



DAILY PT POINTERS

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CONTRIBUTOR: THE WALL STREET JOURNAL

Telangana decision brings divisions to the fore
INTERNATIONAL US economy growth faster than forecast in Jan survey
POLITICS The implications of the decision

Govt looks to address external concerns
Investment needed for hardware, measures being considered to attract more FDI, says Chidambaram

STRESS FACTORS

Expert panel clears Covaxin for emergency use in 2-18 age group
World Bank's top 100 countries to be included in the recovery index for the DCT

THE HINDU

Retail inflation falls to 4.35%; industrial output growth up
Don't read too much into the economic data, economists

for humanitarian to Afghanistan

The Indian EXPRESS
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KARNATAKA GOVT FORMATION
DK does not blink, Cong says new cabinet in 48 to 72 hours

L-G can destabilise elected MCD with power to nominate aldermen, says SC

Tihar officer who 'favoured' Jain faced probe in excise case

Manipur SC says HC order 'absolutely wrong'

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The Hindu: Space (GSIII)-Page 1

Four IAF pilots named as possible Gaganyaan crew

Announcement was made in the presence of PM Modi at Vikram Sarabhai Space Centre; they have been undergoing training in Russia and at ISRO Astronaut Training Facility in Bengaluru

Tilki Rajwi
THIRUVANANTHAPURAM

India on Tuesday announced the names of the four astronaut-designates for the Gaganyaan human spaceflight mission, planned for launch in 2025.

The names of the Indian Air Force (IAF) pilots – Group Captain Prasanth Balakrishnan Nair, Group Captain Ajit Krishnan, Group Captain Angad Pratap and Wing Commander Shubhanshu Shukla – were revealed for the first time in the presence of Prime Minister Narendra Modi during his visit to the Vikram Sarabhai Space Centre (VSSC) here.

The final crew for the mission will be picked from among the four.



The flagbearers: Prime Minister Narendra Modi bestows 'astronaut wings' to the astronaut-designates for the mission, at the Vikram Sarabhai Space Centre in Thiruvananthapuram on Tuesday. ANI

Shortlisted through a rigorous selection process, they have been undergoing training in various aspects of space flight, initially in Russia, and later at the Astronaut Training Facility established by ISRO in Bengaluru.

The Prime Minister presented the four with 'astronaut wings' on the occasion.

According to ISRO, the Gaganyaan programme is designed to demonstrate indigenous capability to undertake human space

India will have its own space station by 2035, says PM

THIRUVANANTHAPURAM
Addressing ISRO scientists at the Vikram Sarabhai Space Centre, Prime Minister Narendra Modi said India will have its own space station by 2035. He said the nation would once again go to the moon and bring back samples from the lunar surface. » **PAGE 10**

flight mission to Low Earth Orbit (LEO). The mission is expected to pave way for a "sustained Indian human space exploration programme" in the long run.

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- Gaganyaan project envisages demonstration of human spaceflight capability by launching crew of 3 members to an orbit of 400 km for a 3 days mission and bring them back safely to earth, by landing in Indian sea waters.
- The Launch Vehicle Mark-3 (LVM3) is the launch vehicle for the Gaganyaan mission.

The Hindu: S&T (GSIII)-Page 12

Why science needs sustainable funding

How much do developed countries spend on research and development? Has the Ministry of Science and Technology consistently underutilised its budget? How much does the private sector contribute to India's R&D funding?

EXPLAINER

What's the deal?

The story so far: The 2024 theme for National Science Day, which India celebrates every year on February 28, is "Science for Sustainable Development". Science and technological developments are key drivers of India's journey towards becoming a developed country by 2047. India is committed to making this progress through sustainable means, as evidenced by its commitments under the Paris Agreement, participation in global forums for sustainable development, and emphasis on this year's theme for Science Day. The role of science in driving sustainable development doesn't need emphasis, but any commitment to science is incomplete without utilizing resources optimally. For science to transform India, it has to be sustainably and consistently funded.

How much is India spending on research and development?

Funding for fundamental research in India is amongst the world's lowest, particularly for a country with high science and technology ambitions. In the recent past, India's research and development (R&D) expenditure has dropped to the current 0.64% of GDP from 0.8% in 2008-2009 and 0.7% in 2017-2018. This reduced expenditure is worrying considering government agencies themselves have stated several ways to double the spending.

The 2003 Science, Technology and Innovation Policy noted that "increasing Gross Expenditure on R&D (GERD) as % of GDP has been a national goal for some time". The JN NERD Economic Survey estimated that in its eighth session, the government had set a target of 1% of GDP for R&D spending despite the government being cognizant of its need to increase its own R&D, but may have been a lack of

The status of R&D expenditure in India

The 2024 theme for National Science Day "Science for Sustainable Development" focuses on sustainable science to improve our lives — to ensure a sustainable future for our planet — to ensure a sustainable, and consistently funded, future.

Chart 1: The distribution for gross value added expenditure on R&D in India (left axis) and the gross domestic expenditure on R&D as a share of GDP (right axis)

Year	GVA Expenditure on R&D (₹ crore)	R&D Expenditure (% of GDP)
2008-09	~10000	0.8%
2009-10	~10000	0.8%
2010-11	~10000	0.7%
2011-12	~10000	0.7%
2012-13	~10000	0.7%
2013-14	~10000	0.7%
2014-15	~10000	0.7%
2015-16	~10000	0.7%
2016-17	~10000	0.7%
2017-18	~10000	0.7%
2018-19	~10000	0.7%
2019-20	~10000	0.7%
2020-21	~10000	0.7%
2021-22	~10000	0.7%
2022-23	~10000	0.7%
2023-24	~10000	0.64%

Chart 2: The share of the sectors in national expenditure on R&D in various years (percentage of total)

Year	Private sector (%)	Public sector (%)	Higher education sector (%)
2008-09	~10	~90	~0
2009-10	~10	~90	~0
2010-11	~10	~90	~0
2011-12	~10	~90	~0
2012-13	~10	~90	~0
2013-14	~10	~90	~0
2014-15	~10	~90	~0
2015-16	~10	~90	~0
2016-17	~10	~90	~0
2017-18	~10	~90	~0
2018-19	~10	~90	~0
2019-20	~10	~90	~0
2020-21	~10	~90	~0
2021-22	~10	~90	~0
2022-23	~10	~90	~0
2023-24	~10	~90	~0

THE GIST

Funding for fundamental research in India is amongst the world's lowest, particularly for a country with high science and technology ambitions in the recent past. India's research and development (R&D) expenditure has dropped to the current 0.64% of GDP from 0.8% in 2008-2009 and 0.7% in 2017-2018.

To make progress in the development sector, India needs to spend more to scale R&D than developed countries spend to sustain their GDPs. This is the foundation of the demand to spend at least 1% of the GDP on R&D annually and 200%.

In the recent Budget, Finance Minister Nirmala Sitharaman provided every indication that the government would like R&D expenditure to include more centralised funds from the private sector.

- National Science Day is celebrated every year on February 28 to commemorate the discovery of the 'Raman Effect' and raise awareness about the importance of science and its role in improving the lives of people.
- The National Science Day also acknowledges the efforts of the **scientific community** who work in exploring more and more ways by which science can be implemented to make our lives simpler and easier.
- The 2024 theme for National Science Day, which India celebrates every year on February 28, is "Science for Sustainable Development".
- Science and technological developments are key drivers of India's journey towards becoming a developed country by 2047

Do you know ?

Funding for fundamental research in India is amongst the world's lowest, particularly for a country with high science and technology ambitions. In the recent past, India's research and development (R&D) expenditure has dropped to the current 0.64% of GDP from 0.8% in 2008-2009 and 0.7% in 2017-2018.

The Hindu: GS2-Governance

Former SC judge A.M. Khanwilkar is Lokpal Chairperson

Press Trust of India
NEW DELHI

Former Supreme Court judge A.M. Khanwilkar was appointed as the Chairperson of the anti-corruption ombudsman Lokpal on Tuesday, nearly two years after the post fell vacant.

The Lokpal has been working without its regular chief after Justice Pinaki Chandra Ghose completed his term on May 27, 2022.

Justice Pradip Kumar Mohanty, a judicial member of the Lokpal, is currently the Acting Chairperson.

Justice Khanwilkar retired from the Supreme Court in July 2022.

A communique issued by the Rashtrapati Bhavan said that retired Justices Lingappa Narayana Swamy, Sanjay Yadav and Ritu Raj Awasthi have been ap-



Justice A.M. Khanwilkar

pointed as judicial members of the anti-corruption ombudsman.

Sushil Chandra, Pankaj Kumar and Ajay Tirkey will be non-judicial members, the communique said. These appointments will take effect from the dates they assume charge of their respective offices, it added.

Apart from a Chairperson, the Lokpal can have eight members, four judicial and four non-judicial.

- The Lokpal and Lokayuktas Act came into force on 16th January, 2014 and has been amended once in 2016 since its notification.
- The Lokpal is the first institution of its kind in independent India, established under the Lokpal and Lokayuktas Act 2013 to inquire and investigate into allegations of corruption against public functionaries who fall within the scope and ambit of the above Act.
- The Lokpal has jurisdiction to inquire into allegations of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union Government under Groups A, B, C and D. Also covered are chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Union or State government. It also covers any society or trust or body that receives foreign contribution above ₹10 lakh. Lokpal will have power of superintendence and direction over any central investigation agency including CBI for cases referred to them by the Lokpal.

HEADLINES OF THE DAY

Indian Express: S&T (GSIII)

Explained: Google DeepMind's Genie, an AI model that creates virtual worlds from image prompts

This AI model could soon enable users to create their own video games. Here's why this experimental model is revolutionary.



- Google DeepMind has just introduced Genie, a new model that can generate interactive video games from just a text or image prompt. That too without any prior training on game mechanics (which are essentially rules, elements, and processes that make up a game).
- Genie is a foundation world model that is trained on videos sourced from the Internet.
- The model can “generate an endless variety of playable (action-controllable) worlds from synthetic images, photographs, and even sketches.”

HEADLINES OF THE DAY

PIB: Places in news (GSI)

Prime Minister's Office

 

PM Narendra Modi and PM Pravind Jugnauth of Mauritius to jointly inaugurate new Airstrip and a Jetty at the Agalega Island in Mauritius on 29th February

Six community development projects at Agalega Island to also get inaugurated

Projects will strengthen connectivity of Agalega with mainland Mauritius and strengthen maritime security

- Prime Minister Shri Narendra Modi and Prime Minister of Mauritius, H.E. Mr. Pravind Jugnauth, will jointly inaugurate the new Airstrip and St. James Jetty along with six community development projects at the Agalega Island in Mauritius on 29 February 2024 at 1 PM via video conferencing.
- **Agalega Islands**, two-island dependency of Mauritius, in the western Indian Ocean. It consists of North Island and South Island.
 - **Mauritius**, island country in the Indian Ocean,
- Copra and coconut oil are produced and exported



HEADLINES OF THE DAY

Air: Places in news (GSI)

Peru Declares Health Emergency Amidst Dengue Surge; Over 31,000 Cases Reported

In Peru, the government has declared a health emergency due to the rapidly rising cases of dengue fever across the South American country. Local media reported that the health emergency was declared in 20 of Peru's 25 regions. Peru's Health Minister Cesar Vasquez said yesterday that more than 31,000 cases of dengue have been recorded till date, including 32 deaths.

The move will enable the government to transfer funds more quickly to affected regions and more easily deploy doctors and nurses.

Peru has been experiencing high temperatures and heavy rains since 2023 due to the El Nino weather pattern, which has warmed the seas off the country's coast and helped mosquito populations grow.



Peru

Lima – the capital.

It is located on the western side of South America

It shares borders with five countries: Ecuador and Colombia to the north, Brazil to the east, Bolivia to the southeast, and Chile to the south. Its western border lies along the Pacific Ocean.

This region includes the towering peaks of the Andes Mountains, among them Huascarán, the highest peak in Peru.

This region is also home to Lake Titicaca, which Peru shares with Bolivia.

