

**The Hindu Important News Articles & Editorial For UPSC CSE**

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**Page : 04 : GS 2 : International Relations – Bilateral Relations**

During his visit to Poland, Indian Prime Minister Narendra Modi and Polish Prime Minister Donald Tusk elevated bilateral ties to a strategic partnership.

- ▶ They agreed on a five-year action plan focusing on trade, technology, clean energy, and space exploration, and introduced initiatives like a youth exchange program and a social security agreement.

# India, Poland formulate action plan, upgrade ties to strategic partnership

**Dinakar Peri**  
WARSAW

India and Poland have agreed to formulate and execute a five-year action plan that will guide bilateral collaboration from 2024 to 2028 across several areas, following talks between Prime Minister Narendra Modi and his Polish counterpart Donald Tusk. The ties between the two countries have been upgraded to the level of a “strategic partnership”.

The India-Poland action plan identified priority areas for cooperation which include political dialogue and security cooperation, trade and investment, climate, energy, mining, science and technology, transport and connectivity, terrorism, cyber security, health, people-to-people ties and cultural cooperation.

Poland is among the world leaders in food processing, Mr. Modi noted and invited Polish companies to join the mega food parks being built in India. “In India, rapid urbanisation is opening up new opportunities for our cooperation in areas such as water



Narendra Modi had interacted with the Indian diaspora and discussed people-to-people ties in Warsaw. X/@NARENDRAMODI

treatment, solid waste management, urban infrastructure,” he said identifying clean coal technology, green hydrogen, renewable energy, artificial intelligence as “common priorities”.

Addressing the Indian community on Wednesday evening, Mr. Modi announced the Jam Saheb of Nawanagar youth exchange programme between the two countries under which every year 20 young persons from Poland will be taken on a tour to India.

“We invite Polish companies to join Make in India and make for the

world,” the PM said. Towards the welfare of the skilled workforce, workers, and to promote mobility, the two sides agreed on a social security agreement.

Both sides agreed to work on concluding a cooperation agreement to promote the “safe, sustainable, and secure” use of space and commercial space ecosystems. “They also agreed to promote human and robotic exploration,” a joint statement said. Poland also recognised India’s ambition to join the International Energy Agency. Mr. Modi met Polish President Andrzej Duda at Belweder Palace.

- **Strategic Partnership:** India and Poland upgraded their ties to a strategic partnership, focusing on enhanced bilateral cooperation.
- **Five-Year Action Plan (2024-2028):** A comprehensive plan was agreed upon to guide collaboration across diverse sectors including political dialogue, security, trade, and investment.
- **Economic Cooperation:**
  - **Food Processing:** Invitation to Polish companies to invest in India's mega food parks.
  - **Urbanisation:** Opportunities in water treatment, solid waste management, and urban infrastructure are to be explored.
- **Technology and Innovation:**
  - **Clean Energy:** Emphasis on clean coal technology, green hydrogen, and renewable energy.
  - **Artificial Intelligence:** Identified as a common priority.
  - **Youth Exchange Program:** Introduction of the Jam Saheb of Nawanagar youth exchange program for 20 Polish youths annually.
  - **Space Exploration:** Agreement to promote safe, sustainable space use and commercial space ecosystems, including human and robotic exploration.
  - **Social Security Agreement:** Agreement to enhance mobility and welfare of skilled workers.
  - **International Cooperation:** Poland acknowledged India's ambition to join the International Energy Agency.

The Waqf (Amendment) Bill 2024 has sparked intense debate in Parliament, with opposition parties objecting to excessive government control, non-Muslim board members, and deed record requirements.

- Criticism also includes concerns about the District Collector's role and insufficient stakeholder consultation.
- The Joint Committee aims to address these issues before the Winter Session.

# Opposition members raise an array of objections to Waqf Amendment Bill

Parties rally against interference by govt., inclusion of non-Muslim members in Waqf Boards, and role of the Collector as primary authority in determining whether a property is classified as Waqf or govt. land; BJP ally TDP says it will make suggestions during the clause-by-clause discussion

**Sobhana K. Nair**  
NEW DELHI

Parliament's Joint Committee on the Waqf (Amendment) Bill began consultations on Thursday, with many members describing the mood of the meeting as "combative".

Opposition members rallied against many provisions in the Bill, including "excessive interference" from government, "inclusion of non-Muslim members", and the move to ask for "deed records" for Waqf properties.

The BJP's former ally, the YSR Congress, came out strongly against the amendments. The BJP's NDA partners took a middle path, backing reform and addressing concerns.

The Joint Committee has to deliver its report before the beginning of the Winter Session, which is likely to be scheduled in

the last week of November. Minority Affairs Ministry officials made a detailed presentation and elaborated the various provisions of the Bill. Representatives from the Ministry of Law and Justice were also present to provide a legal perspective.

### Vocal critics

There was near unanimity among the Opposition parties on amending the clause that designates the District Collector as the primary authority in determining whether a property is classified as Waqf or government land. The Congress, the All India Majlis-e-Ittehadul Muslimeen, the Trinamool Congress, and other Opposition parties all wanted the clause to be removed. There was also a huge uproar over the clause that allowed for inclusion of non-Muslim members in Waqf Boards.

AIMIM MP Asaduddin



**Discussions on:** Members of the Joint Committee on Waqf (Amendment) Bill during the first meeting at Parliament House Annex in New Delhi on Thursday. PTI

Owaisi, according to sources, was one of the most vocal critics, pointing out during the meeting that the government did not carry out any consultations before drafting the Bill. Though the government claims that it has taken into account the Sachar Committee report, he reportedly argued that the government has "cherry-picked" the recommendations. For instance, the report had recommended "broad basing" the membership of

the Waqf Boards.

This has been used to justify the inclusion of non-Muslim members in the Boards and to remove the mandatory requirement of Muslim membership generally. This, he said, was a misinterpretation of the commission's recommendation, which had called for "broad-basing" within the community.

Samajwadi Party MP from Rampur Mohibullah protested against the requirement for the submis-

sion of a "property deed" while filing details of Waqf properties on the portal. He reportedly argued that if "customs and usage" can be the basis of recognising temples, why is the expectation different for Waqf properties.

Senior YSR Congress leader Vijay Sai Reddy represented his party in the panel. Apart from the objections raised by the other Opposition parties, Mr. Reddy also argued against allowing sub-sects such as

"Aghakhani" and "Bohra" Muslims to have a Waqf Board, noting that this was a very divisive move.

National Democratic Alliance partner, the Telugu Desam Party, meanwhile, took the middle path. The party was represented by Lok Sabha floor leader Lavu Sri Krishna Devarayalu who, according to sources, said during the meeting that the law should be strengthened while addressing everyone's apprehensions. His party will make suggestions, he said, when the committee discusses the law clause by clause.

Ahead of the meeting, the panel's Chairperson Jagdambika Pal told the media that the committee would hear the voices of different stakeholders. "We will discuss all the 44 amendments and bring a good and comprehensive Bill by next session," he said.

## Objections Raised by Opposition Parties

### Excessive Government Interference:

- Opposition parties criticised provisions that they believe grant excessive control to the government over Waqf properties.

### Inclusion of Non-Muslim Members:

- There is strong opposition to the inclusion of non-Muslim members in Waqf Boards, arguing it undermines the primary purpose of these boards, which is to manage Waqf properties for the benefit of the Muslim community.

### Deed Records Requirement:

- The requirement to submit “deed records” for Waqf properties has been objected to, with concerns raised about the burden it places on managing and recording these properties.

**Authority Designation:**

- Opposition parties are united in their objection to the clause designating the District Collector as the primary authority in determining whether a property is Waqf or government land. They argue this could lead to misclassification and misuse.

**Consultation Process:**

- There are complaints about the lack of proper consultation with stakeholders before drafting the Bill, with the argument that the government did not fully consider the Sachar Committee’s recommendations.

**Broad-Basing Membership:**

- The broad-basing of Waqf Board membership is contested, as it is seen as misinterpreting recommendations intended to include more community members rather than altering the core composition of the boards.

**Divisive Sub-sects Representation:**

- Objections have been raised against provisions allowing representation of specific sub-sects in Waqf Boards, which are viewed as potentially divisive and counterproductive to unified board management.

**Joint Parliamentary Committee (JPC)**

- **Definition:** A Joint Parliamentary Committee (JPC) is an ad-hoc committee set up by both houses of Parliament for specific issues and durations.
- **Formation:** Established through a motion in one house, agreed to by the other; membership and terms are decided by Parliament.
- **Examples:** JPCs have been formed for stock market scams (2001) and pesticide residues (2003).  
**Functions:** Investigate specific issues beyond financial scrutiny, unlike the Public Accounts Committee (PAC).
- **Membership:** Includes MPs from both Lok Sabha and Rajya Sabha; for example, 30 members for the stock market scam JPC, with varying proportions from each house.
- **Effectiveness:** Recommendations are persuasive but not binding; the government may choose whether to act on them.
- **Comparison with PAC:** JPCs can investigate broader issues; PAC focuses on financial scrutiny and audit reports.

**UPSC Prelims PYQ : 2012**

**Ques : Consider the following provisions under the Directive Principles of State Policy as enshrined in the Constitution of India:**

1. Securing for citizens of India a uniform civil code
2. Organising village Panchayats
3. Promoting cottage industries in rural areas
4. Securing for all the workers reasonable leisure and cultural opportunities

**Which of the above are the Gandhian Principles that are reflected in the Directive Principles of State Policy?**

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

**Ans: (b)**

India's crumbling healthcare infrastructure, exacerbated by the current severe heatwave, has led to overcrowded, poorly ventilated hospitals where patients suffer from heat-related illnesses.

- The lack of adequate cooling and poor management contribute to worsened health outcomes, highlighting the urgent need for systemic improvements and effective heat management protocols.

## When sweltering heat turns public hospitals into potential 'death traps'

India's public health infrastructure is crumbling under the sheer volume of sick people and this might have unintended consequences for people in the current heatwave. India is experiencing this phenomenon disproportionately affects poor and marginalised communities who have no access to cooling devices

Christiane Ratna Kiruba

Come with me to a busy outpatient clinic at a public hospital in rural Andhra Pradesh. There is a sea of waiting patients. Some are on chairs, most on the floor, waiting to be called in by the doctor. People on the floor talk, eat, and some even nap as they wait. Oppressive heat, along with the smell and feel of sweat, pervade the atmosphere. In a small consultation room two doctors attend to a patient. In the corner, another doctor treats a patient. Outside the door stand a multitude of patients. Every now and then someone peeks in and asks, "Doctor, when will my turn come?"

Looking around, we notice there are no windows. An old fan rattles overhead, recirculating the same overheated air. While the doctors can take breaks in their air-conditioned duty room, patients have no such respite.

A similar stifling environment is replicated in other places across the country, as Joseph can testify. "I accompanied my relative to his appointment at the B. Barnali cancer centre in Guwahati," says Mr. Joseph (name changed). "The hospital waiting room was overcrowded and extremely humid because everybody there was sweating. Soon enough, I started having a headache and muscle cramps. My body temperature rose too. I had to go out to a different clinic to consult a doctor and they diagnosed me with heat exhaustion. I was admitted and given paracetamol along with saline injections. Only after some time did I feel better," he adds.

**Failing infrastructure**  
India's public health infrastructure is crumbling under the sheer volume of sick people and this might have unintended consequences for people in the current heatwave India is experiencing.

This year, India is experiencing its longest and deadliest heatwave in the past 15 years with some parts of North India hitting record-high temperatures. This heat wave disproportionately affects the poor and marginalised communities who have no access to cooling devices. While several forms of inequalities have been exposed by the current heatwave – such as occupational inequality and gender inequality, it is also important to talk about how economically weaker sections of the community who seek healthcare from the public sector are exposed to heat-related illnesses within the premises of these clinics and hospitals.

"My father was admitted to the general ward of a hospital because he had a fever and stomach pain sometime back," says



A motorcyclist on a hot summer evening in New Delhi. AFP

Muniamma, a daily wage labourer from Vellore, South India. "The doctors told me that he had a kidney infection and they were treating it with injections with which he was getting better. Suddenly his fever returned and he started speaking incoherently. Initially, the doctors did a lot of tests but then they realised that it was heat related as it was peak summer."

Ms. Muniamma's father, though he was admitted with a different ailment, developed a heat-related illness as he lay in the hospital bed in the overcrowded and poorly ventilated hospital ward. "The doctors tried their best," says Muniamma who had to then sit with her father day and night spraying cold water from a spray bottle onto every bit of exposed skin. "They gave him saline injections which were cooled in a refrigerator. They asked us to bring a few table fans which we placed around him. We also kept trying to cool him by placing ice cubes in his armpits and such. But he did not get better. His kidneys failed due to the heat and he died," she recounts sadly.

### Killer heat

Just like Muniamma, Kumari from Vellore too has lost an uncle to heat illness in a poorly ventilated ward. "He had some mental illness and would always be sad or crying, so we showed him to a psychiatrist and got him medicine. However, after a suicide attempt, we rushed him to a hospital where they put a tube in his nose and gave him injections and medications. He started gaining consciousness and was getting better when he started having a fever. The doctors initially said that he might have caught an infection from the other



They gave him saline cooled in a refrigerator. We brought table fans which we placed around him. We also kept trying to cool him by placing ice cubes in his armpits. But his kidneys failed due to the heat and he died.

patients. But all the tests were negative. That is when we realised that it might have been the heat, as it was scorching. He was treated for heat-related illness but he did not recover," she says, "I am truly sad that my uncle died of something that was not even his initial problem. But what can we do? We can only afford to come to a government hospital and we know how overcrowded and hot it can get," she adds.

While the news of heat-related deaths is making headlines daily, there is reason to believe that the numbers may be underreported due to several logistical reasons. Known reasons include decreased knowledge among healthcare professionals about when to report and inadequate autopsy services to prove heat-related deaths, patients developing heat-related illness after admission to a hospital for a different illness are lesser-known reasons for the underreporting. For instance, in the past two examples, cause of death may be mentioned as urinary tract infection and suicidal poisoning despite the reason being heat.

According to Anand Zachariah, consultant physician, CMC Vellore,

people who come to hospitals for certain illnesses are more vulnerable to heat-related illnesses. "Especially when someone has a fever due to any infection, it is very important for them to dissipate heat from their bodies via sweating. However, if the ambient heat in the hospital ward is high, they will not be able to do so. This puts them at a very high risk for developing heat exhaustion," he says. Alongside this, older individuals, individuals with any longstanding illnesses and skin conditions which cause issues with sweating may also be at risk according to a paper co-authored by Dr. Zachariah.

According to Aditi Dandawate, a paediatrician at Cooper Hospital, Mumbai, such issues can be very common in newborns and children admitted for other reasons. "Considering the high temperatures in Mumbai, we always keep our eyes peeled for dehydration in children. We advise mothers to dress their children in the bare minimum clothing. We also ensure adequate hydration," she adds.

### Improving amenities

While these are individual measures taken at the level of the treating doctors, it is not enough to combat the systemic failings of poor infrastructure of the healthcare system and the ever-loomng problem of climate change at large. Hospitals, for one, need to have a strategy in place every year as to how they would deal with such occurrences. This year some hospitals including Tirunelveli Medical College, RML Hospital Delhi, GRH Madurai etc. have started air-conditioned wards to admit and treat heat stroke patients, but these measures fall short on the prevention front. CMC Vellore has prepared a protocol for its doctors which disseminates information about how heat stroke can develop while in hospital. The document shows the signs the doctors must look out for and cautions them as to which kinds of patients are at risk for the same.

"On top of this, it is important to ensure further changes at the level of the hospital like providing shade for patients to wait, keeping pots of water or water dispensers in outpatient areas, measures to cut the time patients must stand in queues etc," says Dr. Zachariah. (Assistance for overcoming suicidal thoughts is available on the State's health helpline 104, Tele-MANAS 14416 and Sneha's suicide prevention helpline 044-24640050. Helplines across the country can be accessed here.)

(Dr. Christiane Ratna Kiruba is an internal medicine doctor with a passion for patient rights advocacy. christianezdenmis@gmail.com)

### THE GIST

Heat-related deaths are likely being underreported. Reasons include lack of knowledge among healthcare professionals and inadequate autopsy services. Also patients developing heat-related illness after admission for a different illness can cause underreporting

People who come to hospitals for certain illnesses are more vulnerable to heat-related illnesses. If someone has a fever it is very important to dissipate heat via sweating. However, if the ambient heat in the hospital ward is high, they will not be able to do so. This puts them at high risk of heat exhaustion

Individual measures taken by doctors cannot cope with systemic failings of poor health infrastructure and the problem of climate change at large. Hospitals need to have a strategy in place every year to deal with such occurrences

### Infrastructure Drawbacks in Indian Healthcare:

- **Overcrowding:** Public hospitals face extreme overcrowding, with patients often waiting for hours or even days in inadequate conditions.
- **Poor Ventilation:** Many facilities, especially in rural areas, lack proper ventilation, exacerbating issues during heatwaves.

- ➔ **Inadequate Cooling:** The absence of air conditioning in many hospitals leads to stifling, humid environments that affect patient health.
- ➔ **Overheated Wards:** Hospital wards, particularly in poorly ventilated areas, can become excessively hot, worsening the condition of patients, especially those with fever or other ailments.
- ➔ **Limited Respite:** Patients do not have access to cooling devices or shaded waiting areas, leading to heat-related illnesses.
- ➔ **Underreporting of Heat-Related Illnesses:** Heat-related deaths may be underreported due to inadequate diagnostic capabilities and lack of awareness among healthcare professionals.

**Future Directions:**

- ➔ **Enhanced Infrastructure:** Invest in improving hospital infrastructure, including better ventilation systems, air conditioning, and shaded waiting areas.
- ➔ **Heat Management Protocols:** Develop and implement protocols for managing heat-related illnesses, including regular temperature monitoring and appropriate hydration measures.
- ➔ **Cooling Measures:** Install automated weather and water level monitoring systems to anticipate and manage extreme weather conditions affecting hospital environments.
- ➔ **Awareness and Training:** Train healthcare staff to recognize and manage heat-related illnesses and incorporate heat management into patient care protocols.
- ➔ **Public Health Strategy:** Develop comprehensive strategies to deal with heatwaves, including improving public awareness and implementing preventive measures across healthcare facilities.
- ➔ **Systematic Changes:** Ensure systematic improvements such as reducing patient wait times, providing access to drinking water, and improving overall hospital environment conditions to mitigate the impact of heat on patients.

**UPSC Prelims PYQ : 2010**

**Ques : What are the possible limitations of India in mitigating global warming at present and in the immediate future?**

1. Appropriate alternate technologies are not sufficiently available.
2. India cannot invest huge funds in research and development.
3. Many developed countries have already set up their polluting industries in India.

**Which of the statements given above is/are correct?**

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

**Ans: a)**



Page 10 : GS 3 : Science and Technology

Since Chandrayaan 3's successful moon landing on August 23, 2023 and its declaration of National Space Day, ISRO has remained highly active with several key missions, despite a quieter phase at Sriharikota.

# A look at ongoing Indian space missions

Over the past year, ISRO has made significant strides with several key missions: the Aditya L1 spacecraft began studying solar radiation from the Earth-Sun Lagrange point, while the Gaganyaan TV-D1 mission successfully demonstrated crew safety systems

**FULL CONTEXT**

Pradeep Mohandas

**The story so far:**

After a busy 2023, things have been quiet at Sriharikota, India's spaceport. But silence here doesn't mean India's space programme itself has been dormant. A lot has been happening since the Indian Space Research Organisation (ISRO) successfully landed the lander of its Chandrayaan 3 mission, Vikram, on the surface of the moon. Prime Minister Narendra Modi has declared this date, August 23, India's National Space Day.

**Highlights in the last year**

**Aditya L1:** India followed its lunar success with the successful launch of its solar science mission Aditya-L1 on September 2, 2023. The launch was the easiest part of the mission, onboard ISRO's Polar Satellite Launch Vehicle (PSLV). The spacecraft executed a series of manoeuvres to move into an orbit around the first earth-Sun Lagrange point (L1) on January 6, 2024. It completed its first orbit around L1 on July 2, 2024. It studied a solar storm in May 2024, together with observations on the ground and spacecraft in lunar orbit.

**Gaganyaan TV-D1:** ISRO used a modified L-40 Vikas engine to build its Test Vehicle (TV) that it used to perform the first abort mission on October 21, 2023, as part of its 'Gaganyaan' human spaceflight mission. The mission demonstrated the ability of the Crew Escape System (CES) to separate from the TV, take the crew module to safety, and the crew module's ability to decelerate before splashing down in the Bay of Bengal. The crew module at the test's end was recovered by the Indian Navy vessel *INS Shakti*.

**XPoSat:** ISRO celebrated the new year with the launch of its X-ray Polarimeter Satellite (XPoSat) on January 1, 2024. The satellite will study how radiation from various celestial objects is polarised. It is the second such space-based observatory after NASA's Imaging X-ray Polarimetry Explorer (IXPE), launched in 2021. The two instruments on board XPoSat, called XSPECT and POLIX, began operating on January 5 and 10.

**INSAT-3DS:** ISRO launched the meteorological satellite INSAT-3DS on February 17 onboard a Geosynchronous Satellite Launch Vehicle (GSLV). This mission was important to prove the vehicle's credibility before the critical NASA-ISRO Synthetic Aperture Radar (NISAR) mission, now expected to launch in early 2025. This version of the GSLV had previously successfully launched the NVS-01 satellite in 2023.

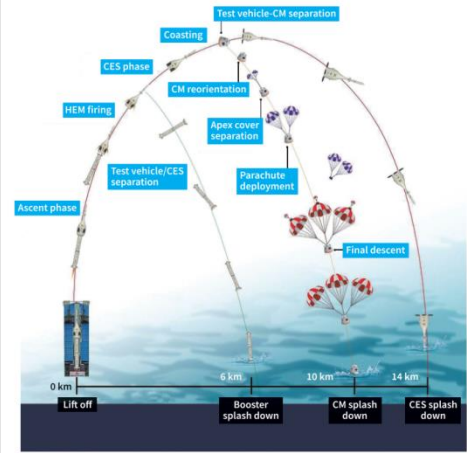
**RLV-TD:** ISRO used a downscale version of the Reusable Launch Vehicle, called Pushpak, to conduct two landing experiments - LEX-02 and LEX-03 - on March 22 and June 7 at its Aeronautical Testing Range in Challakere, Karnataka. The tests simulated landing conditions from space by dropping the Pushpak vehicle from a Chinook helicopter, in LEX-02 along its landing path and in LEX-03 500 metres to one side. Successes in these tests gave ISRO the confidence to move on to the 'Orbital Return Flight Experiment'.

**SSLV:** On August 16, ISRO launched the third and final development flight of the Small Satellite Launch Vehicle (SSLV), placing the EOS-08 and the SLO-D Demosat satellites in orbit. With two consecutively successful test flights, ISRO declared the



Maiden test flight of Gaganyaan mission

The first uncrewed Gaganyaan flight is expected in late 2024



SOURCE: ISRO

demonstrate the use of reflections from a global satellite navigation system for earth observation, and one ultraviolet dosimeter and alarm to be tested ahead of their use in the Gaganyaan crew module.

**ISRO roadmaps**

After handing over operational responsibilities to NewSpace India, Ltd. (NSIL), ISRO has prioritised research. In December 2023, ISRO Chairman S. Somanath announced a 25-year roadmap until 2047 for Gaganyaan. It intersects with the lunar exploration roadmap in the form of an Indian landing on the moon by 2040. Mr. Somanath also shared a lunar exploration roadmap that includes - apart from a crewed lunar mission - a sample-return mission, a long-duration mission on the moon's surface, docking with NASA's Lunar Gateway (under the Artemis programme), and building moon

has been to train its astronaut candidates, or Gaganyatris, for spaceflight.

Prime Minister Modi revealed the candidate's names on February 27: Wing Commander Shubhanshu Shukla and Group Captains Prashanth Nair, Ajit Krishnan, and Angad Pratap.

Earlier this month, Mr. Shukla and Mr. Nair travelled to the U.S. for advanced training ahead of a flight to the International Space Station (ISS). Mr. Shukla is likely to fly in this mission, with Mr. Nair as his designated backup. The mission will be conducted by Axiom Space, a private company, with inputs from NASA and using SpaceX's launch vehicle and crew capsule. The flight is scheduled for 2025.

ISRO has also planned at least four more abort tests using its Test Vehicle before the historic crewed flight. The first uncrewed Gaganyaan flight is expected in

(BAS) by 2035.

**Next-generation Launch Vehicle**

Since India is aspiring to both the BAS and a full-fledged lunar programme, it requires a new launch vehicle that can deliver heavier payloads per launch than its PSLV or GSLV rockets. This is set to be the Next Generation Launch Vehicle (NGLV).

ISRO set up a team led by S. Sivakumar that submitted a project report to the Union Cabinet in February with a request for funding and details of the NGLV, including manufacturing requirements.

ISRO has planned for NGLV to be a three-stage launch vehicle powered by a semi-cryogenic engine, a liquid engine, and a cryogenic engine. ISRO doesn't plan to continue the use of the GSLV once the NGLV is ready. The PSLV is already under production by a private consortium led by Larsen & Toubro and Hindustan Aeronautics, Ltd.

This said, ISRO is developing a semi-cryogenic engine for the LVM-3 rocket - another name for the GSLV Mk III - to enhance its launch capability. On May 2 and 21, it successfully tested the engine's pre-burner ignition test article.

**NSIL missions**

ISRO is focusing on research because NSIL has been tasked with conducting missions and chaperoning commercial activities. On May 1, ISRO transferred all commercial activities related to Indian Remote Sensing satellite data and products to NSIL.

NSIL signed an agreement with SpaceX to launch the GSAT-20/GSAT-N2 satellite. LVM-3 currently can't launch this 4,700-tonne machine. SpaceX is expected to launch it in August 2024.

On May 10, NSIL released a request for qualification for the production of LVM-3 through a public-private partnership and agreed a dedicated launch service agreement with an Australian private space company to launch the SSLV.

**Private space missions**

Agnikul Cosmos successfully launched its SoRTeD-01 vehicle from its launch pad at the Satish Dhawan Space Center in Sriharikota on March 21. This was the first launch of a vehicle powered by a semi-cryogenic engine as its first stage from Indian soil.

Skyroot Aerospace is progressing towards the launch of its Vikram 1 rocket. It had previously pressure-tested solid-fuel engines between May and July 2024 and launched a test vehicle called Vikram S from Sriharikota on November 18, 2022.

Dhruva Space and Bellatrix Aerospace flew their experiments on the fourth and final stage of the PSLV-CS8 mission on January 1.

**IN-SPACE**

In the last year, there have been several notable policy updates and licenses issued by India's new space regulator, IN-SPACE. Most importantly, it released the 'Norms, Guidelines, and Procedures for Authorisation of Space Activities' on May 3.

It also granted the country's first satellite broadband licence to Eutelsat OneWeb on November 21, 2023, and the first licence for a ground station as a service to Dhruva Space on July 15.

Finally, on February 21, the Government of India amended its foreign direct investment (FDI) policy to allow 100% direct FDI in all space and spaceflight segments except for a 74% ceiling in satellite manufacturing and

**THE GIST**

ISRO made major progress with missions like Aditya L1 for solar research, Gaganyaan TV-D1 testing crew safety, and XPoSat for X-ray studies.

Successful launches and tests include the SSLV's final development flight, the INSAT-3DS meteorological satellite, and the RLV-TD landing experiments.

ISRO is focused on its 25-year roadmap for Gaganyaan, a new Next Generation Launch Vehicle, and the Bharatya Antariksh Station by 2035.

NSIL manages commercial missions, and private companies like Agnikul Cosmos and Skyroot Aerospace are advancing their own space technologies.

New policies and licenses are boosting private sector participation and foreign investment in India's space sector.

	<b>Details</b>	<b>Date</b>
<b>Chandrayaan 3</b>	Successful Moon landing by Vikram lander. <b>August 23</b> declared as India's National Space Day.	August 23, 2023
<b>Aditya L1</b>	Solar science mission to study the Sun. Reached Earth-Sun <b>L1 point</b> on January 6, 2024. Studied <b>solar storm</b> in May 2024.	Launched: September 2, 2023 L1 Orbit: January 6, 2024
<b>Gaganyaan TV-D1</b>	<b>First abort mission</b> for Gaganyaan program. <b>Tested Crew Escape System (CES)</b> ; crew module recovered by INS Shakthi.	October 21, 2023
<b>XPoSat</b>	X-ray Polarimeter Satellite to study radiation polarization. <b>Second such space observatory</b> after NASA's IPEX.	Launched: January 1, 2024
<b>INSAT-3DS</b>	Meteorological satellite launched to support GSLV credibility for <b>NISAR mission</b> . Enhances weather forecasting capabilities.	Launched: February 17, 2024
<b>RLV-TD (Pushpak)</b>	<b>Reusable Launch Vehicle</b> tests (LEX-02 and LEX-03) conducted. Simulated landing conditions for future Orbital Return Flight.	LEX-02: March 22, 2024 LEX-03: June 7, 2024
<b>SSLV</b>	Final development flight of <b>Small Satellite Launch Vehicle (SSLV)</b> . Successfully placed EOS-08 and SR-0 Demosat in orbit.	August 16, 2024
<b>ISRO Roadmaps</b>	<b>25-year roadmap until 2047</b> . Plans for crewed lunar missions, sample-return missions, and the <b>Bharatiya Antariksh Station (BAS)</b> by 2035.	Announced: December 2023
<b>Next-Generation Launch Vehicle (NGLV)</b>	<b>New 3-stage launch vehicle</b> under development to replace GSLV. Powered by <b>semi-cryogenic, liquid, and cryogenic engines</b> . Project report submitted to Union Cabinet.	Project report submitted: February 2024
<b>NSIL Missions</b>	<b>Agreement with SpaceX</b> for GSAT-20/GSAT-N2 launch. <b>SSLV launch</b> service agreement with an Australian company.	2024
<b>Private Space Missions</b>	<b>Agnikul Cosmos</b> launched <b>SoRTeD-01</b> , first <b>semi-cryogenic engine</b> vehicle from Indian soil.	2024

	<b>Skyroot</b> and <b>Dhruva Space</b> progressing with tests and launches.	
<b>IN-SPACE Initiatives</b>	<p><b>Released</b> 'Norms, Guidelines, and Procedures for Authorisation of Space Activities'.</p> <p><b>Granted first satellite broadband license</b> to Eutelsat</p> <p><b>OneWeb</b> and <b>first ground station</b> service license to Dhruva Space.</p> <p><b>100 % Direct FDI policy.</b></p>	2024

**UPSC Prelims PYQ : 2016**

**Ques :** 'Consider the following statements:

**The Mangalyaan launched by ISRO**

1. is also called the Mars Orbiter Mission
2. made India the second country to have a spacecraft orbit the Mars after the USA
3. made India the only country to be successful in making its spacecraft orbit the Mars in its very first attempt

**Which of the statements given above is/are correct?**

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

**Ans: c)**

## Term In News : Waterspout

Recently, a luxury yacht sank off Sicily, Italy, during a violent storm, resulting in one confirmed death and six individuals missing, possibly due to a waterspout.



### About Waterspouts:

- Waterspouts are significant atmospheric phenomena characterised by rotating columns of air that form over water bodies. These tornado-like structures typically develop overseas or in large lakes, presenting a spectacular display of nature's power.
- It is a weaker version of a tornado, typically lasting 5-10 minutes.
- Average diameter is around 165 feet (50 meters).
- Wind speeds can reach up to 100 km/h (60 mph).

### Formation of Waterspouts:

- The formation of a waterspout varies depending on its type:

- Fair-weather waterspouts occur when cool air flows over open water, pulling water upwards and creating the waterspout.
- Tornadic waterspouts are more likely to form during thunderstorms. Some may even start as tornadoes on land and then move over water. These waterspouts typically develop in the sky and extend downward.

#### **Waterspouts evolve through a distinct five-stage process:**

- **Dark spot:** A light-coloured disk becomes visible on the water's surface, surrounded by a darker area with blurred edges.
- **Spiral pattern:** Bands of light and dark colours spiral outward from the dark spot.
- **Spray ring:** The dark spot creates a swirling mass of sea spray, resembling the eye of a hurricane.
- **Mature vortex:** The spray ring forms a spinning funnel that stretches from the water's surface to the clouds above.
- **Decay:** As warm air disrupts the vortex, the waterspout weakens and dissipates.
- The key to waterspout formation is the presence of cold air cycling over warm water. When these conditions align, a waterspout can develop.
  - While most common in tropical and subtropical regions, waterspouts can occur in various parts of the world, including Europe, the Middle East, and even Antarctica.

#### **Types of Waterspouts:**

- **Tornadic Waterspouts:**
  - Essentially tornadoes over water.
  - Associated with severe thunderstorms.
  - Can be accompanied by dangerous conditions like high winds, large hail, and frequent lightning.
- **Fair Weather Waterspouts:**
  - Form under calmer conditions, often along the base of developing cumulus clouds.
  - Generally not linked to thunderstorms.
  - Develop from the water's surface upward.
  - Typically move very little due to light wind conditions.
- **Snowspouts:**
  - These are exceptionally rare waterspouts that develop under the base of a snow squall.
  - They are occasionally known as snow devils and are typically weak, although, in certain instances, they can reach the strength of an EF1 tornado.
  - Recent research from the University of Barcelona suggests a correlation between warmer sea surface temperatures and increased waterspout formation.
  - For instance, the sea surface near Sicily has been observed to be 2.5 to 3 degrees Celsius warmer than the 1990-2020 average, potentially contributing.

**UPSC Prelims PYQ : 2020**

**Ques : Consider the following statements:**

1. Jet streams occur in the Northern Hemisphere only.
2. Only some cyclones develop an eye.
3. The temperature inside the eye of a cyclone is nearly 10°C lesser than that of the surroundings.

**Which of the statements given above is/are correct?**

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

**Ans : c)**

*Do we need a Central law for protection of healthcare professionals?*



**R.V. Asokan**  
is national president of the Indian Medical Association



**Shanthi Ravindranath**  
doctor-activist, is Secretary, Doctors' Association for Social Equality

**PARLEY**

**F**ollowing the brutal rape and murder of a trainee doctor in Kolkata, the issue of violence against healthcare workers has come to the forefront, with medical professionals across India demanding the enactment of a Central law to protect healthcare workers. In 2019, a Bill on this issue was drafted by the Central government, but it never saw the light of day. Can a Central law ensure security for healthcare professionals at work? R.V. Asokan and Shanthi Ravindranath discuss the question in a conversation moderated by C. Maya. Edited excerpts:

**Why has violence against healthcare workers been increasing across India?**

**R.V. Asokan:** The violence that the postgraduate trainee doctor experienced (in Kolkata's R.G. Kar Medical College and Hospital) is obviously very different from what doctors normally face. Generally, when there is an unexpected death, relatives sometimes get violent (with doctors and nurses). We have been seeing such incidents of violence in the last two-three decades. In fact, 25 States have enacted laws (to protect medical professionals), but unfortunately, there are very few convictions. The violence is due to patients' expectations, high out-of-pocket expenditure, and the lack of proper communication between doctors and patients. It is a complex subject.

**Shanthi Ravindranath:** WHO (the World Health Organization) says every country should spend at least 6% of the GDP on health. But few countries are doing this (India spend less than 2%). People need free, easily accessible, proper, and complete treatment. When they reach the hospital, they get angry because they are in distress. Ideally, this anger should be directed against the system. But unfortunately, it is taken out on the doctor who provides the treatment, who is the face of the hospital at that point, and who is in the emergency room. WHO also says violence against healthcare workers at the global level is 8%-38%. We need to increase GDP spending on health and strengthen the public health system so that people are provided proper treatment when they go to a hospital. This will help check such cases of violence.

**Could better infrastructure and additional security measures in hospitals help?**

**SR:** Most hospitals, especially government ones and medical colleges, use interns, postgraduate medical students, and super speciality students to run the show. As the main healthcare force, these people are made to work continuously for long hours. They are emotionally exploited and verbally abused at work. So, we have to improve



Doctors protest against the rape and murder of a postgraduate trainee doctor of the Kolkata R.G. Kar Medical College and Hospital, in Prayagraj. ANI

the healthcare system not just by improving infrastructure, but also by ensuring that doctors' working hours are restricted to eight hours a day. Postgraduate students are there to learn and work, not to replace doctors who should be treating the patients. Recently, NMC (National Medical Commission) published a study which said that a majority of postgraduate students are suffering from mental health issues. This point should also be considered.

**RVA:** The issues of patient-related violence can be brought down by improving communication (between doctors and patients), ensuring safety measures, and placing a security protocol in all hospitals, especially medical college hospitals. NMC has already come out with an advisory for medical colleges (emphasising the need for each medical college to develop and implement a comprehensive policy to enhance the safety of students and healthcare professionals within the campus and hospital premises). This can be really helpful.

**SR:** I also want to add that every hospital should have a hospital protection committee to check all aspects of hospital security. There should be CCTV cameras and security personnel, who should be accountable for the safety and security of all the people working in the hospital, especially healthcare workers.

**In 2019, the Centre had drafted a Bill titled 'The Healthcare Service Personnel and Clinical Establishments (Prohibition of violence and damage to property) Bill, 2019'. However, the Centre took the stand that existing State and Central laws provide adequate legal protection for our health workforce and that all that we require in addition is the beefing up of security in hospitals. Do we need a Central Act to protect healthcare workers from violence?**



In Kerala, since the law was made stringent following the murder of Vandana Das in 2023, the incidence of violence has come down. There were a few instances of violence where the State acted quickly.

R.V. ASOKAN

**RVA:** We don't understand what the Central government is trying to tell us, because it was the Ministry of Health which had signed the office memorandum with the IMA (Indian Medical Association) in 2017 saying it will explore the possibility of a Central Act (to protect healthcare workers from violence). Had the government not known then that health as well as law and order are State subjects? If yes, why did it sign this?

In 2019, under the same Health Minister, the three Ministries of Home, Law, and Health drafted this Bill. I was part of the committee which drafted it. A lot of consultations were held before the Bill was drafted, but the Bill did not go to the Cabinet. Why did they lead us down the garden path?

Now, the government is saying that it is not possible (to bring in legislation). During the COVID-19 pandemic, when there was large-scale violence against doctors in Hyderabad, the IMA had declared a 'white alert'. We said that we would protest by lighting candles. The next day, the Union Home Minister met with the IMA at 11 a.m. and by noon, the 'white alert' was withdrawn. At 4 p.m. the same day, the ordinance to bring amendments to the Epidemic Diseases Act, 1897, was produced, which was subsequently ratified by Parliament. Why was that done? So, now, suddenly, how are they all saying a Central law is not possible?

**The Supreme Court has now set up a national task force to look into the issue of the safety of healthcare workers. How does the IMA view this development?**

**RVA:** We welcome it. The Supreme Court is the one institution acceptable across party lines, religious lines, and professions. It has got so much credibility and respect and we will work with the task force. But if you go through the Supreme Court order, it is all about the safety, security, and working conditions (of healthcare workers). It does not talk about a deterrent law. What if there a violence? What will be the next step? Or are the existing laws adequate? Yes, there are 25 State laws, but where are the convictions? In my understanding, there was only one conviction last year in Tamil Nadu while there are hundreds of cases. In Kerala, since the law was made stringent following the

murder of Vandana Das in 2023, the incidence of violence has come down. There were a few instances of violence where the State acted quickly. Kerala has also enacted a Code of Grey Protocol. We have asked the government to adopt this Protocol of the Kerala government too.

**SR:** We need a Central Act but at the same time, a Central Act should not take away the rights of the State and that of the patients. A law can help in reducing the incidence of violence against healthcare workers, but policymakers should also examine why these incidents are happening. It is the responsibility of the government to see to it that the expectations of a poor patient who comes to the hospital, of free, fair, and total health care, are met. The public health system should be strengthened and out-of-pocket expenditure should be reduced.

**Why do you think the Centre went back on its earlier intent of enacting a Central law?**

**RVA:** The government seems to have a problem acknowledging that there is violence against healthcare professionals in India. But the reality is for everybody to see. If you look at the issue of violence, corporate hospitals are much safer because of the security arrangements. It is mainly government hospitals and small and medium hospitals in the private sector which are exposed to this violence.

**There is no dearth of laws in the country. Kerala framed legislation to prevent violence against healthcare workers in 2012, but it was not enough. While seeking a new law, what are the implementation challenges you expect?**

**RVA:** The 2012 Kerala law did not have teeth. The Rules were framed later. The law was not backed by the Indian Penal Code (now called the Bharatiya Nyaya Sanhita) or the Code of Criminal Procedure (now called the Bharatiya Nagarik Suraksha Sanhita). The police had no idea that such a law had come into existence. We had to show them there was indeed an Act to take cognisance of the violence against hospitals and healthcare workers. The Vandana Das murder changed things. Today, Kerala has a very strong law. At least in four or five instances of violence, after this law was framed, the police acted swiftly. So, a deterrent law which is implemented by the police on the ground and is understood by the public is very useful.



To listen to the full interview  
Scan the code or go to the link  
[www.thehindu.com](http://www.thehindu.com)

**GS Paper 03 : Social Justice – Health**

**Mains Practice Question :** Discuss the need for a Central law to protect healthcare professionals in India, considering the rising incidents of violence despite existing state laws. (250 Words)

## Context :

- The rise in violence against healthcare professionals in India has sparked debate over the need for a Central law to protect them.
- Despite existing state laws, incidents persist due to weak enforcement, high healthcare costs, and strained infrastructure, prompting calls for national legislation to ensure better security and deterrence.

## Do We Need a Central Law for the Protection of Healthcare Professionals?

- The recent rise in violence against healthcare professionals across India has brought the need for stronger legal protection into sharp focus.
- The discussion on whether a Central law is necessary has resurfaced, especially after multiple incidents of violence, including the recent brutal attack on a trainee doctor.
- The article delves into the arguments for and against the need for a Central law to protect healthcare workers.

## Rising Violence Against Healthcare Workers

- **Increasing Incidents:** Violence against healthcare workers has been on the rise in India for the last two to three decades, often triggered by factors such as unexpected deaths, miscommunication, or high medical costs.
- **Root Causes:**
  - **High Expectations:** Patients and their families expect immediate and often unrealistic outcomes, which leads to frustration when those expectations are unmet.
  - **Healthcare Costs:** The high out-of-pocket expenditure in India's healthcare system adds to the pressure, often resulting in emotional outbursts against healthcare workers.
  - **Lack of Infrastructure:** The healthcare system's inefficiencies, especially in public hospitals, contribute to long wait times and limited access to quality care, further exacerbating tensions.
- **Need for Better Infrastructure and Security Measures**
  - **Workforce Overload:** Many hospitals, especially government facilities, rely heavily on interns and postgraduate medical students, who are often overworked and emotionally exploited.
  - **Security Protocols:** Strengthening security in hospitals is essential. Recommendations include:
    - Installing CCTV cameras.
    - Ensuring the presence of accountable security personnel.
    - Establishing hospital protection committees to oversee the safety of healthcare workers.
  - **Communication and Mental Health Support:** Improved communication between doctors and patients is crucial to avoid misunderstandings, while addressing the mental health of medical staff, especially postgraduate students, is also vital.
- **Existing Laws and the Need for a Central Legislation**



- **State-Level Laws:** Around 25 states have enacted laws aimed at protecting healthcare professionals, but there are very few convictions under these laws, signalling a gap in enforcement.
- **Previous Attempts:** In 2019, the central government drafted the 'Healthcare Service Personnel and Clinical Establishments (Prohibition of violence and damage to property) Bill'. However, it was not passed due to concerns over whether existing state and central laws were sufficient.
- **Central vs. State Jurisdiction:** Health and law enforcement are primarily state subjects under India's federal system. However, advocates for a Central law argue that national legislation would standardise the protection of healthcare workers across the country and provide much-needed enforcement consistency.
- ➔ **Supreme Court's Involvement and the IMA's Viewpoint**
  - **Supreme Court's Task Force:** The Supreme Court has established a national task force to examine the safety of healthcare workers, focusing on improving working conditions and security measures. However, this initiative does not address the need for a deterrent law.
  - **Lack of Convictions:** Despite the existence of state laws, there have been very few convictions related to violence against healthcare workers, raising questions about the effectiveness of these laws in preventing such incidents.
- ➔ **The Case for a Central Law**
  - **Deterrent Effect:** A well-drafted Central law, with strong provisions linked to the Indian Penal Code and the Code of Criminal Procedure, could act as a significant deterrent to violence against healthcare professionals.
  - **Kerala's Example:** Kerala's recent amendments to its healthcare protection laws, following the tragic death of a medical professional, have shown that stringent laws backed by swift police action can reduce the incidence of violence.
  - **Balancing Stakeholder Rights:** A Central law must strike a balance between protecting healthcare workers and ensuring that patient rights are not compromised. Strengthening the public health system and reducing out-of-pocket expenditure are equally important to address the root causes of violence.

## **Conclusion**

While improving hospital infrastructure, enhancing security measures, and increasing public healthcare spending are critical, a Central law could provide the legal framework needed to ensure the safety of healthcare professionals across the country.

## TRAFFIC

The TRAFFIC, the Wildlife Trade Monitoring Network, is a leading non-governmental organisation working on wildlife trade in the context of both biodiversity conservation and sustainable development.

- It is a joint program of World Wildlife Fund (WWF) and the International Union for Conservation of Nature (IUCN).
- It aims to ensure that trade in wild plants and animals is not a threat to the conservation of nature.
- It was established in 1976 and has developed into a global network, research-driven and action-oriented, committed to delivering innovative and practical conservation solutions.
- **Headquarters:** Cambridge, United Kingdom
- Illegal wildlife trade is one of the main reasons that many species are endangered.



**TRAFFIC**<sup>®</sup>  
the wildlife trade monitoring network

<b>Founded</b>	1976
<b>Headquarters</b>	Cambridge, United Kingdom
<b>Mission</b>	Ensure that trade in wild plants and animals does not threaten the conservation of nature.
<b>Founding Partners</b>	World Wildlife Fund (WWF) and the International Union for Conservation of Nature (IUCN)

<b>Focus Areas</b>	Biodiversity Conservation Sustainable Development
<b>Governance</b>	TRAFFIC Committee (WWF and IUCN members) Cooperation with the CITES Secretariat
<b>Staff Expertise</b>	Biologists, conservationists, academics, researchers, communicators, investigators
<b>Global Network</b>	Research-driven, action-oriented global network
<b>Key Functions</b>	Evolution of wildlife trade treaties Expertise on urgent species trade issues (tiger parts, elephant ivory, rhino horn) Addressing large-scale commercial trade in timber and fisheries products
<b>TRAFFIC in India</b>	Programme Division of WWF-India since 1991 Based in New Delhi Collaborates with national and state governments to curb illegal wildlife trade

**UPSC Prelims PYQ : 2020**

**Ques : If a particular plant species is placed under Schedule VI of The Wildlife Protection Act, 1972, what is the implication?**

- (a) A licence is required to cultivate that plant.
- (b) Such a plant cannot be cultivated under any circumstances.
- (c) It is a Genetically Modified crop plant.
- (d) Such a plant is invasive and harmful to the ecosystem.

**Ans: a)**