bilateral economic relationship. Accompanied by a delegation of over 100 Indian industry leaders, the visit signals a renewed intent on both sides to strengthen economic engagement and impart fresh momentum to the CEPA negotiations. Equally important, it seeks to deepen business-to-business linkages, enhance investor confidence, and encourage industry on both sides to translate strategic intent into tangible commercial partnerships and long-term economic collaboration.

India is fast becoming a driving force in Canada's future prosperity. Indian companies have invested significantly in Canada and created thousands of jobs across the country, in sectors ranging from technology and life sciences to manufacturing and mining, highlighting the depth and diversification of bilateral business relations. This two-way business presence is an important marker of trust and long-term commercial confidence.

### The diaspora link

The Indian diaspora stands as a living bridge between the two nations. Indian-origin entrepreneurs, professionals, academics, students, and community leaders have left an incredible mark on Canada's economic and social landscape. Their achievements reflect the spirit of entrepreneurship, innovation, and multiculturalism that both countries hold dear. The diaspora should be recognised as a strategic asset, ready to drive trade, investment, innovation, talent exchange and cultural understanding.

Meanwhile, Canadian pension funds are supporting India's growth story, investing in

everything from infrastructure and logistics to clean energy, financial services, and digital ventures. This vibrant two-way investment proves that when these economies engage, both nations reap the rewards of growth, innovation, and opportunity.

### Strengthening Indo-Pacific cooperation

The India-Canada partnership resonates far beyond their borders, carrying weight across the Indo-Pacific. Canada's Indo-Pacific strategy places India at its heart, recognising its economic potential, youthful population, and strategic clout. Both nations champion a free, open, inclusive, and rules-based region. By joining forces in maritime security, advanced technologies, artificial intelligence, clean energy, resilient supply chains, and climate action, they can drive prosperity at home and stability throughout the region.

The path ahead calls for steady engagement, trust, and a relentless focus on real-world outcomes. The most resilient economic partnerships are built on lasting commercial interests and vibrant people-to-people connections. The momentum from the recent high-level visits shows that both countries are eager to invest in a shared future. The partnership must also become more inclusive for small and medium enterprises on both sides. As the backbone of their respective economies, these enterprises hold immense untapped potential to drive bilateral trade and investment.

India and Canada are natural allies, innovation collaborators, and pivotal players in shaping the Indo-Pacific's future. India's drive for growth, energy transformation, and manufacturing expansion opens a wealth of opportunities for Canadian businesses and investors. This is the moment to transform goodwill into action and promise into partnership. With shared vision and determination, these two nations can forge one of the decade's most influential economic alliances.

Feb 2026

Mark Carney

Piyush Goyal

Min Comm & Ind



## Energy Resources

- Oil & Gas:** Canada holds the world's **third-largest oil reserves** (primarily in the Athabasca oil sands of Alberta), and is a massive global exporter of natural gas. [Britannica +1](#)
- Hydroelectric:** Abundant rivers provide immense clean energy, particularly in provinces like Quebec, Manitoba, and British Columbia, making Canadian electricity rates some of the lowest in North America. [YouTube - Canada Action](#)
- Nuclear:** Canada is a major global producer and exporter of uranium, primarily sourced from Saskatchewan. [Britannica](#)

## Minerals & Metals

- Critical Minerals:** Canada contains nearly all the critical minerals needed for the global green transition, including potash (world's largest supply), nickel, copper, cobalt, and lithium. [CanadianVisa.org +3](#)
- Precious & Base Metals:** Significant mining operations extract massive quantities of gold, zinc, lead, and silver, particularly in the Canadian Shield and the Northern territories. [Britannica +1](#)
- Diamonds:** The Northwest Territories is a major hub for large-scale diamond mining. [Britannica](#)

## Forestry & Agriculture

- Timber:** Canada's vast boreal forests supply massive amounts of lumber, pulp, and paper, making it one of the largest exporters of forest products globally. [YouTube - Canada Action +4](#)
- Agriculture:** The Canadian Prairies represent one of the most important global agricultural regions, making Canada the world's largest producer and exporter of canola, along with massive yields of wheat and other grains. [Wikipedia +1](#)

## Water & Clean Energy Transition

- Freshwater:** Canada holds a significant portion of the world's renewable fresh water, which supports its agricultural, fishing, and industrial sectors. [YouTube - Super Simple Sheets](#)
- Clean Energy:** The country is rapidly modernizing with investments in low-carbon Liquefied Natural Gas (LNG), carbon capture, and clean energy grids. [YouTube - CBC News +2](#)

2047

100 GW

9GW

oil  
gas

Long Term  
Supply Deal

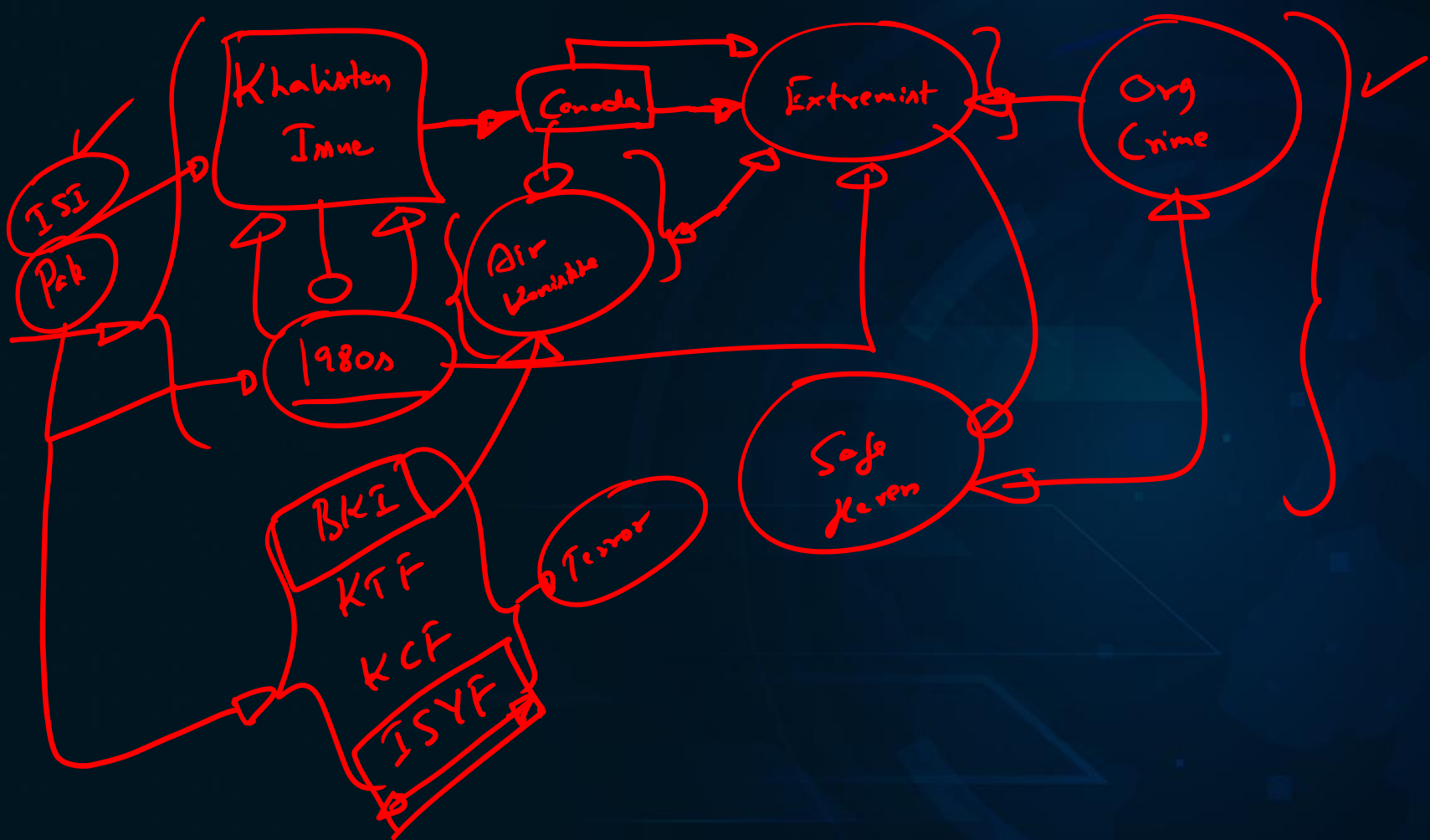
India -> China

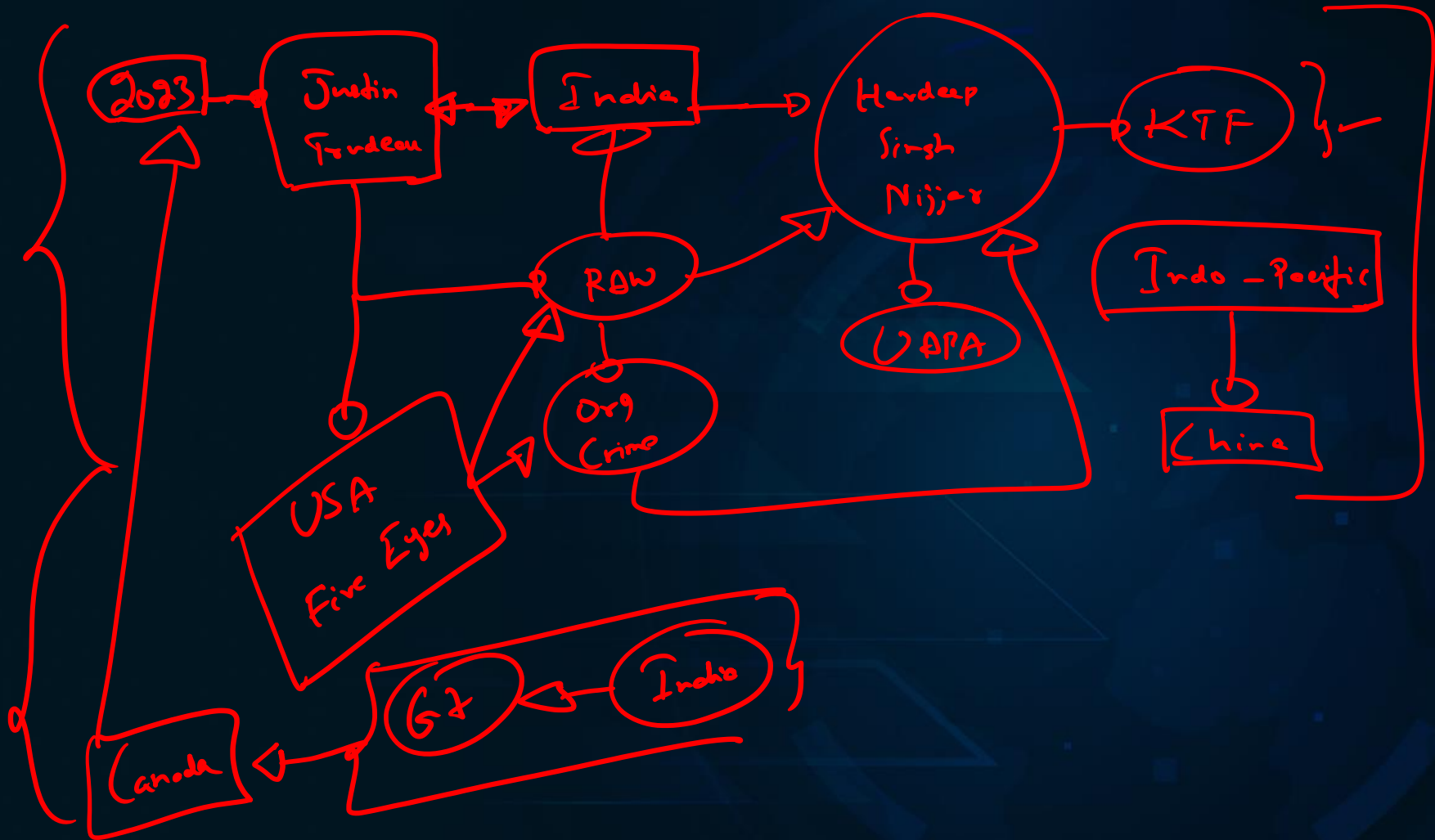
Tech

Innovation

Clean & RE

AI  
Semi-  
conductors  
PC





## Mains Practice Question

Q. India's relationship with Canada is being revitalized after a turbulent period. Critically examine the opportunities available and the challenges that lie ahead. (250 words; 15 marks)

# 3. Pg 7 – GS II (Governance) & GS IV (Ethics)

## Towards a dialogue on adolescent sexuality

A recent judgment of the Supreme Court of India, allowing the medical termination of pregnancy at 28 weeks, has received significant media attention. Much of this attention stems from the arguments advanced on behalf of the All India Institute of Medical Sciences (AIIMS), which has sought for a reconsideration of the judgment.

Doctors at AIIMS argued that what the court described as a medical termination of pregnancy would, in reality, involve delivering a living child at 28 weeks, one likely to be born with serious medical complications, long term co-morbidities and disabilities. They asked that the delivery be pushed by six weeks to improve the child's chances of survival. These arguments were rejected by the court in rather strong terms.

**A doctor's ethical burden**  
The nature of the doctors' argument is not inherently distinct from claims about a (much younger) foetus' interest in being carried to term. In both cases more time in the womb increases the chances of survival outside it. However, since a 28-week foetus is at a more advanced stage of gestation, two things change about the claim.

First, doctors are better able to predict both the foetus' chances of survival and the medical complications it may face, making concerns about neo-natal care and future health more concrete.

Second, and not unrelatedly, the ethical burden of the doctor who must perform the delivery increases significantly. Where a foetus is not viable, the doctor's sole obligation is to the pregnant woman. But where a living child may be delivered, the doctor's obligations extend to that child as well. A doctor may, therefore, experience the procedure not merely as an abortion, but as a medically induced premature delivery that immediately creates an obligation to preserve life.



**Shradha Chaudhary**  
Assistant Professor,  
School of Law, BML  
Munjal University

While the court's order protects her from legal action, it does not extinguish her ethical and moral obligations as a doctor and as a human being.

None of this necessarily undermines the court's decision. Faced with an unwed minor who had reportedly attempted suicide twice, the court understandably prioritised her reproductive autonomy and well-being. But the doctors' objections, though framed as concern for the unborn child, also reflect a potent anxiety: the ethical burden placed on medical professionals asked to perform such procedures at the edge of foetal viability. This burden need not change how we think about the outcome of the case, but it deserves to be acknowledged for the ethical tensions underlining it.

**On adolescent sexual activity**  
These ethical tensions are not accidental or anomalous. The immense trauma endured by the unwed minor, the predicament of the unborn but viable foetus, and the ethical burden of the doctors are all symptomatic of a deeper structural issue. Cases like these arise because of a serious and largely unnoticed failure of the state to deal appropriately with the phenomenon of teenage sex. In this case, a de-facto consensual sexual relationship between a 15-year-old girl and her 17-year-old partner resulted in pregnancy. The pregnancy went unnoticed until the minor's mother reportedly observed 'an unusual heaviness' in her abdomen, by which time it was already too advanced to terminate without court intervention. This is because the Medical Termination of Pregnancy Act, as amended in 2021, does not allow abortions beyond 24 weeks even in exceptional circumstances.

The Indian state's approach to the issue has largely been one of blanket criminalisation: all sexual activity involving minors is treated as a criminal offence, regardless of whether it involves coercion,

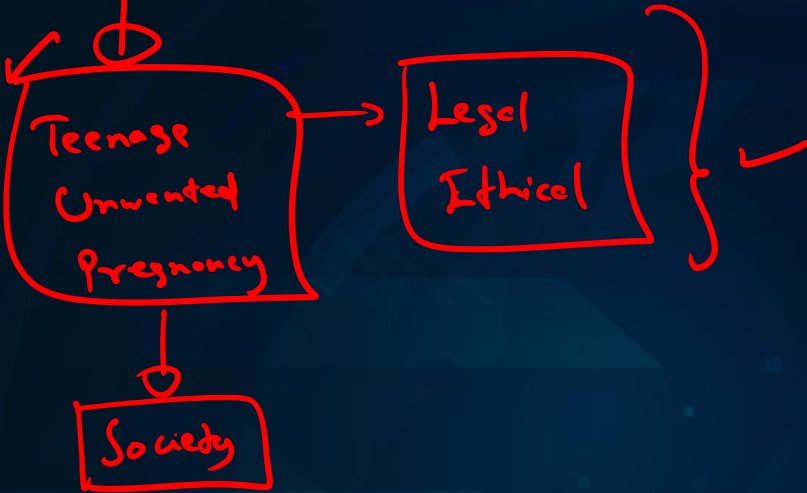
exploitation, or de-facto consensual sexual activity between adolescents. Studies from the U.S. have shown that abstinence-only policies fail to prevent adolescents from having sex. Empirical studies on the Protection of Children from Sexual Offences Act, 2012 (POCSO) in India have also repeatedly shown that nearly 10-15% of all cases before the POCSO special courts involve de-facto consensual relationships, and there is nothing to suggest that the law manages to deter such sex amongst adolescents.

If anything, this criminalisation works in tandem with the absence of adequate and comprehensive sex education in educational institutions.

Policies such as the ban on condom advertisements between 6.00 a.m. and 10.00 p.m., and a generally repressive culture around sex brush questions of sex and sexuality under the carpet. Instead of teaching adolescents the essentials of safe sex, menstruation, sexually transmitted diseases and pregnancy, the answer to all questions around sex and sexuality is reduced to a simplistic "don't do it". However, preventing cases such as this is more likely to require comprehensive sex education and an emphasis on safe sexual practices.

**The way forward**  
Such policies require a more nuanced conversation around adolescent sexuality, in which we are willing to acknowledge that de-facto consensual sexual interactions involving adolescents exist and should not be conflated with instances of child rape and exploitation. They also require a commitment to steady long-term measures, which may not provide short-term rhetorical gains.

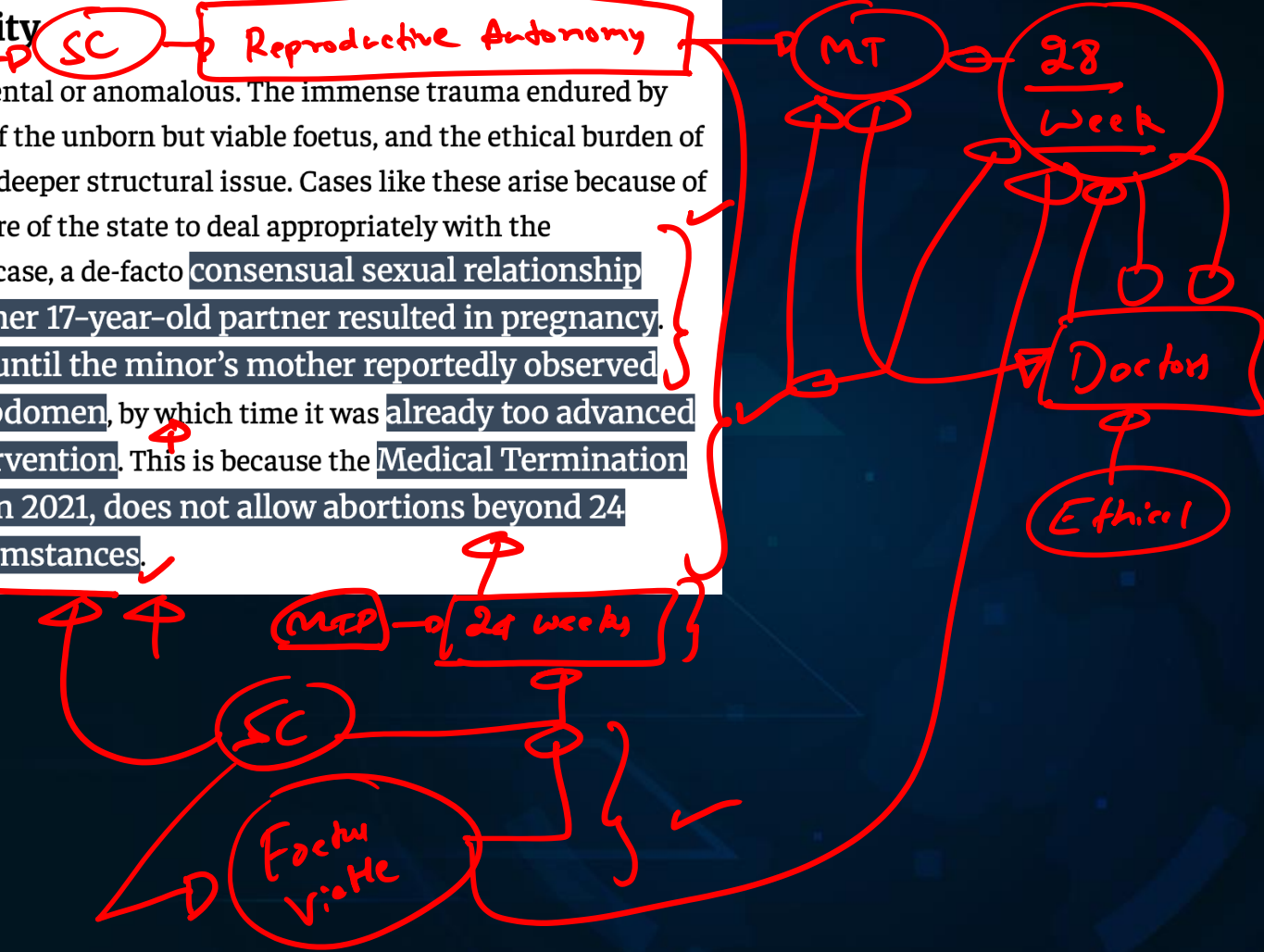
Thus, if our concern is truly the well-being of adolescents, the solution is not a refusal to acknowledge their sexuality but a commitment to engage with it honestly and meaningfully.



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# On adolescent sexual activity

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The Indian state's approach to the issue has largely been one of **blanket criminalisation: all sexual activity involving minors is treated as a criminal offence**, regardless of whether it involves coercion, exploitation, or de-facto consensual sexual activity between adolescents. Studies from the U.S. have shown that abstinence-only policies fail to prevent adolescents from having sex. Empirical studies on the **Protection of Children from Sexual Offences Act, 2012 (POCSO) in India** have also repeatedly shown that **nearly 10-15% of all cases before the POCSO special courts involve de-facto consensual relationships**, and there is nothing to suggest that the law manages to deter such sex amongst adolescents.

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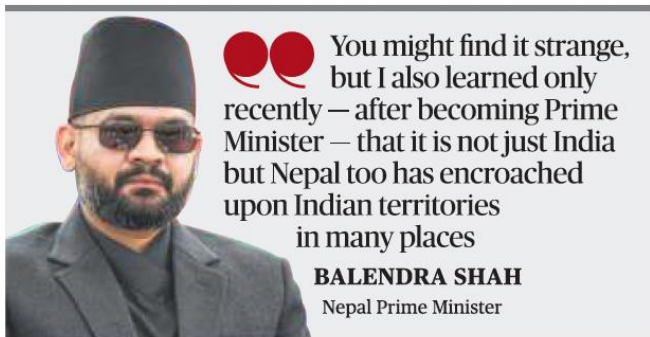
India - Nepal Border Dispute

# Nepal PM sparks row, says his country has encroached upon Indian territory

**Sanjeev Satgainya**  
KATHMANDU

Nepal Prime Minister Balendra Shah said on Sunday that his country too had encroached upon Indian territory, in what is considered to be the first such public statement by a head of government of the neighbouring country.

Mr. Shah was responding to a question by a lawmaker in Parliament regarding the Kalapani region, which remains disputed between Nepal and India. "You might find it strange, but I also learned only recently – after becoming Prime Minister – that it is not just India but Nepal too has encroached



upon Indian territories in many places," Mr. Shah said, prompting an uproar in Parliament as the Opposition objected to the statement.

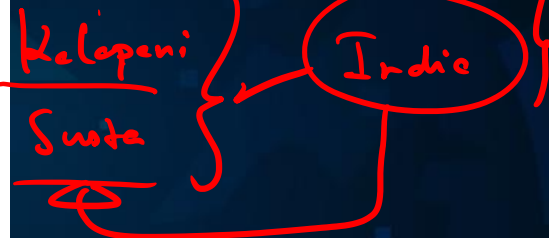
Nepal and India have a long-pending boundary dispute over **Lipulekh, Limpiyadhura, and Kalapani** and the dispute resur-

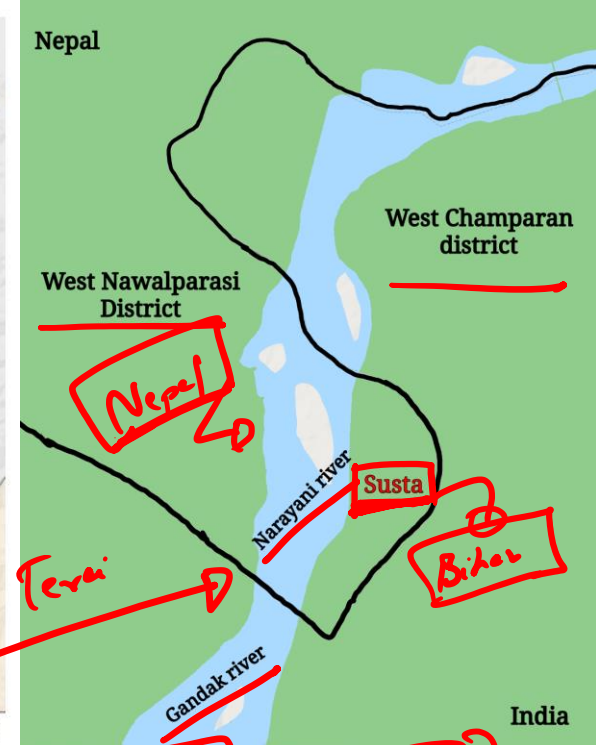
red recently when India announced the revival of the Kailash Manasarovar Yatra pilgrimage via the Lipulekh route. Nepal then sent diplomatic notes to both India and China. India maintains that the territories are part of Uttarakhand.

Lawmakers from the

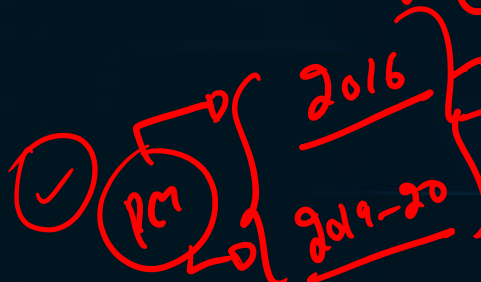
Nepali Congress and the Nepali Communist Party demanded that the Prime Minister clarify where exactly Nepal has encroached upon Indian territory and sought the removal of his remarks from the record. "The Prime Minister said Nepal has encroached upon Indian territory," Nepali Congress Chief Whip Basana Thapa said. "Where exactly has this happened? The Prime Minister must make the House aware of this. This is a serious and objectionable statement."

**CONTINUED ON**  
» PAGE 10  
**RSP DELEGATION VISIT**  
» PAGE 12





Treaty of Sugauli 1816

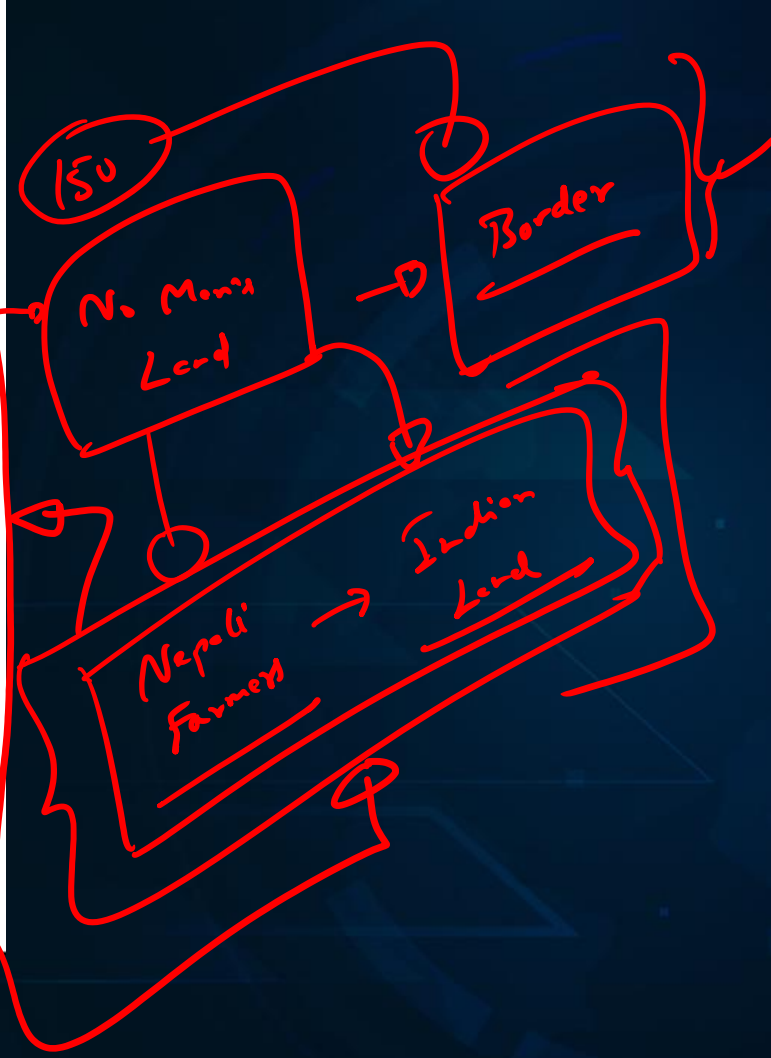


K.P. Sharma Oli  
CPN (UML)  
Pro-China  
Anti-India

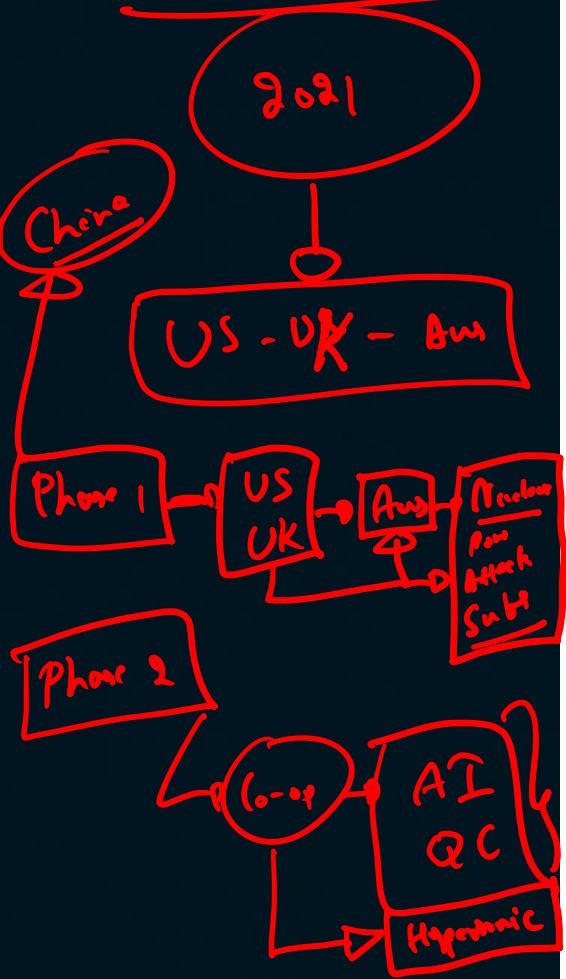
# 'Nepal has encroached upon Indian territory'

After Mr. Shah's remarks created a furore, the Nepal Ministry of Foreign Affairs issued a statement clarifying that the issue raised by the Prime Minister was "primarily related to encroachment in the Dasgaja area (no-man's land)" and "cross-border occupation" – that is, the use or possession of land across the border. "...situations have arisen where citizens of one country cultivate land or reside on land that falls within the territory of the other country," the Ministry said.

"Studies conducted by the technical committee have shown that, in some places, land currently being used and occupied by Nepal may actually fall on the Indian side of the border..." the Ministry added. "The Prime Minister's statement in Parliament that 'in some places, Indian land may be on Nepal's side' was made in reference to this technical reality and the issue of cross-border occupation."



Cross Border Occupation



# U.S. to send only used subs to Australia in revised defence deal

**Agence France-Presse**  
SINGAPORE

Australia will only receive used nuclear-powered submarines from the United States as part of an agreement to “streamline” the AUKUS deal, with the move branded on Sunday as a “cost-effective” measure by Defence Minister Richard Marles.

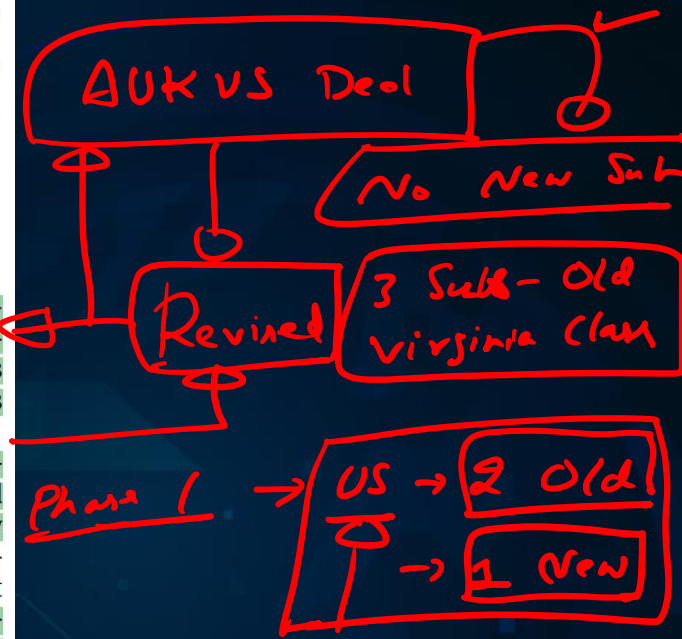
The two nations – together with the third partner in their security pact, Britain – met at Singapore’s Shangri-La Dialogue, which brings together top defence officials and experts from about 45 countries.

Under the 2021 AUKUS deal, Australia is expected

to receive at least three so-called “Virginia-class” nuclear-powered submarines from the United States within 15 years.

Australia had been expecting to receive two used submarines and one new one, but the countries announced on Saturday that all three will now be in-service vessels from the U.S. Navy stock.

When asked why Canberra was now receiving only used equipment, Mr. Marles, who is also Deputy Prime Minister, told presspersons on Sunday it would be more cost-effective. In a joint statement, the U.S. and the U.K. confirmed the revision to the submarine agreement.



# Prelims Bytes

# Study: carrot extract can make fake ghee dodge quality test

**Rahul Karmakar**  
GUWAHATI

The red-orange pigment from carrots can make fake ghee dodge a popular quality test to pass off as a premium product sourced from cows, a new study has found.

Researchers from the Indian Institute of Technology (Banaras Hindu University) in Varanasi, Uttar Pradesh, have demonstrated that non-dairy fats, such as palm oil and lard or rendered pig fat, can be engineered to mimic the Raman spectral signature of authentic cow ghee simply by adding a beta-carotene-rich carrot extract.

Cow ghee naturally contains beta-carotene, responsible for its yellowish colour. The researchers are Vineet Sharma, Ajay Kumar Bind, Shreyans K. Jain, and Venkatanarayan Ramanathan. Their study has been published in the latest issue of the *Journal of Raman Spectroscopy*.

The findings, although based on a small sample size, raise concerns about fraud in India's premium dairy market. They also challenge the efficacy of Raman spectroscopy, a rapid testing technique widely used by food regulators and laboratories.

Named after Nobel laureate C.V. Raman, Raman spectroscopy is considered a powerful analytical quality test. It acts as a molecular fingerprint to verify the exact chemical composition, crystalline structure and purity of a substance.

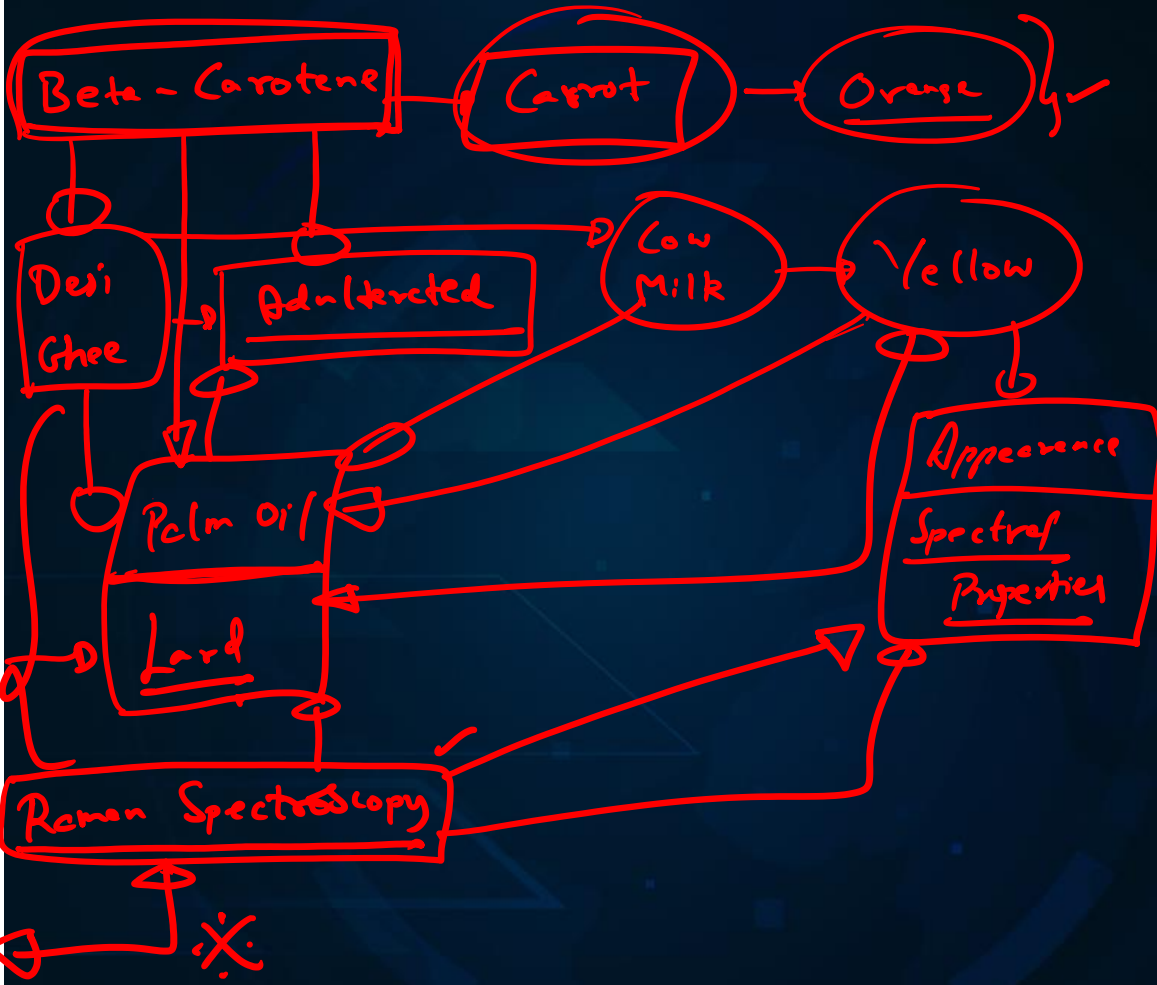


Cow ghee naturally contains beta-carotene, responsible for its yellowish colour.

The team investigated whether the characteristic Raman signatures associated with cow ghee could be artificially recreated with other fats. Previous studies have treated three Raman spectral peaks of beta-carotene – at 1,006, 1,157, and 1,520 cm<sup>-1</sup> – as reliable markers for authenticating cow ghee. These peaks are often absent in non-dairy fats.

### Same results

To test the robustness of these markers, the researchers fortified samples of lard and palm oil with carotenoids extracted from carrots. Both lard and palm oil displayed the same Raman peaks traditionally attributed to cow ghee. The fortified fats acquired the yellow-orange colour similar to cow ghee, making them resemble the dairy product in appearance and spectroscopic profile. They said the study was designed as an "anti-fraud proof-of-concept" to highlight weaknesses in current screening processes and not to examine the adulteration of genuine ghee with other fats.



**Beta-carotene** is a strongly colored, red-orange plant pigment and the most abundant precursor to **Vitamin A (retinol)** in the human diet. It belongs to a group of antioxidants called carotenoids and provides numerous health benefits, though high-dose supplements should be used cautiously. [Wikipedia +3](#)

## Key Benefits

- **Vitamin A Conversion:** Your body converts beta-carotene into retinol, which is vital for maintaining healthy vision, immune function, and skin health. [Wikipedia +3](#)
- **Antioxidant Properties:** As an antioxidant, it helps neutralize harmful free radicals, protecting cells from oxidative stress. [Wikipedia +3](#)
- **Skin Health:** Dietary intake of beta-carotene can offer mild photoprotection against sun damage. [Wikipedia +4](#)

## Top Food Sources

You can easily boost your beta-carotene levels through a balanced diet. Excellent sources include: [Wikipedia +4](#)

- **Orange & Yellow Veggies:** Carrots, sweet potatoes, pumpkins, and butternut squash. [Wikipedia +4](#)
- **Leafy Greens:** Spinach, kale, and broccoli. [Wikipedia +4](#)
- **Fruits:** Cantaloupe, mangoes, and apricots. [Wikipedia +4](#)

# General Subramani takes charge as CDS; lays emphasis on 'JAI'

Saurabh Trivedi  
NEW DELHI

General N.S. Raja Subramani on Sunday assumed charge as **India's third Chief of Defence Staff (CDS)** and **Secretary, Department of Military Affairs.**

Soon after assuming office, General Subramani paid tribute to fallen soldiers by laying a wreath at the National War Memorial in New Delhi. He was later accorded a ceremonial Tri-Service Guard of Honour at South Block.

Addressing reporters, the new CDS expressed gratitude for the trust reposed in the armed forces and reaffirmed his commitment to strengthening national security through greater integration among the services. "The Indian Army, Navy, Air Force, Ministry of Defence, strategic institutions and all stakeholders stand united as part of the Whole of Nation approach to strengthen India's security," he said.

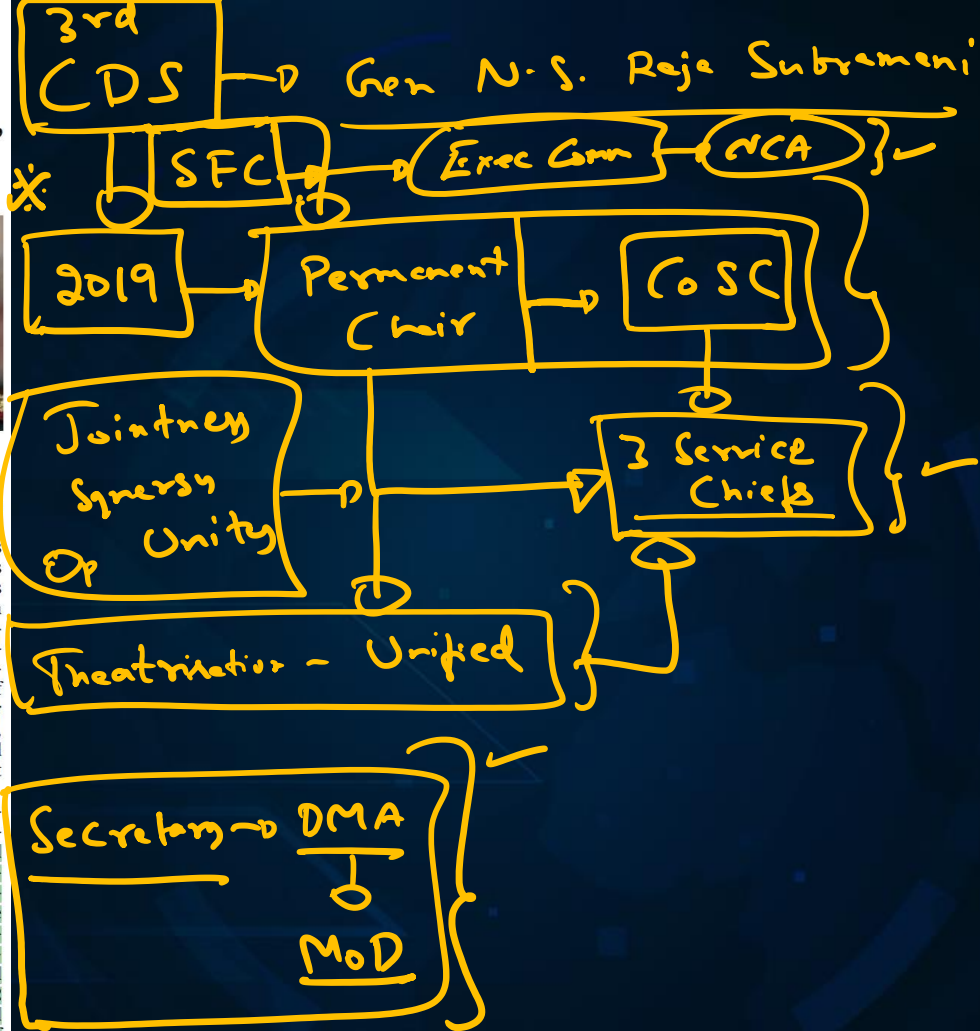
He said the armed forces would work towards implementing Prime Minister Narendra Modi's vision of "JAI" – **Jointness, Atma Nirbharta (self-sufficiency), and Innovation.** He



Gen. N.S. Raja Subramani

said organisational reforms aimed at enhancing synergy, integration, and operational effectiveness among the three services would remain a key focus area. "Atma Nirbharta is a central pillar of our national security. We will accelerate the development, induction, and integration of indigenous weapons in our armed forces," he said, while stressing the need for innovation in thought and action.

A highly decorated officer with more than four decades of service, **General Subramani was commissioned into the Garhwal Rifles in December 1985.** He has held several key command and staff appointments, including **General Officer Commanding 2 Corps, GOC-in-C Central Command, and Vice Chief of the Army Staff.**





# Admiral Swaminathan takes charge as 27th chief of Navy

**Saurabh Trivedi**  
NEW DELHI

Admiral Krishna Swaminathan on Sunday assumed charge as the 27th Chief of the Naval Staff (CNS) of the Indian Navy, succeeding Admiral Dinesh Kumar Tripathi, who retired after over 41 years of service.

Soon after taking over the command of the maritime force, Admiral Swaminathan reaffirmed the Navy's commitment to protecting national and economic interests amid an increasingly complex regional security environment. Speaking to reporters on the occasion, the new Navy chief said he was honoured to lead the force at a time when maritime security challenges continue to evolve.

"I'm extremely grateful to have this opportunity to serve the Indian Navy and the nation in this capacity. The Indian Navy stands vi-



Adm. Krishna Swaminathan with outgoing Navy chief Adm. Dinesh Kumar Tripathi in New Delhi. SHIV KUMAR PUSHPAKAR

gilant to protect national interests and is actively deployed in a regional security environment that remains challenging, complex, unpredictable and uncertain," he said.

Highlighting his priorities as the Chief of the Naval Staff, Admiral Swaminathan stressed the importance of maintaining the highest standards of operational readiness and combat effectiveness. He said the Navy would conti-

nue its ongoing modernisation drive while accelerating the induction of niche and emerging technologies to strengthen its operational capabilities. "The Indian Navy is well set on a course of capability enhancement and modernisation. It shall be my endeavour to sustain the growth momentum, consolidate ongoing programmes and sharpen our operational capabilities," he added.

Commissioned into the Indian Navy on July 1, 1987, Admiral Swaminathan is a Communication and Electronic Warfare specialist with nearly four decades of distinguished service.

During his career, he has held several key operational and staff appointments, including Commander of Western Fleet, Vice Chief of Naval Staff and Flag Officer Commanding-in-Chief of Western Naval Command, a position he held prior to becoming the Navy chief.

Litani River

# Israel captures Beaufort castle in Lebanon in its deepest incursion

Defence Minister Katz says Israel will hold the site while targeting 'thousands more homes' and Hezbollah infrastructure in southern Lebanon; the 12th century Crusader-built castle overlooks Litani river and has long-standing strategic importance

Associated Press  
BEIRUT

Israeli troops have captured a strategic mountain topped with a Crusader-built castle in southern Lebanon in the deepest incursion into the country in more than a quarter-century, the military said on Sunday.

The capture of Beaufort castle, near the city of Nabatiyeh, came after days of air strikes and intense fighting in nearby villages where Israeli troops fought Hezbollah members in the rugged area.

Its capture marks a major development in the latest Israel-Hezbollah war,



**Holding down the fort:** Israeli soldiers operate at Beaufort Ridge in southern Lebanon on Sunday. REUTERS

which began on March 2 when Hezbollah fired rockets into northern Israel two days after the U.S. and Israel attacked its main backer, Iran.

"The occupation of Beaufort is a dramatic stage and a dramatic shift in the policies we are leading," Israeli Prime Minister Benjamin Netanyahu said.

Defence Minister Israel Katz wrote on X that they raised an Israeli flag over the castle. **Israeli troops previously captured the castle in 1982 and held it until they withdrew from Lebanon in 2000.**

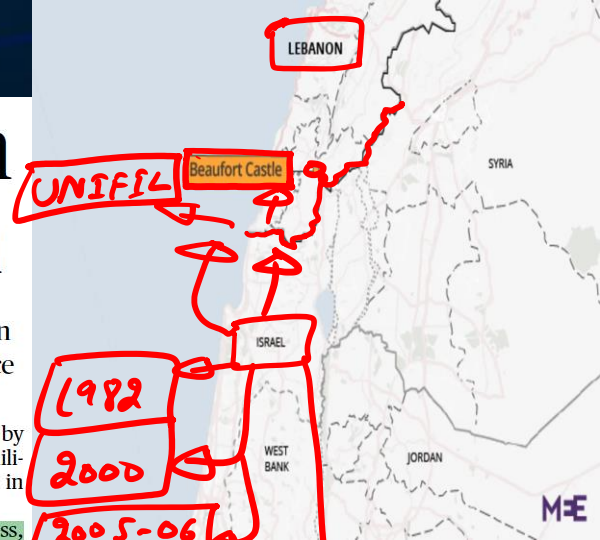
"Twenty six years after the withdrawal from the security zone in Lebanon, the Israeli flag has returned to fly on the peaks that overlook the Galilee towns," Mr. Katz said at a memorial ceremony for Israeli soldiers killed in its previous occupation of southern Lebanon.

Mr. Katz said Israel intends to hold the castle as its troops work to destroy thousands more homes

that he says were used by Hezbollah and other military infrastructure in southern Lebanon.

The Beaufort fortress, perched high atop Lebanon's rolling green hills and overlooking the Litani River, has been a strategic military asset for centuries.

**Built as a Crusader castle around the 12th century on top of previous fortifications, it has also been used by Saladin's Jerusalem army, Mamluks, Ottomans, the French mandate, the Palestine Liberation Organisation and the Israeli military until 2000, when it was partially restored and opened to visitors.**



1982  
2000  
2005-06  
2023-2026

# 9. Pg II – IR Padma Barrage: another barrier

Vasudevan Mukunth

Bangladesh has approved a large river engineering project called the Padma barrage, on the Padma river, which is Bangladesh's stretch of the Ganga, in Rajbari district. It is Bangladesh's attempt to partially re-engineer the hydrology of its southwest region, which has become prone to drought after decades of reduced seasonal flows linked to the Farakka barrage upstream in India.

The barrage will be 2.1-km-long and have 78 spillway gates, undersluices, navigation locks, fish passages, and associated embankments. It will impound roughly 2.9 billion cubic metres of water and includes 113 MW of hydropower generation. According to Bangladesh, the project will affect roughly 37% of the country's land area and irrigate around 2.88 million ha of farmland.

While the barrage's supporters see a long-delayed national water security project in the Padma barrage, critics have said mega-barrages often underperform, alter sediment flows in unpredictable ways, and can create new ecological problems, such as water-logging and damage to fisheries. Some environmental groups have also criticised the speed of approval and called for greater public scrutiny.

As Meheebub Sahana at the University of Manchester and Bayes Ahmed at University College London have argued, the project highlights how South Asian countries are building more barriers to

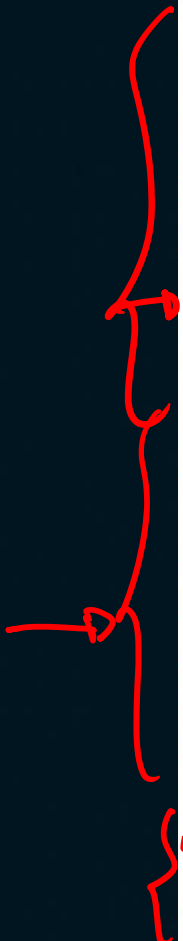
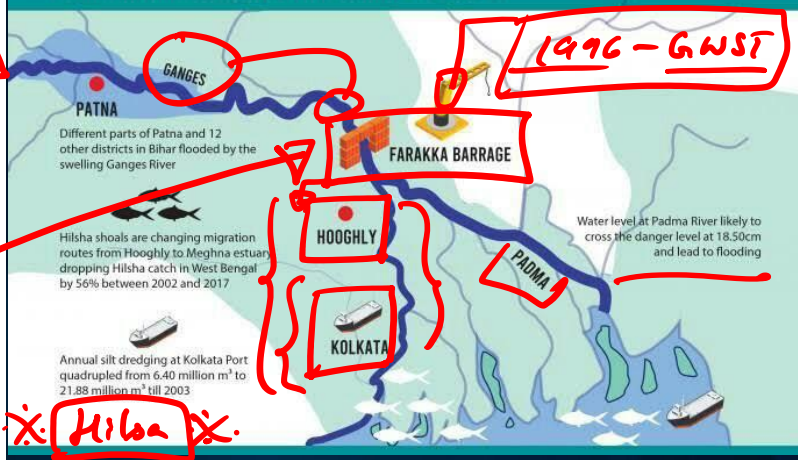


Boats on the Padma river in 1860. PUBLIC DOMAIN

rivers rather than removing them. The regional turn towards unilateral river engineering is at odds with Europe and North America tearing down obsolete dams and culverts to restore rivers' free flow. In 2025 alone, 21 European countries removed a record 603 barriers.

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

## FARAKKA BARRAGE NOW A THREAT TO INDIA



# Webb telescope captures weather on exoplanet 700 lightyears away

As state-of-the-art instruments like the **Extremely Large Telescope** which **Europe is currently building in northern Chile** become operational, astronomers could discover many exoplanet nurseries around distant stars, increasing manifold the possibility of finding more extra-solar earth-like planets and, who knows, even a true earth twin

Prakash Chandra KOCHI

“**C**loudy with a chance of rain” – imagine astronomers turning into meteorologists and issuing weather reports like this, but for alien planets.

According to a new study published in *Science* on May 21, scientists were able to use the **NASA James Webb Space Telescope (JWST)** to peer closely at an exoplanet nearly **700 lightyears** away, and deciphered the weather patterns on it.

Named **WASP-94A b**, this exoplanet is almost twice as large as Jupiter but with only half the mass. It orbits very close to its parent star – so close that it takes just four days to complete a whole revolution.

### Extreme worlds

Gas giants like **WASP-94A b** with scorching atmospheric temperatures are called ‘hot Jupiters’ and have their orbits tidally locked, meaning their rotation is synchronised with their revolution. As a result, the same side of the planet always faces the host star, much like the moon’s tidally locked orbit keeps one side always facing the earth.

WASP-94A b’s dayside is thus a sweltering desert with temperatures hot enough to melt rock while its nightside is perennially dark and frozen as temperatures dip to nearly absolute zero.



An artistic rendering of **WASP-94A b**, a gas giant around 700 lightyears away. On this exoplanet, clouds build up as air flows over the night side of the planet, reaching a large swell by daybreak. They dissipate on the dayside, leaving clear skies in the early evening. HANNAH ROBBINS/JOHNS HOPKINS UNIVERSITY

silicate, iron, and magnesium sulphide while the evenings sport clear skies. “The clouds appear to form on the

discovery. “As the planet passes in front of the star, its atmosphere absorbs starlight. By studying exactly how that absorption

Neptune-like gas worlds and gas giants) form, evolve, and differ from planets in our own solar system.”

### THE GIST

▼ Astronomers have always been intrigued by the bizarre weather patterns on the 6,000 or so exoplanets they have found so far

▼ But in the absence of a sufficiently powerful telescope, they have had no way to study these far-flung bodies

▼ NASA’s launch of the James Webb Space Telescope (JWST) in December 2021 was the gamechanger

▼ The unprecedented sensitivity of its instruments — which allow the telescope to discern the details on a small coin from a distance of 50 km — has helped scientists study exoplanets’ atmospheres like never before

The **Extremely Large Telescope (ELT)** is an [astronomical observatory](#) under construction.<sup>[1]</sup> When completed, it will be the **world's largest optical and mid-infrared extremely large telescope**. Part of the **European Southern Observatory (ESO) agency**, it is located on top of [Cerro Armazones](#) in the **Atacama Desert of northern Chile**, 23 km from the existing facilities at [Paranal Observatory](#).

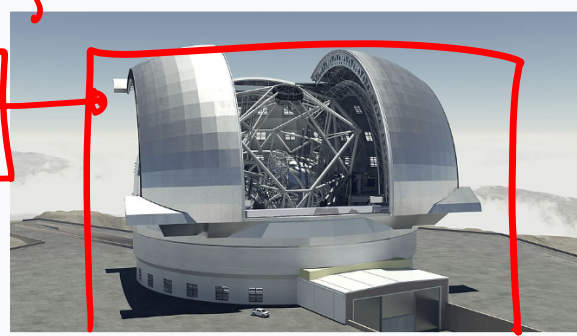
Europe

EU

The design consists of a reflecting telescope with a 39.3-metre-diameter (130-foot) **segmented primary mirror** and a 4.25 m (14 ft) diameter secondary mirror. The telescope is equipped with **adaptive optics**, six **laser guide star** units, and various large-scale scientific instruments.<sup>[2][3]</sup> The observatory's design will gather 100 million times more light than the human eye, equivalent to about 10 times more light than the largest **optical telescopes** in existence as of 2025, with the ability to correct for atmospheric distortion. It has around 250 times the light-gathering area of the **Hubble Space Telescope** and, according to the ELT's specifications, will provide images 15 times sharper than those from Hubble.<sup>[4]</sup>



## Extremely Large Telescope



Artist's impression of the ELT

<b>Alternative names</b>	ELT
<b>Location(s)</b>	<a href="#">Cerro Armazones</a> , <a href="#">Antofagasta Province</a> , <a href="#">Antofagasta Region</a> , Chile
<b>Coordinates</b>	<a href="#">24°35′21″S 70°11′30″W</a>

Ministry of Culture

Piprahewa  
Relics

Buddha

## Sacred Relics of Lord Buddha's Chief Disciples Enshrined in Mongolia

Exhibition "Vessels of Light" Opens at Gandantegchenling Monastery

Posted On: 31 MAY 2026 8:06PM by PIB Delhi

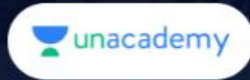
## INDIAN AIR FORCE AIRLIFTS SACRED BUDDHIST RELICS TO MONGOLIA

An Indian Air Force IL-76 strategic airlift aircraft, Gajraj, transported the sacred relics of Arahant Sariputta and Arahant Mahamoggallana the chief disciples of Gautama Buddha from Delhi to Mongolia on 30 May 2026. The aircraft undertook an overnight flight and landed in Mongolia at 1125 hrs IST.

The mission was undertaken by the IAF in support of India's efforts to strengthen cultural ties with friendly nations.

The airlift reflects the IAF's capability to support national objectives and contribute to India's global cultural outreach initiative.

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HINDU

# ANALYSIS