

# DAILY PT POINTERS

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## The Hindu-Governance(GSII)-Page-1

# PM to meet unions of govt. employees

**The Hindu Bureau**  
NEW DELHI

For the first time in 10 years, Prime Minister Narendra Modi will meet staff representatives of the Joint Consultative Machinery (JCM), a platform for Central government employees' unions, and the Personnel Ministry.

The Personnel Ministry has sent an invitation to JCM secretary Shiv Gopal Mishra and other members of the platform's staff to meet the Prime Minister at his official residence on Saturday. The issue of restoring the old pension scheme (OPS) is likely to come up at the meeting.

Mr. Mishra told *The Hindu* that the staff representatives had sought an audience with Mr. Modi. "We are in touch with the go-

vernment on several issues. We wanted to meet the Prime Minister too on our issues," Mr. Mishra said, adding that the restoration of the OPS is an important issue that is not yet resolved. "We will take it up with the Prime Minister," he said.

The unions of employees of the Union government and Central PSUs had earlier decided to go on an indefinite strike from May 1. It was deferred following discussions with the government.

### List of demands

They have been demanding restoration of the OPS and stopping privatisation and corporatisation of PSUs. The employees have also been asking the Centre to fill vacant posts in various departments.

- The scheme of Joint Consultative Machinery is a platform for constructive dialogue between the representatives of the staff side and the official side for peaceful resolution of all disputes between the Government as employer and the employees.
- The scheme was introduced in 1966 with the objectives of promoting harmonious relations and securing the greatest measure of cooperation between the Central Government as the employer and the employees in matters of common concern and with the object of further increasing the efficiency of the public service combined with the well being of those employed

The Hindu –Science and Tech(GSIII)-Page 6

## IIA finds a novel way to explore the sun's secrets by studying solar magnetic fields

**The Hindu Bureau**  
BENGALURU

Astronomers at the Indian Institute of Astrophysics (IIA) have found a new way to probe deeper into the sun's secrets by studying the magnetic fields at different layers of the solar atmosphere. The astronomers have done this using data from IIA's Kodaikanal Tower Tunnel Telescope.

According to the Department of Science and Technology, the solar atmosphere is composed of various layers interconnected through magnetic fields. The magnetic field acts as a conduit to transfer energy and mass from the inner layers to the outer layers, commonly known as the coronal heating problem and is also the prime driver of solar wind. To understand the physical mechanisms behind these processes, measurements of magnetic fields at different heights of the solar at-



The solar atmosphere is composed of various layers interconnected through magnetic fields. FILE PHOTO

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mosphere are important.

IIA astronomers have examined an active region (sunspot) with complex features, including multiple umbrae and a penumbra, through simultaneous observations in the Hydro-

gen-alpha and Calcium II 8662 Å lines from the Kodaikanal Tower Tunnel telescope.

The study used data from multiple spectral lines acquired simultaneously, especially the Hydrogen-alpha line, at 6562.8 Angstroms (Å), to infer the magnetic field's stratification at various heights of the solar atmosphere, taken from the Tunnel Telescope at the Kodaikanal Solar Observatory, which IIA operates.

The primary mirror (M1) of the 3-mirror setup at the Tunnel Telescope tracks the Sun, the secondary mirror (M2) redirects sunlight downwards, and the tertiary mirror (M3) makes the beam horizontal

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## 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



(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

#### 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

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**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).

**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.

**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 polarized.

**INSAT-3DS:** ISRO launched the meteorological satellite INSAT-3DS on February 17 onboard a Geosynchronous Satellite Launch Vehicle (GSLV).

## The Hindu-Disaster Management(GSIII)-Page 16

### NDMA to monitor 189 high-risk glacial lakes to prevent disasters

Lake-lowering measures among proposed steps; National Glacial Lake Outburst Floods Risk Mitigation Programme was approved on July 25

Jacob Koshy  
NEW DELHI

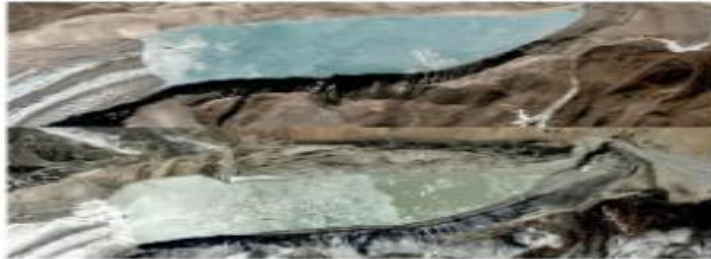
Following disasters inflicted by overflowing glacial lakes in the Himalayas, the National Disaster Management Authority (NDMA) has finalised a list of 189 “high-risk” glacial lakes for mitigation measures to reduce the risk emanating from them.

Some of the proposed steps include constituting teams to investigate these lakes and attempt “lake-lowering measures”, which are done to buffer against any overflow, and mitigating potential damage in downstream States.

Last October, the South Lhonak Lake in Sikkim, a glacier-formed lake, overflowed and inundated several parts of the Northeastern State killing at least 40 people and destroying the Chungthang dam.

The National Glacial Lake Outburst Floods Risk Mitigation Programme was approved by the Centre on July 25.

There are nearly 7,500 glacial lakes in the Hima-



Satellite views of Lhonak Lake before (top) and after it burst its banks on October 3, 2023. ISAR TECHNOLOGIES

layan mountain ranges located in India and some of them are being monitored through remote sensing. However, fully assessing their impact is only possible with site visits, which is difficult owing to inhospitable terrain. There are only a few months in a year – July to September – when expeditions can be mounted to access them.

This week, for instance, the Arunachal Pradesh State Disaster Management Authority has sent two teams to six high-risk glacial lakes in the Tawang and Dibang Valley districts

to study them. The Central Water Commission in an October 2023 report stated that 902 glacial lakes and waterbodies are being monitored via satellite.

The programme aims at detailed technical hazard assessments, installing automated weather and water level monitoring stations, and early warning systems at the lakes and in downstream areas.

So far, 15 expeditions have been conducted, including six in Sikkim, six in Ladakh, one in Himachal Pradesh and two in Jammu and Kashmir.

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### Do you know?

There are nearly 7,500 glacial lakes in the Himalayan mountain ranges located in India and some of them are being monitored through remote sensing. However, fully assessing their impact is only possible with site visits, which is difficult owing to inhospitable terrain. There are only a few months in a year — July to September — when expeditions can be mounted to access them.

The Hindu-Governance(GSII)-Page 16

## Centre announces simplified norms for seaplane operations

**The Hindu Bureau**  
NEW DELHI

The Civil Aviation Ministry on Thursday released new rules for seaplanes, allowing non-scheduled operators to provide such services.

The rules have also been simplified with an aim to encourage seaplane operations under the regional air connectivity scheme UDAN, which has so far seen poor response.

Under the relaxed norms of the Directorate General of Civil Aviation (DGCA), there will be no need for a waterdrome licence, and compliance requirements have also been reduced. Pilots with a commercial pilot licence (CPL) can now qualify as seaplane-rated pilots.

Non-scheduled operators are entities other than

commercial airlines that have to operate their fleet as per a published schedule of flights.

“We urge States to identify waterbodies and we will find ways to activate them,” Vumlunmang Vualnam, Secretary, Civil Aviation Ministry, said.

The guidelines define responsibilities of various stakeholders such as State governments, seaplane operators, and the Centre.

“Seaplane hold the opportunity of revolutionising connectivity in regions where conventional airport infrastructure is not feasible due to obvious land constraints,” Civil Aviation Minister K. Ramohan Naidu said.

He said seaplanes could also open opportunities for economic growth by providing new avenues for tourism.

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# What is vaccine-derived polio?

Privali Prakash

### EXPLAINER

**The story so far:** A two-year-old child in Tikrikilla, Meghalaya, has been infected with vaccine-derived polio. This is not a case of wild poliovirus, but an infection that presents in some people with low immunity, the Union Health Ministry said on Tuesday, August 20.

“The two-year-old child from Tikrikilla was found to have symp-



Oral polio drops being administered. FILE PHOTO

cause the disease again and circulate in areas where either immunisation is low, where immunocom-

ated the virus using formaldehyde and injected it into the muscles of test subjects. This inactivated polio vaccine (IPV) induced systemic immunity (relating to the blood, brain, and all other organ systems) in the subjects.

After Salk, Albert Sabin developed another vaccine that contained live polio strains weakened by growing them serially in macaque cells, making them unfit for human infection. Since this vaccine contained the live virus, it had to be administered through its natural mode of infection – in this

virus outbreaks are due to the type 2 virus present in oral polio vaccines. VAPP constitutes 40% of cases caused by the type 2 oral polio vaccine. Many cases of VAPP from the type 3 virus also occur in countries using OPV.

The Indian government does not count VAPP as polio since these cases are sporadic and pose little or no threat to others, even though the number of VAPP-compatible cases showed a rising trend.

After the global switch from trivalent (containing all three variants)

- A vaccine-derived poliovirus (VDPV) is a strain related to the weakened live poliovirus contained in oral polio vaccine (OPV). If allowed to circulate in under- or unimmunized populations for long enough, or replicate in an immunodeficient individual, the weakened virus can revert to a form that causes illness and paralysis.
- OPV is a safe and effective vaccine that contains a combination of one, two, or three strains of live, weakened poliovirus, and is given in the form of oral drops. OPV has been instrumental in eradicating wild polioviruses around the world, including in the United States, because it stops the spread of the virus by inducing immunity in the gut. VDPVs emerge when not enough people are vaccinated against polio, and the weakened strain of the poliovirus from OPV spreads among under-immunized populations.
- The first successful polio vaccine for poliovirus was made by Jonas Salk in the early 1950s. Salk inactivated the virus using formaldehyde and injected it into the muscles of test subjects.

## The Hindu-IR(GSII)

### 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.

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## PIB-Science (GSIII)

President's Secretariat

### President of India presents Rashtriya Vigyan Puraskar –2024

Posted On: 22 AUG 2024 2:20PM by PIB Delhi

The President of India, Smt. Droupadi Murmu presented the Rashtriya Vigyan Puraskar-2024 at an award ceremony held at Gantantra Mandap, Rashtrapati Bhavan today (August 22, 2024).

In the first edition of the Rashtriya Vigyan Puraskar, 33 awards were presented to distinguished scientists in four categories - Vigyan Ratna, Vigyan Shri, Vigyan Yuva, and Vigyan Team.

The Vigyan Ratna Award, given to the scientists who have made lifetime contributions in any field of Science and Technology, was presented to Prof. Govindarajan Padmanabhan, a pioneer of molecular biology and biotechnology research in India. The Vigyan Shri Awards, given to the scientists who have made distinguished contributions to Science and Technology, were presented to 13 scientists for their path-breaking research in their respective domains. The Vigyan Yuva-SSB award, given to recognize scientists who have exceptionally contributed to any field of science and technology, was given to 18 scientists for their significant contribution in the areas spanning from the study on the warming of the Indian Ocean and its consequences, to the development of indigenous 5G base station and communication and precision tests of quantum mechanics. The Vigyan Team Award, given to a team of 3 or more scientists for making ground-breaking research contributions in any field of science and technology, was given to the team of Chandrayaan-3 for the successful landing of Chandrayaan-3 lander near the south pole of the moon.

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