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New Zealand,
India should
join security
efforts: Luxon

Suhasini Haidar
NEW DELHI

New Zealand and India “bookend” the Indo-Pacific region, and should work together on building security in the region, New Zealand Prime Minister Christopher Luxon said in an exclusive interview to *The Hindu*.
Mr. Luxon, the chief guest at the Raisina Dialogue here this week, met with Prime Minister Narendra Modi to announce a defence agreement and re-launch talks for a trade agreement. Responding to Mr. Modi voicing concerns about “illegal activities” by “anti-India” Khalistan supporters, Mr. Luxon stressed that New Zealand was a multicultural country and a “liberal democracy”, and did not want to “import politics” into its immigrant community.

INTERVIEW ON
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+ *Tryst with gravity*



Sunita Williams, who spent nine months stuck in space with fellow astronaut Butch Wilmore, being helped out of a SpaceX capsule that landed o the Florida coast on Wednesday. ANI (SEE ALSO PAGES 4, 16)

V-P calls for debate on freebies, policy on efficient use of public investments

The Hindu Bureau
NEW DELHI

Criticising the culture of “freebies”, Vice-President and Rajya Sabha Chairman Jagdeep Dhankhar on Wednesday called for a Parliament debate on it, saying there was an urgent need for a national policy so that all investments of the government were used in a structured manner.
His remarks came after Samajwadi Party MP and floor leader Ramgopal Yadav, during Zero Hour, demanded that the MP Local Area Development Scheme (MPLADS) funds should be increased to ₹20 crore a



Jagdeep Dhankhar

year from ₹5 crore.
“On placatory mechanisms, on appeasement, which is often known as freebies, this House needs to deliberate... Because the country grows only with capex being available. Electoral process is such that these have become electoral allurements and thereaf-

ter the governments that came in saddle found themselves very uncomfortable, so uncomfortable that they wanted to revisit their thoughts. There is an urgent need for a national policy so that all investments of the government in any form are used in a structured manner for larger good,” Mr. Dhankhar said.
Subsidies, if required, he said, should be direct as was the case in developed countries. “I checked with the U.S. mechanism. The U.S. has one-fifth of the farm households as our country, but the average income of a U.S. farm household is more than the gen-

eral income of a U.S. household, and that is because the subsidy to the farmer is direct, transparent, without intermediary,” he said. If the leaders of both sides agree, there could be a discussion, he said, adding this was a very serious issue.
Mr. Yadav said MLAs in Uttar Pradesh got ₹5 crore for constituency development and those in Delhi had ₹10 crore at their disposal. The cost of construction had risen in the past two decades, making the current outlay inadequate. He demanded that MPLADS funds be exempted from GST.

A delimitation red flag — the lessons from J&K, Assam

As the debate on a fresh delimitation of legislative constituencies heats up, a number of concerns have been aired along with their solutions, including the very sensible proposal to freeze the number of parliamentary seats but increase the number of Assembly seats in States whose population has grown. That is the more democratic formula since Members of the Legislative Assembly are the first port of call for their constituents whereas Members of Parliament represent their constituents on national policy (broadly speaking).

There are, too, other ways to accommodate the well-founded fears of the southern States that an expanded imbalance of power that a fresh delimitation will create. For example, Rajya Sabha seats could be redistributed in equal measure to the northern, central, eastern, western and southern States, which are already grouped into these five geographic zones, in theory each with its own zonal council. Most of these have not met since 2023, with the exception of the Western Zonal Council, which met in February 2025, while the Southern Zonal Council has not met since 2022, though a meet was planned in Chennai in January 2025.

Naysayers will argue that the zonal councils were intended to settle disputes between States while the Inter-State Council could deal with both State-State and Centre-State relations. In practice, however, the councils take up a series of issues, from Aadhaar to good governance. Given their range, perhaps they need to be freed from the mantle of the Home Ministry. Zonal councils could coordinate with the Union executive through the now dormant Inter-State Council (according to its website, it last met in 2016), which requires greater authority as well as permanence.

The case of Jammu and Kashmir

If combined, the two proposals above would deepen both electoral representation and federalism. But there are other potential pitfalls for the delimitation in 2026 that require guarding against. Two State-level delimitations have been recently carried out: the first was in Jammu and Kashmir in 2022, and the second in Assam in 2023. Each emits warning signals for the exercise in 2026.



Radha Kumar

is a historian and policy analyst, whose most recent book is ‘The Republic Relearn: Renewing Indian Democracy, 1947-2024’

Apart from population bias, there is another danger that arises from delimitation — the communal demarcation of electoral constituencies

The Jammu and Kashmir delimitation was widely criticised by all the political parties in this former State, barring the Bharatiya Janata Party (BJP). Numerically, its addition of six seats for Jammu and one seat for the valley gave a Jammu elector’s vote the weight of 1.2 as against one for the Valley elector. It created new constituencies which made no administrative or geographic sense. Indeed, its inclusion of Jammu’s Poonch and Rajouri into the valley’s Anantnag Lok Sabha seat created both administrative and geographic difficulties given that the former are part of the Pir Panjal range, and the latter is in the Jhelum valley.

Worse still, the redrawing of Assembly constituencies suggested that the Delimitation Commission used communal criteria for demarcation. All six of the new constituencies, i.e., Jasrota, Ramgarh, Ramnagar, Vaishno Devi, Padder-Nagseni and Doda West, are Hindu majority.

Further, Muslim majority Kishtwar was turned into a Hindu majority constituency by adding areas of the former Inderwal constituency. Vaishno Devi, Padder and Doda West have electorates as small as 50,000 in comparison to Muslim majority constituencies such as Dooru (1.92 lakh) and Surankote (1.77 lakh). Neither of the three is geographically distinct from other parts of its district.

In Assam

The Assam delimitation followed a slightly different pattern with similar outcomes. The number of Assembly seats was frozen, but the Assam cabinet pre-emptively folded four districts back into the districts from which they had originally been separated, reducing the number of districts from 35 to 31. The merger led to a loss of as many as 10 Muslim majority constituencies – South Salmara, Barpeta (two seats), Darrang, Nagaon, Dibrugarh, Sibsagar, Jorhat, Hailakandi and Karinganaj – while Hindu and tribal seats increased. As in Jammu and Kashmir, the Assam delimitation also created constituencies of a vastly different population size.

In other words, population bias is not the only danger that opponents of the delimitation exercise in 2026 should fear. As the Jammu and Kashmir and Assam examples suggest, recent delimitation commissions have not hesitated to

create small population constituencies alongside large population ones when it has served the communal purpose of further marginalising minorities. Is there any reason to believe that the same tactic will not be deployed during the delimitation in 2026?

Danger of polarisation

Surprisingly, the Opposition has not focused on this danger as yet. It should. All the Opposition-ruled States have large minority populations, mostly Muslim. True, regional identity outstrips communal identity in most – for example, the majority of Bengali or Tamil Hindus, Muslims and Christians voted for their relatively secular regional party, respectively, namely, the Trinamool Congress and the Dravida Munnetra Kazhagam, in previous Assembly and parliamentary elections. But there is no guarantee that this non-communal voting pattern will continue. On the contrary, the communal demarcation of constituencies is likely to polarise voters even in the southern States. It certainly had that impact in Jammu and Assam, where almost all the new constituencies voted for the BJP.

We tend to believe that the Union administration’s policies in border States will not be replicated in the heartland. That used to be true, but is no longer so. The use of draconian legislation against dissent used to be most common in conflict areas, especially on the borders; it has now spread across the country. The maltreatment of minorities has similarly multiplied.

The power imbalance between the large northern States and the rest that will result from a purely population-based delimitation is, undoubtedly, a clear and present danger. But it should not be allowed to overshadow the other clear and present danger – of communal demarcation of electoral constituencies. Each threatens the unity of this country in a different way. The first step divides the more developed States from the less developed States by further reducing the influence of the more developed States in the union. The second step divides the people by religion. Together, step one and step two constitute a formidable attack on the foundations of our pluralist federation. They must be halted.

Telecom tribunal reforms to handle data protection pleas

In early January this year, the Ministry of Electronics and Information Technology (MeitY) released the draft Digital Personal Data Protection Rules, 2025 (Rules) under the Digital Personal Data Protection Act, 2023 (Act). Several criticisms of this draft have emerged, which include the Union government’s discretion to appoint members to the Data Protection Board (DPB or Board). Since the DPB has quasi-judicial functions, the control of the executive over appointments to the DPB have raised concerns on the separation of powers and the independence of the DPB.

The Act and draft Rules also state that appeals from the DPB’s decisions will be filed in digital form before the Telecom Disputes Settlement and Appellate Tribunal (TDSAT). The TDSAT must dispose of appeals within six months. The feasibility of this dispute resolution mechanism is questionable. However, there are three institutional reforms that will equip the TDSAT to handle appeals from the DPB. These are the appointment of a technical member with expertise in data protection; increased capacity to swiftly dispose of appeals, and, technological updates to process digital filings.

Need for a specialist

First, there must be a technical member with expertise in data protection on the TDSAT. Tribunals are seen as better equipped to handle sector-specific matters, since they have technical members with sectoral expertise. Section 14C of the Telecom Regulatory Authority of India Act, 1997 states that a member of the TDSAT should have been a Secretary to the Government (or the equivalent thereof) for at least two years or have expertise in “technology, telecommunications, industry, commerce or administration”. The TDSAT is ostensibly equipped to handle appeals under the TRAI Act and the Telecommunications Act, 2023.

However, the increasingly important field of data protection poses a unique set of concerns and challenges, and matters relating to telecommunications are fundamentally distinct



Natasha Aggarwal

is a Senior Research Fellow at TrustBridge Rule of Law Foundation

The Telecom Disputes Settlement and Appellate Tribunal needs to undertake reforms with data protection taking on a more critical role in India’s digital governance framework

from matters concerning privacy and data protection. Such appeals may involve understanding and applying legal provisions on consent, access to personal data, and the processing, storage, transfer and unauthorised use of personal data. These issues are substantially different from issues in the telecom sector, which underscore the need for specialised knowledge in data protection laws and privacy principles. Any such appointment will require an amendment to Section 14C of the TRAI Act to necessitate the appointment of a technical member with expertise in data protection and privacy.

The burden of cases

Second, any move to designate the TDSAT as an appellate tribunal must consider its capacity to hear and dispose of appeals. Interestingly, the TDSAT was not always envisaged to be the appellate body for the DPB. The 2018 Bill on personal data protection proposed the establishment of a new tribunal, consistent with the recommendation of the Justice B.N. Srikrishna committee report to set up a new tribunal or confer powers to an existing tribunal. This changed in 2022, when another Bill proposed that appeals be filed with High Courts. This may have been counterintuitive, as the increasing workload of High Courts has, over time, translated into the proliferation of tribunals.

The TDSAT is, however, combating its own overburdened docket. Of the cases filed between February 2020 to February 2025, there are still 3,448 that are pending. Appeals under the newly enacted Telecommunications Act will also increasingly occupy the TDSAT’s time. In this broader context, it is unrealistic to expect the TDSAT to dispose of appeals as per the Act’s timeline, i.e., within six months. In January 2025, the TDSAT had only one member, a technical person, on its sole bench. The absence of a judicial member is concerning, as the Supreme Court of India has reiterated that judicial members are essential on tribunals’ benches.

It is, therefore, unclear how the TDSAT, with

its current capacity, will keep up with appeals from the DPB timelines in the draft Rules. Increased budget allocations, and, consequently, more benches of the TDSAT, may alleviate some of this caseload.

Updating digital infrastructure

Third, the TDSAT must undertake technological updates to satisfy the provisions of the Act. The draft Rules propose that appeals will be filed in digital form. However, the TDSAT’s website does not instil public confidence, and the TDSAT will, therefore, need to significantly update its website for smoother navigation, increased access to information on pending and completed cases, and efficient systems for digital filings. The TRAI Annual Report for 2023 indicates that the TDSAT has implemented a new “legal cases management system” but the status of implementation and impact of this system on the TDSAT’s caseload is unclear. A robust digital infrastructure is critical to support the complexity, and potentially large volume, of data protection appeals.

The TDSAT must undertake institutional reforms to effectively discharge its functions under the Act. These include the appointment of a technical member with expertise in data protection, increasing its capacity to dispose of appeals, and updating its technological infrastructure. The TDSAT must also be accountable in each of these respects. One way of ensuring accountability is through the publication of annual reports, which should include information on the number of appeals filed, the number of appeals allowed or dismissed, the number of pending appeals, and key issues involved in each appeal. This information should be provided for each type of matter –for example telecom, broadcasting, and data protection. As data protection takes on a more critical role in India’s digital governance framework, the TDSAT’s ability to effectively manage such matters will be key to ensuring the rule of law and protecting individual rights.

The views expressed are personal

Safe from space

NASA did well to follow established protocol in bringing space crew back

In the early hours (IST) of March 19, a SpaceX crew capsule bearing NASA astronauts Sunita Williams, Barry Wilmore, Nick Hague, and Roscosmos cosmonaut Aleksandr Gorbunov splashed down off the Florida coast. Ms. Williams and Mr. Wilmore had returned to the earth after nine months in the International Space Station (ISS), whereas they had originally been expected to spend eight days in the course of testing Boeing’s Starliner crew capsule. The Starliner saga has now concluded, but not before it twisted the reality of human spaceflight out of context, making it sound like a caper rather than a testament to the virtues of protocol. Following Starliner’s launch in June 2024, a series of malfunctions left Ms. Williams and Mr. Wilmore onboard the ISS before the capsule returned empty to the ground in September. The events spurred concerns and indignation in the popular imagination, swirling around a dearth of information both NASA and Boeing were reluctant to fill. As their stay was expanded to nine months, curiosity swelled over their well-being. While this response was natural, speculation fuelled by insufficient updates and political propaganda in the U.S. also fanned misinformation that cast Ms. Williams and Mr. Wilmore as having been “stranded” in space.

If the “stranded” narrative captures the gist of Starliner’s failure, it misses the inalienable contingencies at the heart of human spaceflight. Ms. Williams herself has sought to downplay the use of such terms. Over the years, but especially in the wake of the Challenger and Columbia shuttle disasters in 1986 and 2003, NASA has instituted procedures its personnel are required to follow in a variety of situations where events buck a pre-planned sequence. One is that astronauts on-board malfunctioning spacecraft can move to the ISS, which is always prepared to host such visitors. But many actors framed NASA as weak-willed for sticking to its protocols. When it scrubbed a prior launch attempt of the capsule that returned the astronauts for technical reasons, supporters of U.S. President Donald Trump accused the agency of infirmity rather than acknowledging it as a well-known safety measure. Narratives that overlook the simple fact that two veterans were picked to pilot Starliner’s first crewed flight belie the existence of multiple safety checkpoints and the great lengths to which space agencies go to ensure one unexpected outcome does not spell catastrophe. People, including in India – where concern for Ms. Williams parallels a growing pride in the country’s budding human spaceflight programme owing to her Indian ancestry – would do well to replace notions of triumphalism in space with good old “safety first”. Also, space agencies should realise the importance of clear, timely communication as an integral part of safety protocol.

Torture shadows India’s justice system

The ruling by the King’s Bench Division of the High Court of Justice in London on February 28 in the Sanjay Bhandari extradition case, upholding the fugitive’s defence against extradition, and the proceedings in Tahawwur Rana’s appeal in the U.S. Supreme Court challenging the latter’s extradition are significant judicial developments with larger implications for a constitutional state. Hopefully, these proceedings will spur the government to reinforce India’s claim as a professed defender of human rights by enacting a comprehensive law against torture, enabling it to ratify the United Nations Convention against Torture (UNCAT).

This is because the defence of Bhandari, facing Indian prosecutors for tax evasion and money laundering, and of Rana, whose extradition is sought for his role as a conspirator in the 26/11 Mumbai terrorist attack, is premised essentially on credible evidence of endemic custodial torture in India including its non-ratification of the Convention.

In Bhandari’s case, Justices Holroyde and Steyn, while denying the Indian government’s plea for extradition, found that Bhandari faced a real risk of custodial torture in Indian jails and that India had not ratified the UNCAT.

Rana, in his renewed application for a stay on extradition to India pending the decision of his *Habeas Corpus* petition, has cited the U.K. judgment and its reasoning. Other fugitives from Indian law have also challenged the government’s extradition request on similar grounds, exposing a legal lacuna that has compromised the effectiveness of the country’s criminal justice system.

Although one of the earliest Unilateral Declarations against Torture (Resolution number 32/64) was initiated by India in the UN General Assembly and has ratified several other international treaties against torture, including the Universal Declaration of Human



Ashwani Kumar

Senior Advocate, Supreme Court and Former Union Minister for Law and Justice
Views expressed are personal

Rights (1948) and the International Covenant on Civil and Political Rights (1976), its ambivalence in ratifying the UNCAT is confounding. Articles 51(c), and 253 of the Constitution mandate respect for international treaties to which India is a party (NALSA (2014), *Vishakha* (1997) et al. Regrettably, India finds itself in the company of discredited non-ratifying dictatorial regimes such as Angola, Brunei, Comoros, the Gambia, Haiti, and Sudan.

Judicial abdication

Reflecting a broad political consensus on the outlawing of torture based upon deeply felt popular sensitivities, the Select Committee of the Rajya Sabha had recommended a comprehensive anti-torture legislation as early as 2010. The Law Commission also recommended this in its 273rd Report (2017) and furnished a draft of the proposed law for consideration. The Human Rights Commission of India has similarly supported a stand-alone domestic law against torture.

In an expansive interpretation of Article 21 of the Constitution, the Supreme Court has declared that torture in any form is an unacceptable infringement of the sacrosanct right to dignity and privacy (*D.K. Basu* (1997), *Puttaswamy* (2017), *Nambi Narayanan* (2018), *Romila Thapar* (2018). Even so, in *Ashwani Kumar* (2019), the constitutional court found itself unable to even nudge the government to consider enacting the requisite law, despite its several pronouncements suggesting suitable laws on different subjects (*Tehseen Poonawalla* (2018), *Ranveer Allahabadia* (2025), etc.). The Court failed to appreciate that “a lack of legislation may be contrary to the principle of legal certainty,” that ‘it is the function of the court to provide effective remedy’ and that ‘it is legitimate for constitutional courts to caution legislatures against their failure to introduce what they consider as adequate legislation.” [Opinion No.18 [2015] Consultative Council

of European judges]. Nor did it heed D.Y. Chandrachud’s declaration in *Jeet S. Bisht* (2007) that the doctrine of separation of powers” allows methods to be used to prod and communicate to an institution either its shortfalls or excesses in discharging its duties...” Even as the Court cautioned in *Sharaya Bano* (2017) that constitutional rights can be defeated through inaction, indifference, or ambivalence on the part of other organs of the State, its failure to facilitate the enactment of a comprehensive law against torture is an impermissible abdication of its remit.

In these premises, the extradition cases raise profoundly important questions about a democratic State baulking at fulfilling its compelling constitutional and international obligations. Surely, the price of security cannot be an unconscionable brutalisation of the incarcerated. Whether a democratic State can, by its inaction, demonstrate a brazen disdain for national consensus on a core humanitarian issue is a disconcerting interrogatory. India’s continued failure to enact a credible anti-torture law indicates the impoverishment of our politics and the indifference of political parties as democratic agents, to mediate fundamental policy choices in furtherance of the republic’s core values.

Whether or not the cited cases validate Professor Harold Laski’s profound insight that “ideas must wait upon events that give them birth,” only time will tell. Wiser with the lesson of Guantanamo Bay that torture in State custody irretrievably dents democracy’s soft power, the Indian State is expected to vindicate the republic’s foundational principles by ratifying the Convention. It is time for a nation wedded to democracy and seeking a role as the world’s moral arbiter to recognise that a flailing democracy is antithetical to a resurgent Bharat and that torture in any form is “... a wound in the soul so intangible that there is no way to heal it...”

A regional divide in blue-collar worker migration from India

The share of migrants to the Gulf from the southern States has decreased while those from the north and east have remained high

DATA POINT

Vignesh Radhakrishnan

The latest data indicate a decline in the Gulf countries’ share of India’s inward remittances, while contributions from advanced economies have increased. The data also reveal that States with a declining share of migrants to the Gulf countries are seeing a growing share of India’s inward remittances, while those with higher migrant outflows to the Gulf contribute only a minimal—and further decreasing—share.

These trends have a significant impact on States such as Bihar, Uttar Pradesh, Rajasthan, and West Bengal, which have continued to send large numbers of workers to the Gulf countries over the past decade. In contrast, States such as Tamil Nadu, Kerala, Andhra Pradesh, Telangana, and Punjab — historically major contributors of migrants to Gulf migration — have seen a considerable decline in the number of emigrants.

Table 1 shows the country-wise share of India’s inward remittances for the years 2016-17 and 2023-24. The UAE’s share dropped from 26.9% to 19.2%, Saudi Arabia’s from 11.6% to 6.7%, and Kuwait’s from 6.5% to 3.9%. Conversely, remittances from advanced economies have increased. The U.S.’s share rose from 22.9% to 27.7%, the U.K.’s from 3.4% to 10.8%, Singapore’s from 5.5% to 6.6%, and Canada’s from 3% to 3.8%.

Table 2 presents the State-wise share of India’s inward remittances for the years 2016-17 and 2023-24. The data reveal an increasing share for States such as Maharashtra, which rose from 16.7% to 20.5%, Kerala from 19% to 19.7%, and Tamil Nadu from 8% to 10.4%. In contrast, States such as Uttar Pradesh, which already had a low share of 3.1% in 2016-17, saw a slight decline to 3% in 2023-24. Similarly, West Bengal, Rajasthan, and Bihar maintained consistently low shares,

ranging between 1% and 3% during this period.

Table 3 presents the absolute number of Emigration Clearances (ECs) issued to workers from various States across three periods: 2014-16, 2017-20, and 2021-24. ECs are primarily required by blue-collar workers emigrating from India to the Gulf for employment. **Table 4** provides a State-wise breakdown of ECs issued as a percentage of India’s total in the periods. **Tables 3** and **4** reveal two distinct patterns in migration trends. The number of blue-collar workers emigrating to the Gulf from southern States has declined. Kerala’s numbers dropped from over 82,000 in 2014-16 to 60,000 in 2021-24, Tamil Nadu’s from 1.3 lakh to 78,000, Telangana’s from 69,000 to 35,000 and Andhra Pradesh’s from 87,000 to 55,000. Punjab’s reduced from 94,000 to 39,000.

But, migration from northern and eastern States remained high. The number of workers from Uttar Pradesh stayed above 4 lakh in both periods, while Bihar’s remained over 2 lakh. Although migration from West Bengal and Rajasthan to the Gulf also declined, the scale of reduction was smaller compared to the southern States.

If the State-wise share of ECs issued by India is compared to the State-wise share of India’s total electorate, the skew is even more revealing. The electorate is used as a proxy for the population. Uttar Pradesh formed 15.8% of India’s electorate in 2024 but in the 2021-24 period, the State formed 34% of ECs issued. Similarly, Bihar formed 7.9% of the electorate but formed 17.4% of ECs issued.

When analysed together, the tables raise some critical questions. Are migrants from southern States opting for destinations outside the Gulf, given the relatively lower financial returns as suggested by the declining remittance share? Also, do workers from Bihar and U.P. continue to migrate to the Gulf in bulk despite lower wages due to limited alternative opportunities?

Remittance flows and its implications

The data was taken from the article titled “Changing Dynamics of India’s Remittances – Insights from the Sixth Round of India’s Remittances Survey”, published in the Reserve Bank of India’s March 2025 bulletin. Electorate data was sourced from Election Commission of India’s 2024 statistical reports page. Emigration clearances data for the years 2014 to 2020 were taken from the E-migrate portal and for the latest years from a Rajya Sabha Q&A

Table 1: % of India’s inward remittances in 2016-17 and 2023-24

Country	2016-17	2023-24
U.S.	22.9	27.7
UAE	26.9	19.2
U.K.	3	10.8
Saudi	11.6	6.7
Singapore	5.5	6.6
Kuwait	6.5	3.9
Qatar	–	4.1
Canada	3	3.8
Oman	1	2.5
Australia	–	2.3
Bahrain	0.7	1.5
Hong Kong	-	1.3
Germany	0.6	1
Belgium	0.9	0.4
Malaysia	–	0.6

Table 2: % of India’s inward remittances in 2016-17 and 2023-24

State	2016-17	2023-24
Maharashtra	16.7	20.5
Kerala	19	19.7
T.N.	8	10.4
Telangana	-	8.1
Karnataka	15	7.7
A.P.	4	4.4
Delhi NCT	5.9	4.3
Punjab	1.7	4.2
Gujarat	2.1	3.9
U.P.	3.1	3
Haryana	0.8	2.9
West Bengal	2.7	2.3
Rajasthan	1.2	1.5
Bihar	1.3	1.3
Uttarakhand	0.2	1.1

Table 5: % of ECs issued in 2021-24 vs % of India’s electorate in 2024

State	ECs	Electorate
Maharashtra	1.8	9.5
Kerala	4.8	2.8
T.N.	6.3	6.4
Telangana	2.8	3.4
Karnataka	1.5	5.6
A.P.	4.4	4.2
Delhi NCT	0.4	1.6
Punjab	3.1	2.2
Gujarat	1.0	4.9
U.P.	34.1	15.8
Haryana	0.3	2.1
West Bengal	7.9	7.8
Rajasthan	7.0	5.5
Bihar	17.4	7.9
Uttarakhand	0.9	0.9

Table 3: Absolute number of Emigration Clearances issued to workers from various States

State	2014-16	2017-20	2021-24
Maharashtra	30,489	25,561	22,812
Kerala	82,131	58,799	60,113
Tamil Nadu	1,37,837	1,04,191	78,528
Telangana	69,346	47,067	35,505
Karnataka	21,512	16,290	19,242
Andhra Pradesh	87,589	55,141	55,485
Delhi	5,158	4,191	4,999
Punjab	94,706	65,367	39,241
Gujarat	13,729	12,762	12,660
Uttar Pradesh	4,36,471	3,19,896	4,25,851
Haryana	5,504	4,719	4,221
West Bengal	1,31,990	1,01,654	98,822
Rajasthan	95,356	97,566	87,388
Bihar	2,11,910	1,97,949	2,17,335
Uttarakhand	9,276	8,397	11,143

Table 4: % share of Emigration Clearances issued to workers from various States

State	2014-16	2017-20	2021-24
Maharashtra	2.0	2.1	1.8
Kerala	5.4	4.9	4.8
Tamil Nadu	9.1	8.7	6.3
Telangana	4.6	3.9	2.8
Karnataka	1.4	1.4	1.5
Andhra Pradesh	5.8	4.6	4.4
Delhi NCT	0.3	0.4	0.4
Punjab	6.3	5.5	3.1
Gujarat	0.9	1.1	1.0
Uttar Pradesh	28.8	26.8	34.1
Haryana	0.4	0.4	0.3
West Bengal	8.7	8.5	7.9
Rajasthan	6.3	8.2	7.0
Bihar	14.0	16.6	17.4
Uttarakhand	0.6	0.7	0.9

Text & Context

The market size of India's online gaming industry by 2029

9.1 In \$ billion. The online gaming sector is expected to grow by over two-fold by 2029, dominated by real money games, a report by real money gaming platform WinZO Games and IEIC said. The report said that India's online gaming market revenue was \$3.7 billion in 2024. PTI

Funds approved by the World Bank for Pakistan

102 In \$ million. The World Bank has approved funds for cash-strapped Pakistan for a project that aims to enhance access to microcredit and support the resilience of the microfinance sector, particularly after climate-related shocks. PTI
COMPILED BY THE HINDU DATA TEAM

Is the APAAR ID for students mandatory?

What does APAAR stand for? What are its touted benefits? Are State governments and school authorities pushing for its large-scale adoption? Is the collection of personal data of minors without a backing law constitutional? What are digital activists saying?

EXPLAINER

Aroon Deep

The story so far:

Activists and parents are worried about the rapid push by schools to generate an APAAR ID. APAAR is part of the National Education Policy (NEP), 2020's record-keeping reforms, and while it is voluntary, States and school authorities have pushed students to enrol in it.

What is the APAAR ID?

APAAR stands for Automated Permanent Academic Account Registry. The registry enables what the government describes as the "One Nation, One Student ID", in order to "accumulate and store [students'] academic accomplishments, facilitating seamless transitions between institutions for the pursuit of further education". The APAAR ID is linked to Aadhaar and is stored in the DigiLocker. The registry provides students with standardised data on their marksheets and institutional affiliation. The system is touted as a way for different educational institutes to rapidly process and verify any given student's academic transcripts. APAAR is generated through the Unified District Information System For Education Plus (UDISE+) portal, which contains regional academic statistics and data on schools, teachers and students.

The ID is a key aspect of NEP 2020's mandate to overhaul education data collection for policymaking and analysis. The Education Ministry has been pushing schools affiliated with the Central Board of Secondary Education (CBSE) to get "100% saturation" with respect to students registering for an APAAR ID.

Is APAAR mandatory?

APAAR is not mandatory, according to a document posted on the ID's official site. However, circulars by the CBSE, and FAQ pages that have been published by the government, do not make this clear. The



New IDs: Students at a school in Governor Peta, Vijayawada, Andhra Pradesh on March 15. G.N. RAO

government has instead described the benefits of APAAR to students, such as permanently recording data on "transfer from one school to the other, entrance examination, admission, job application, skilling, upskilling," and so on. While there is no law mandating its use, the CBSE and States like Uttar Pradesh have laid out expectations to schools, under their umbrella, that the ID should be issued to all students. Parents often do not receive any information which clearly spells out that the programme is voluntary. The Union government re-confirmed the optional nature of APAAR in response to a Parliament query in December 2024.

What about data security?

There is still a lack of clarity over the genesis of the APAAR programme. When the Internet Freedom Foundation (IFF)

attempted to file a Right to Information application on its policy documents, the Union government transferred the advocacy's application over 30 times, with no clear answer for months. "The datasets slated to be collected through APAAR enrolment are not limited to just educational certificates and grades, but spread far and wide," the IFF wrote in 2023. Besides, the large-scale collection of data of minors without a law to back it up, the IFF argues, is unconstitutional. Moreover, teachers have questioned the need for APAAR, arguing that the data that APAAR collects is already collated by teachers for the UDISE+, thus duplicating a significant amount of administrative work in schools.

"Additionally, Section 9(3) of the Digital Personal Data Protection Act, 2023 specifically prohibits "tracking or behavioural monitoring of children or

targeted advertising directed at children" by entities," the IFF points out. "Having open Application Programming Interfaces (APIs) and channels of data sharing without any robust safeguards, can expose children's data to third parties who may use it for such purposes. Before it is rolled out, any such interfaces must be secured and legal safeguards put in place. There is an added responsibility on the APAAR framework to ensure cyber security, as the data being processed pertains to children..".

How is an APAAR ID generated?

Teachers and schools are taking the lead in guiding parents to generate an APAAR ID for students. Schools verify a student's "demographic details," that is, their name and date of birth. Parents are then required to fill a consent form, and after another step of authentication by the school, the APAAR ID is generated. Some parents have flagged issues regarding the mismatch of names in school records and identity documents. "The user must correct the inaccurate data and resubmit their request to generate the APAAR ID", an official document states.

Is there a way to opt out?

Parents have the option of writing to schools and opting out of generating the APAAR ID for children in their care. The Software Freedom Law Centre (SFLC) has provided a template on its website which parents, wishing to opt out of the scheme, can edit and send to their schools.

However, recent developments are increasing pressure on parents and school authorities at the local level to ensure APAAR generation. For instance, Uttar Pradesh has warned of "mismatch" between APAAR generation and school enrolment data, in spite of the voluntary nature of the programme, and threatened to de-recognise some madarassas that have not started the process. A digital rights advocate said that so far, parents have had success in persuading schools to opt out by providing relevant paperwork to show the voluntary nature of APAAR.

THE GIST

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What are the different risks and rewards of using UAVs?

Why are Unmanned Aerial Vehicles seen as less of a threat compared to inhabited or piloted fighter jets? How should India evolve as UAVs become integrated into military operations?

Adya Madhavan

The story so far:

The sight of two Chinese Unmanned Aerial Vehicles (UAVs) over waters near Okinawa recently had Japan scrambling to pursue them. Yet, the level of alarm was considerably lower than what it would have been if the People's Liberation Army Air Force's piloted aircraft had been sighted near Japanese airspace. Arguably, in most cases, UAVs are seen as less of a threat than a fighter jet in the same context.

Why are UAVs seen as less of a threat?

Many features factor into this perception. UAVs are, by and large, less dangerous, since even those UAVs that are capable of carrying weapon payloads are still less capable than fighter jets; a large proportion of UAVs are not armed and

serve surveillance and reconnaissance purposes. Additionally, the lack of direct human presence makes them seem like less of an instrument of state power. By virtue of being unmanned, sending a UAV for a reconnaissance mission seems like a low-hanging fruit, where the mission may be just as effective without endangering human life, or risking an expensive inhabited aircraft. Even if UAVs are downed by enemy forces, they seem less of a burden financially.

Are there recent examples of this?

Instances of drones being shot down and met with a relatively restrained response are examples of this. For instance, in 2019 an American surveillance drone was shot down by Iran over the Strait of Hormuz using an Iranian surface-to-air missile. The Iranians called it an act of self-defence as the drone, they said, was within their airspace, while the U.S.

claimed it was flying over international waters. Tensions were already high then, and U.S. President Trump ordered a strike, but it was soon aborted. Although U.S. forces maintained readiness in the region, no overt military retaliation occurred. Similarly, when Russia brought down an American MQ-9 Reaper UAV in 2023 there was no major retaliation.

While this perceived lower level of threat can prevent actions from resulting in conventional warfare, it can also indirectly encourage risk-taking behaviours. While countries would not typically be willing to infiltrate another country's airspace or fly close to foreign territories in a fighter jet, the costs of losing an unmanned aircraft are lower and therefore countries are more willing to utilise them for such missions. Given that UAVs are also met with less drastic forms of retaliation, countries can see them as an easy way to perform actions

that they would not otherwise.

What are the repercussions for India?

The challenge for India is to figure out how to effectively deal with UAVs, especially in relation to its neighbouring countries. In the case of Pakistan, smaller propeller-powered UAVs are often used to transport arms and drugs across the border, with the Pakistani government not taking accountability. India will need to figure out how to deal with such incursions without utilising expensive missiles to bring them down like it did in 2019. Air-to-air missiles like the one India used via a Su-30 in 2019 are far more expensive than the dual-use UAVs they are used to bring down. Pakistan has not taken any major retaliatory actions when India has shot down UAVs. Similarly, Bangladesh recently deployed Turkish Bayraktar TB-2 UAVs near the Indian border for surveillance. In the case of larger fixed-wing UAVs like the Bayraktar TB-2, which is akin to most inhabited military aircraft in terms of size and endurance, in the unlikely event that it ventures into Indian airspace, given the lower associated level of threat, India will have to figure out how to address the issue without risking further escalation.

As UAVs become integrated with military operations, Indian military strategy will have to evolve accordingly.

Adya Madhavan is a researcher at the Takshashila Institution.

THE GIST

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From Page One

Supply of aid to people of Gaza must continue: India

Expressing concern over the worsening situation, External Affairs Ministry says all hostages should be released; Israeli official reiterates call that Hamas be seen as a terrorist organisation

Suhasini Haidar
NEW DELHI

India has expressed concern over the worsening situation in Gaza, where Israel has resumed bombing, calling for the resumption of humanitarian supplies to Palestinians and the release of all hostages taken by the Hamas group during the October 7, 2023 attack on Israel.

The statement by the External Affairs Ministry came even as a high-level delegation from Israel's Foreign Ministry, led by Director-General Eden Bar Tal, was in New Delhi for talks this week.

On Tuesday, Mr. Bar Tal met Foreign Secretary Vikram Misri and Deputy National Security Advisers T.V. Ravichandran and Pavan Kapoor at the National Security Council Secretariat.

"We are concerned at the situation in Gaza," the External Affairs Ministry said in a statement on Wednesday. "It is important that all hostages are released. We also call for supply of humanitarian assistance to the people of Gaza to be sustained," it added.

Since the October 7 attacks and Israel's bombard-



Fleeing danger: Palestinians leave Beit Hanun, heading towards Gaza City following Israeli evacuation orders on Wednesday. AFP

ment of Gaza in which more than 45,000 people have been killed (including about 400 since the January 19 ceasefire), India has issued only a few such statements.

Israel has refused to extend the ceasefire without more hostage releases by Hamas. Many of the 59 remaining hostages are believed to have died. A total of 250 were originally taken on October 7, 2023, when about 1,200 people were killed.

India has refrained thus far, in its statements, from naming Israel for the bombardment, or from naming Hamas. The government has also not designated Hamas as a terror organisation thus far.

reality is that things started 70 years before with the occupation of Palestine and all Palestinians have been living in an open jail in Gaza."

The West Asia conflict was not at the centre of discussions at the three-day Raisina dialogue that concluded on Wednesday, as the Russia-Ukraine conflict dominated the sessions, with more than half the gathered Ministers attending the conference coming from European countries.

However, James Lawless, Minister for Education and Innovation of Ireland, a country that along with Spain has been severely critical of Israeli actions in the aftermath of the terror attacks, said that while there were many differences between the two conflicts, and Israelis have a "history of hardships", that did not give them a "licence to perform whatever actions they wish to their neighbours".

"It's very regrettable that there were more rockets and attacks into Gaza overnight," Mr. Lawless told *The Hindu*. "That's a big setback for the peace process."

He said that a resolution could only come from a two-state solution.

Supreme Court to hear pleas against 2023 law on CEC, EC appointments on April 16

The Hindu Bureau
NEW DELHI

The Supreme Court on Wednesday scheduled a detailed hearing of a challenge to a law giving the Union government a dominant role in the appointments of the Chief Election Commissioner and Election Commissioners on April 16.

A Bench headed by Justice Surya Kant listed the case in mid-April following an oral mentioning made by advocate Prashant Bhushan, who appeared for petitioner-NGO Association for Democratic Reform (ADR).

The case was originally listed before the Bench for hearing on March 19, but placed towards the fag end

This case goes to the very roots of democracy, says senior advocate Prashant Bhushan

of the board. Mr. Bhushan voiced the possibility that the case would not come up for hearing on March 19, and sought a future date. "This case goes to the very roots of democracy," he submitted.

The case hearing was similarly adjourned in February. At that time, it was on a request from Solicitor-General Tushar Mehta, appearing for the Centre, who said he was appearing in another courtroom before a Constitution Bench.

Meanwhile, a new Chief

Election Commissioner, Gyanesh Kumar, was appointed under the Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service, and Term of Office) Act of 2023. The top court had in the past refused a plea to stay the law's implementation.

Justice Kant had earlier orally observed that the test regarding the validity of the 2023 Act would hinge on whether the apex court's authority to pronounce binding decisions under Article 141 could be circumvented or diluted by a law.

"The real test here is between the court's opinion and exercise of legislative powers," Justice Kant had remarked.

Per capita income claims by States contradict high BPL population: SC

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Wednesday questioned the claims of high development rate and per capita income when certain States have about 70% of their population living below the poverty line. The court wondered whether distribution schemes of subsidised essential food grains really reached the poor in the country.

"There are States which utilise or project the development card, saying our per capita income is high, we have progressed so well, but we find that 70% of their population are declared below poverty line (BPL)... How can these two factors go together? There is an inherent contradiction if 70% people are BPL



Is subsidised ration system merely a ploy for popularity, asked the Supreme Court.

and still you claim a high per capita income," Justice Surya Kant, heading a Bench, observed orally.

The top court wondered whether the subsidised ration system, meant to provide food security to the deserving poor, was merely a ploy by governments to garner popularity.

The court was hearing petitions seeking ration

cards for migrant workers to ensure food security.

Advocates Prashant Bhushan and Cheryl D'Souza, appearing for activists Anjali Bhardwaj, Harsh Mander, and Jagdeep Chhokar, said the contradiction arose from the growing level of inequality. "The level of inequality has gone up so much that a few people are worth lakhs of crores while a vast majority survive on ₹30 and ₹40 a day," Mr. Bhushan said.

Justice Kant asked whether the issuance of ration cards identifying the beneficiaries for distribution of foodgrains too were dictated by political considerations.

"Unfortunately, the Executive functions at different levels. By the time ration reaches the poor, so

many things would have happened," Justice Kant observed. The court said corruption and mismanagement of the Public Distribution System must not be a ground to discourage its implementation. It added that the poor have a right to access at least two square meals a day in terms of their fundamental right to life.

Appearing for the Centre, Additional Solicitor-General Aishwarya Bhati intervened to stress that the Centre was duty-bound under the National Food Security Act to provide food grains. She said the coverage under the Act was 81.35%. There was additional coverage for 11 crore people under the Anganwadi scheme, and further coverage for another 22 crore people.

‘We do not want to import politics from overseas’

New Zealand's Prime Minister says he understands the concerns that India has raised about pro-Khalistan Sikh diaspora groups; however, he says that his priority is to make sure that there is mutual respect and understanding among people as New Zealand is a liberal democracy and increasingly multicultural country; right to free speech is protected but action is taken against any illegality, he says

INTERVIEW

Christopher Luxon

Suhasini Haidar
NEW DELHI

New Zealand is a liberal democracy, its Prime Minister, Christopher Luxon, said, when asked about Indian Prime Minister Narendra Modi's public concern over protests held by supporters of Khalistan in that country. Mr. Luxon, who was the chief guest at this year's Raisina Dialogue conference, spoke of why New Zealand had not banned a "referendum" by Khalistan activists in his country in 2024, and rejected the idea of any foreign interference. He also spoke about the agreements signed with Mr. Mo-

di for a defence deal, and the relaunch of Free Trade Agreement talks this year. Excerpts:

New Zealand is not a militaristic country, and you said at the Raisina Dialogue that you don't intend to join the Quad. What exactly will the bilateral defence agreement entail?

As I said at the Raisina inauguration, the rules-based system is giving way to a power-based [system]. Since we came to office 16 months ago, we have been looking at our defence capability, and where we might want to build in the future. That's why I have been deepening our relationships, with our major ally, Australia, but also within Southeast Asia, Northeast Asia, and now India as well, where we have like-minded coun-

tries with convergent interests. You have got New Zealand, very much focused on one side of the Indo Pacific region, and you have got India on the other side, so we bookend the region. It makes great sense for us to work together, whether it is on port calls or defence exchanges.

An area that seems to diverge was over India's security concerns over what are seen as pro-Khalistan Sikh diaspora groups in New Zealand. Prime Minister Modi came out publicly during your press statement and said he expects you to clamp down on this illegal activity by anti-Indian elements. Did that surprise you?

New Zealand is increasingly a multicultural country, but we don't want to im-



SHIV KUMAR PUSHPAKAR

port politics from overseas.

Our priority is to make sure we have respect for each other, we understand each other, we can work together even though there may be differences. We don't see great fault lines within the Indian community in New Zealand.

They work together rather harmoniously, irrespective of regions and religions they come from.

With respect, I understand the concerns that India has raised with me at a macro level around the threat that they see. But as I said privately [to PM Modi], and publicly, New Zea-

land is a liberal democracy. We believe in free speech. We make sure that free speech is legal. We have an outstanding police force that actually enforces our laws. A liberal democracy enables people to take out protests, but equally, it has to be legal, and police enforce that.

India had objected to the Referendum on Khalistan held last November – would you allow another to be conducted?

We have got challenges like everybody has, but the point I am trying to make is that we have a pretty harmonious society, and our new migrants understand that. Again, we are a liberal democracy. We pride ourselves on free speech, that is important.

India and New Zealand

have re-launched talks for a Free Trade Agreement (FTA). The two countries right now have just \$2 billion of bilateral trade, there's no direct flight connectivity. How realistic is the plan for an FTA to be done soon?

Well, look, both of us actually want to get this done fairly quickly, but also we know that there will be hard and sensitive parts for any negotiation. But, you know, getting to this point and actually relaunching a comprehensive FTA that deepens trade and economic ties is really important, and so I'm very confident Minister [of Industry and Supply, Piyush] Goyal and Minister [of Trade for New Zealand, Todd] McClay, will build a strong relationship for what will be tough negotiations. We look at a country like Chi-

na, and we have 15 times the trade we have with India. And yet they have similar population size, which means there's a huge opportunity here for us to get going.

One of the sticking points has always been over market access for agricultural produce and dairy products in particular. How key is that for New Zealand?

Well, look, it's one of those sensitive issues. There's interest on both sides for that conversation. We won't be doing the negotiations with the media, certainly, but we're going to get the very best deal that we can for New Zealanders, as we would expect India to do as well for India.

Prime Minister Modi and I directed both Trade Ministers yesterday to move with pace.

INBRIEF



Cabinet approves additional outlay for Gokul Mission

The Union Cabinet on Wednesday revised the Rashtriya Gokul Mission (RGM) with a total outlay of ₹3,400 crore. Union Information and Broadcasting Minister Ashwini Vaishnaw said the move will boost growth in livestock sector in India. The additional outlay for the scheme as the component of Union government for the period between 2021-22 and 2025-26 will be ₹1,000 crore. Mr. Vaishnaw said the Cabinet had added two new activities: one-time assistance of 35% of the capital cost for establishment of heifer rearing centres and encouraging farmers to purchase high genetic merit.

Technology an enabler, but boots on ground can't be replaced: CDS

Dinakar Peri
NEW DELHI

Boots on the ground cannot be replaced and technology will only be an enabler, the Chief of Defence Staff, General Anil Chauhan, said at the Raisina Dialogue, India's flagship conference on geopolitics, on Wednesday.

At the same panel discussion, former U.S. Army General David Petraeus (ret'd) said his country's military had a legacy procurement process and "yesterday's equipment" was being procured for "fighting tomorrow's wars". General Chauhan acknowledged that Indian procurement cycles were also very long.

"India has been facing this asymmetric threat... We have always called it a sub-conventional kind of conflict. We invented this particular term much before the West invented terms like global war on terror or asymmetric warfare or fourth-generation warfare or now, 'hyper conflicts'. So, we have called it conflict, which is below the threshold of a conventional kind of conflict. And as far as the lessons are concerned, I think the biggest lesson is that there is no substitute for



Quick analysis: Chief of Defence Staff General Anil Chauhan speaks at the Raisina Dialogue in New Delhi on Wednesday. ANI

boots on ground. Technology can only be an enabler but it cannot replace people. I think that's very important," General Chauhan said at the panel discussion titled "Verses and wars: navigating hybrid theatres".

The second important lesson, he said, was the shaping of the combat zone, with intelligence being the third lesson.

Battle of minds

Speaking on "the shaping of a battlefield", he said the battle of minds had become important as far as hybrid warfare was concerned. In hybrid warfare, close collaboration with the State government and the local police was important, General Chauhan stated.

"So it is a kind of a

General Chauhan says the global security environment is marked by two aspects – uncertainty and rapid change

'whole-of-government' approach which is able to look at such kind of warfare. This I think would be major lessons India learned in its... sub-conventional conflicts."

He said the global security environment was marked by two aspects – uncertainty and rapid change.

"I think the global security environment is marked by two things... uncertainty and rapid amount of change. I joined the Army about almost 43 years back

and the types of war they taught us about, the traditional wars, you know, declared conflicts, they are no longer there. Yet, conflicts exist. It is perennial and ubiquitous.."

Speaking at the session, Vivek Lall, chief executive of the General Atomics Global Corporation based in the U.S., said speed was critical in defence and energy security.

In this regard, he identified six key areas: persistent surveillance, robust data-sharing, human resource training, electromagnetic spectrum dominance, real-time operational picture, ability to deliver mass in numbers, and logistical dominance.

General Petraeus (ret'd), also a former Director of the U.S. Central Intelligence Agency (CIA), said that the U.S. military envisioned future combat capabilities but had not fully solidified them.

Structures remain unchanged, leadership development lags, training needs an overhaul, and legacy defence procurement persists, he said, while delving in detail into the employment of technology in the Ukraine war and how it has changed the battlefield.

Philippines keen on India joining the Squad: Gen. Brawner

The Hindu Bureau
NEW DELHI

The Philippines is keen on India and South Korea joining the Squad – the maritime grouping of Australia, Japan, the Philippines, and the U.S. in the South China Sea, General Romeo S. Brawner, Chief of Staff of the Philippines armed forces, said at the Raisina Dialogue on Wednesday.

Terming China the common enemy of both India and the Philippines, he called for greater cooperation between the two countries.

"I will be raising the topic of India joining the Squad during a meeting with Chief of Defence Staff (CDS) Gen. Anil Chauhan in the afternoon today," Gen. Brawner said on the sidelines of the Raisina Dialogue.

Later in the day, the Integrated Defence Staff said on X, "Discussions held on ongoing military cooperation, maritime security and defence technology partnerships. Both leaders reaffirmed commitment to deepening engagements, including joint training, capability enhancement and focusing on strategic collaboration in the Indo-Pacific."



General Romeo S. Brawner

Speaking in the same session as the Philippines General, Indian Navy chief Admiral Dinesh K. Tripathi said three key elements – geopolitics, technology, and tactics in the security domain – had been in a state of flux which had become faster or accentuated in the past three or four years. He said the Indian Navy was working with partners and learning the best practices from them in all domains, while also stressing on the importance of "self-reliance".

Speaking on the Chinese aggression against their exclusive economic zone, Gen. Brawner said it was their belief that China would try to take control of the entire South China Sea. "We consider ourselves the forefront of U.S.-China competition, but we leverage our partnerships. We couldn't do it alone," he stated.

‘Commodity price volatility poses risk to inflation’

As tariff wars rage, passing on higher prices to consumers is a key risk to inflation; India’s external sector is being supported by resilient services exports, says the central bank in its March bulletin

The Hindu Bureau
MUMBAI

Though headline inflation moderated significantly from above 6% in October 2024 to 3.6% in February 2025, high frequency food price data up to March 17 show a rise in prices of rice and wheat, Reserve Bank of India (RBI) officials said.

Edible oil prices rise

Edible oil prices have firmed up as well – mainly driven by palm, soybean and sunflower oil, they said in the State of the Eco-



Food for thought: Edible oil prices have firmed up as well — mainly driven by palm, soybean and sunflower oil. REUTERS

nomy article published in the RBI’s monthly Bulletin.

Pulses prices, on the other hand, continued to show broad-based modera-

tion. Prices of key vegetables including potato, onion and tomato saw further correction.

While facing challenges

from weakening global trade and tariff uncertainty, India’s external sector continued to find support from resilient services exports, which have been less affected by global disruptions, the officials said.

Robust kharif production, better rabi sowing coupled with higher reservoir levels and seasonal winter correction in vegetable prices augur well for food inflation, although volatility in commodity prices and weather anomalies remain potential upside risks to the overall inflation outlook, they concluded.

‘U.S., U.K. replace Gulf nations as top source of remittances’

Ashokamithran T.
MUMBAI

Developed economies emerged as the top source of inward remittances for Indians in the last four years, RBI officials said in a paper titled “Changing Dynamics of India’s Remittances - Insights from the Sixth Round of India’s Remittances Survey”, in the March Bulletin published by the central bank.

Remittances from the U.S. and the U.K. together nearly doubled to 40% of the total money coming into India through banks in the last fiscal year (FY24). This number was 26% in FY17. Just about 3% of the transfers came to India from the U.K. in FY17. This zoomed to 10.8% in FY24.

U.S. became the top source in FY21, bringing in 23.4% of inward remittances. This increased to nearly 28% in FY24.

The authors of the article cited the rise in the share of Indian labour force in the U.S. and the U.K. as the reason behind higher remittances from these two countries.

Rise in Indian labour

While money from Indians in countries that were so far significant contributors, has either stayed stagnant or decreased. United Arab Emirates (UAE) share reduced to 19.2% in the FY24 from 27% in FY17.

Remittances from Saudi Arabia almost halved to 6.7% in FY24 from 11.6% in FY17.

NASA astronauts stranded in space for nine months back on earth with a splashdown

Agence France-Presse
WASHINGTON

Home at last: After an unexpected nine-month stay in space, a pair of NASA astronauts finally returned to earth on Tuesday, concluding a mission that gripped global attention and became a political flashpoint.

A SpaceX Crew Dragon spaceship carrying Butch Wilmore and Sunita Williams — alongside fellow American Nick Hague and Russian cosmonaut Aleksandr Gorbunov — streaked through the atmosphere before deploying parachutes for a gentle splashdown off the Florida coast at 5.57 p.m. (0327 IST).

Ground teams erupted in cheers as the gumbdrop-shaped spacecraft named Freedom, charred from withstanding scorching temperatures of 2,000 degrees Celsius during re-entry, bobbed steadily on the waves.

Fast boats raced to the capsule for initial safety checks, soon to be followed by a recovery vessel that retrieved the crew before they were flown to Houston to begin a 45-day



Safe landing: The SpaceX capsule carrying the astronauts splashes down in the Gulf of Mexico, off Florida's coast, on Wednesday. PTI

rehabilitation programme.

The quartet left the International Space Station roughly 17 hours earlier after exchanging final farewells and hugs with remaining crew members.

Mr. Wilmore and Ms. Williams, both former Navy pilots and veterans of two prior space missions, flew to the orbital lab in June last year, on what was supposed to be a days-long roundtrip to test out Boeing's Starliner on its first crewed flight.

But the spaceship developed propulsion problems and was deemed unfit to fly them back, instead returning empty.

They were subsequently

reassigned to NASA's SpaceX Crew-9 mission, which arrived at the ISS last September to accommodate the pair.

Early on Sunday, a relief team called Crew-10 docked with the station, paving the way for the Crew-9 team to depart.

Wilmore and Williams' 286-day stay exceeds the usual six-month ISS rotation but ranks only sixth among U.S. records for single-mission duration. Frank Rubio holds the top spot at 371 days in 2023, while the world record remains with Russian cosmonaut Valeri Polyakov, who spent 437 consecutive days aboard the Mir station.

El Niño or La Niña? Murky pattern of temperature keeps confusion alive

The unusual pattern of cold SST anomalies to the west of warm SST anomalies in the far east have persisted. In the last few decades, the reverse pattern – with warm SST anomalies around the dateline and cold SST anomalies around the Galapagos – has been more common

Raghu Murtugudde

It's that time of the year again. India waits eagerly for the summer monsoon forecast, tinged with some anxiety about whether it will be 'normal'. The fate of the monsoon also raises the question of whether 2025-2026 will be an El Niño year or a La Niña year. Even though only 60% of deficit and surplus years have historically been accounted for by El Niño and La Niña events, respectively, they have been perceived as the harbingers of bad news or good news about the monsoons.

There have been many headlines over the last few months claiming the world is in the grip of a La Niña. Is this true? Sea surface temperature (SST) patterns in the tropical Pacific Ocean have evolved in a rather unexpected way since early 2024.

Recall that the El Niño forecasts issued in early 2023 turned out to be quite accurate even as the 2023 summer monsoon was essentially 'normal' in terms of total seasonal rainfall.

Recall also that a normal monsoon hardly means an even distribution in space or time. Heavy spells were reported across many States even as parts of Karnataka, Kerala, Uttar Pradesh, West Bengal, and the Northeast registered shortfalls.

The forecasts at the beginning of 2024 seemed equally confident about a strong La Niña for the latter half of 2024. They appeared to validate the presence of cold SST anomalies appearing early in the far eastern tropical Pacific Ocean, which is an expected early symptom of La Niña. Strangely, however, the cold SST anomalies began shifting westward, towards the international dateline, with warm SST anomalies appearing in the far east by early summer 2024.

Anomalies in wind patterns were equally strange: strong easterly anomalies blew in the central-western tropical Pacific even as there were westerly anomalies in the far eastern tropical Pacific.

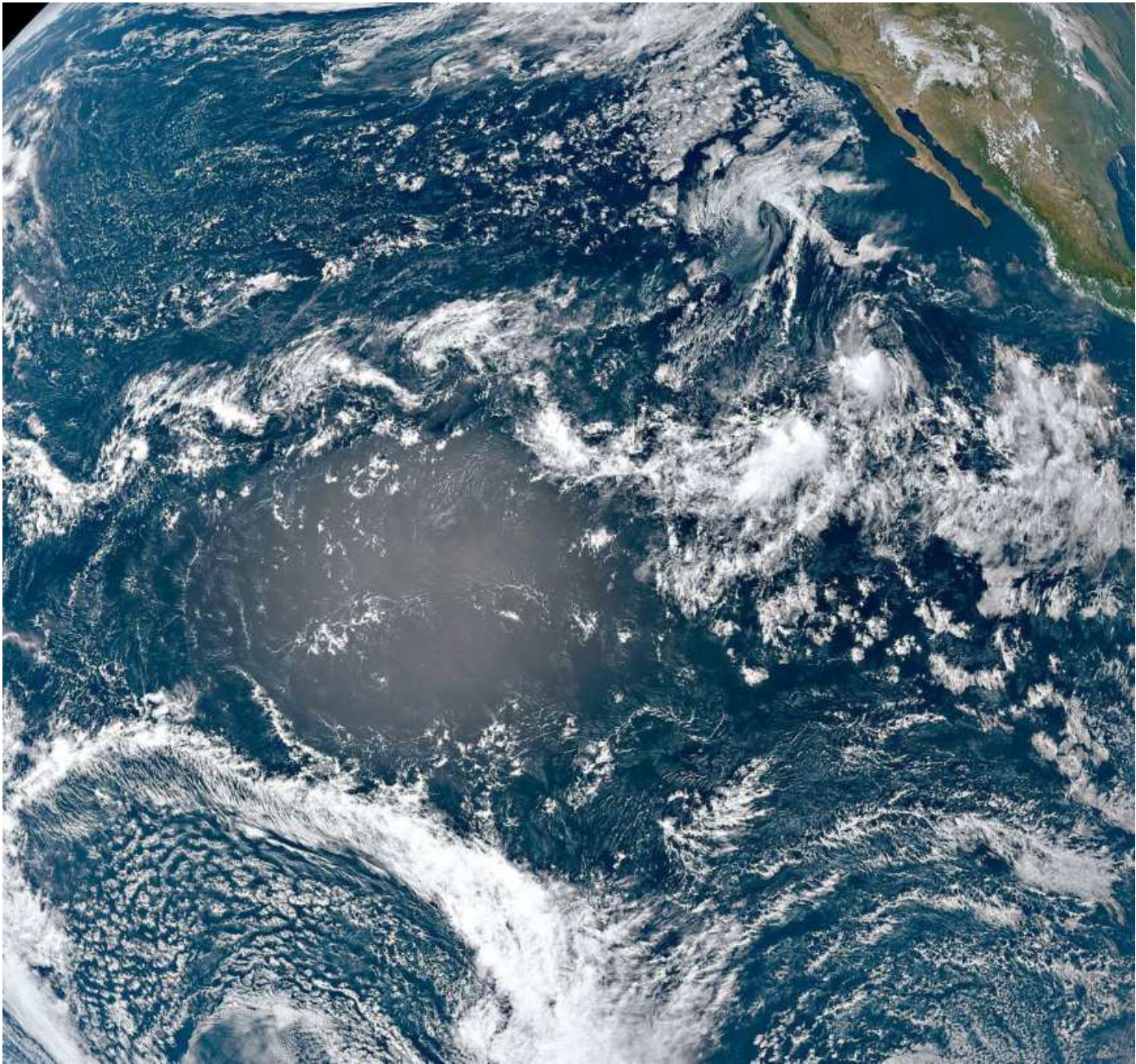
The unusual pattern of cold SST anomalies to the west of warm SST anomalies in the far east have persisted to date. In the last few decades, the reverse pattern – with warm SST anomalies around the dateline and cold SST anomalies around the Galapagos – has been more common. This pattern has been called the Dateline El Niño or a Central Pacific El Niño.

According to our best understanding thus far, La Niña events tend to have one dominant pattern, with cold SST anomalies in the far eastern to central tropical Pacific. But El Niños can have warm SST anomalies in the east or central Pacific: these are called El Niño “flavours”.

Tropical Pacific SST anomalies

What is driving this strange new pattern in the tropical Pacific SST anomalies? Right now, we don't know. Maybe it is just a part of the record warm temperatures of 2023 that continued into 2024 and then 2025. Lack of cooling in the far eastern tropical Pacific does inhibit heat uptake by the ocean, allowing greenhouse gases to build up heat in the atmosphere instead.

There is nonetheless one clue about the anomalies' origin. This author was part of a study published last year that



Lack of cooling in the far eastern tropical Pacific inhibits heat uptake by the ocean, allowing greenhouse gases to build up heat in the atmosphere. NASA

reported a natural mode of climate variability in the southern Pacific Ocean that drives wind anomalies in the tropical Pacific – and thus can decide whether the SST anomalies in the tropical Pacific during the summer are warm or cool.

Since the El Niño and the La Niña both peak during December of one year into January and February of the following year, the transition of this winter state into the following summer appears to be determined by the Southern Hemisphere climate variability, called the ENSO transition mode (ETM). ‘ENSO’ here is the El Niño Southern Oscillation, which encompasses the warm state of an El Niño and the cold state of a La Niña.

The ETM is relevant at present because it was unfavourable for a transition from the El Niño state during the winter of 2023-2024 into a La Niña state in the summer of 2024. It is likely the strong La Niña that was forecast for 2024 failed to emerge due to ETM-induced wind anomalies in the tropical Pacific.

Summer and fall of 2025

Nature is asserting its will again by creating a confused ENSO state: with warm SST anomalies in the far eastern tropical Pacific and cold SST anomalies in the central-western tropical Pacific. Forecasts issued in February 2025 for the rest of this year are also mixed. Some weather prediction centres have said a La Niña will emerge by fall while some

Nature is asserting its will again with a confused ENSO: warm SST anomalies in the far eastern tropical Pacific and cold SST anomalies in the central-western tropical Pacific. Forecasts made in February are mixed. Some weather centres say a La Niña will emerge by fall, while some say it will be a ‘normal’ year

others have said it will be a ‘normal’ year. One climate model has even called for a relatively strong El Niño.

Where does this leave us in terms of the monsoon for this year?

The 2023 monsoon was normal despite the strong El Niño, attributed to the emergence of the Indian Ocean Dipole (IOD) in the fall of 2023. There continues to be controversy among climate researchers as to whether the IOD can influence the monsoon or whether an El Niño itself can induce the IOD, easing the negative impacts on the monsoon.

Note, however, that the El Niño pattern itself was slightly unusual during 2023: the expected cooling in the far western Pacific was not recorded. Instead, weak warm SST anomalies were, which were attributed to a combination of global warming and the El Niño.

What combination of all these modes will play out in the coming months is not

clear yet. So we wait again for the forecasts to give us clearer clues. As usual, we must hope for the best and prepare for the worst. Considering we have not really managed to explain the levels of warming seen since the beginning of 2023, the climate models will continue to struggle to produce reliable forecasts.

The relationship between ENSO and the monsoon itself has changed in recent decades. Experts have argued that this relationship has altered the global belt of cold and warm temperature anomalies in the mid-latitudes, related in turn to the meandering of the jet stream. This mid-latitude change is in turn affecting the monsoon as well as the pre-monsoon cyclones. And the pre-monsoon cyclones are tinkering with the onset of the monsoon itself.

So many factors influence a deceptively simple decision and keep India's farmers on edge over their own fortunes. The State and Union governments can only hope for more reliable forecasts. The climate community and the India Meteorological Department are striving to meet all their expectations. Then again, managing expectations is as challenging as managing the risks from the vagaries of the monsoon, not to forget the heat waves that have arrived early this year.

(Raghu Murtugudde is retired professor, IIT Bombay, and emeritus professor, University of Maryland. mahatma@umd.edu)



The finding calls into question the frequent promotion of grass-fed beef as a more environmentally friendly option. AP

Grass-fed beef is no less emissive than the industrial variety

Associated Press

A March 17 study in the Proceedings of the National Academy of Sciences finds that even in the most optimistic scenarios, grass-fed beef produces no less carbon emissions than industrial beef.

The finding calls into question the frequent promotion of grass-fed beef as a more environmentally friendly option. Still, other scientists say grass-fed beef excels on other factors like animal welfare or local environmental pollution, complicating the choice for conscientious consumers.

“I think that there is a large portion of the population who really do wish their purchasing decisions will reflect their values,” said Gidon Eshel, a research professor of environmental physics at Bard College and one of the study’s authors. “But they are being misled, essentially, by the wrong information.”

When it comes to food, beef contributes by far the most emissions fuelling climate change and is one of the most resource and land intensive to produce. Yet demand for beef around the world is only expected to grow. Carefully weighing the benefits of grass-fed beef matters because in most parts of the world where beef production is expanding, it’s being done by deforesting land that would otherwise store carbon, said Richard Waite of the World Resources Institute.

Researchers used a model of emissions across the process of raising beef, then simulated herds of industrial and grass-fed cattle. It compared differences in how much food they eat, how much they emit, and how much meat they would produce

Experts say this study’s finding makes sense because it’s less efficient to produce grass-fed cattle than their industrial counterparts. Animals that are fattened up in fields instead of feedlots grow more slowly and don’t get as big, so it takes more of them to produce the same amount of meat.

The researchers used a numerical model of the emissions produced across the process of raising beef, then simulated many herds of industrial and grass-fed cattle. It compared differences in how much food they would eat, how much methane and carbon dioxide they would emit, and how much meat they would produce.

Randy Jackson, a professor of grassland ecology at University of Wisconsin-Madison who wasn’t involved in the study, said he has found similar results in his own research showing that grass-fed beef has higher emissions assuming the same demand. But he worries that the study is focused on minimising emissions at the cost of consequences for biodiversity and soil and water quality.

Jennifer Schmitt, who studies the sustainability of U.S. agricultural supply chains at the University of Minnesota and also wasn’t involved in the study, said she thinks the paper “helps us get a little closer to answering the question of maybe how much beef should we have on the landscape versus plant proteins.”

Schmitt said maybe if beef was scaled back on a large enough scale and if farmers could free up more cropland for other foods that humans eat, the localised environmental benefits of grass-fed cattle could make up for the fact that they come with higher emissions.

Eshel, however, thinks climate change should be “second to none” on the priority list of global problems.

THE SCIENCE QUIZ

Space stations are more than just orbital platforms

Vasudevan Mukunth

QUESTION 1

What is common to the International Space Station (ISS), the illegal Israeli settlements of Adei Ad and Givat Harel, and the city of Albany in Western Australia?

QUESTION 2

On July 29, 2021, a Russian module called X docked with the ISS suffered a glitch and fired its thrusters, rotating the ISS by one and a half times, resulting in the first “spacecraft emergency” called in the station’s history. Name X.

QUESTION 3

The incident involving X (from Q2) resulted in the ISS being unable to

receive a crew capsule to be launched on July 30, 2021. The launch was subsequently postponed by a week, only for flaws in the capsule’s design to come to light, leading to a series of delays that pushed its launch date by a year. Name the capsule.

QUESTION 4

The US space shuttle Columbia disintegrated upon reentry on February 1, 2003, so NASA suspended the programme for 900 days. Another year-long lull followed the next shuttle flight in July 2005. As a result, the ISS hadn’t been visited by a shuttle in three years, resulting in an unexpected build-up of ____ that vexed station operations in 2004. Fill in the blank.

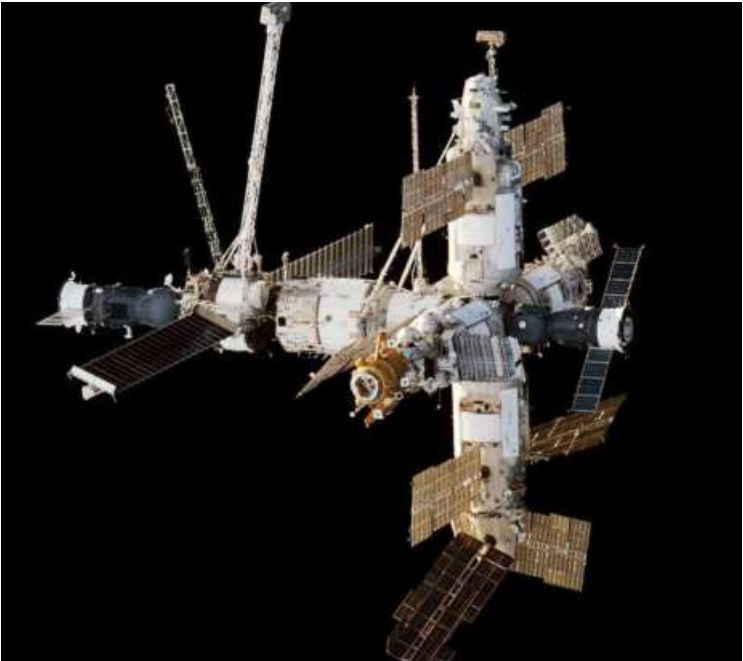
QUESTION 5

Name the enterprising spacemaker

who, in November 2007, ‘rode’ a camera-bearing arm on the ISS to reach a torn solar panel and implement an ad-hoc fix while it was still producing electricity.

Answers to March 18 quiz:

- Elements named for presence in ore-bearing rocks – **Ans: Chalcogens**
 - Element whose ability to “choke” also defines its group’s name – **Ans: Nitrogen**
 - Group name for elements with three valence electrons – **Ans: Triels**
 - Name for elements that form diamond-like crystals – **Ans: Adamantogens**
 - Group 9 element that bucks the Aufbau principle – **Ans: Rhodium**
- Visual: **Henri Moissan**
First contact: Snehil Jain | K.N. Viswanathan | Tamal Biswas | Anmol Agrawal | Joe V.R.



Visual: Name this famous space station, which operated from 1986 to 2001. Among other feats, it was the base for the longest single human spaceflight to date (437 days). NASA

Please send in your answers to
science@thehindu.co.in