

DAILY CURRENT AFFAIR (9 September 2024)

TOPICS COVERED

1. Statistics panel dissolved amid 'dissent' over Census (GS Paper-I: Society)
2. Ukraine hopes that India will 'review' its decision on joining the Swiss peace process, says Ambassador (GS Paper-II: International Relation)
3. Patient with Mpox symptoms isolated, says Health Ministry
4. Redevelopment threatens heritage value of Coonor station (GS Paper-III: Environment)
5. Bird flu: curbs spark outrage among Kerala farmers (GS Paper-III: Basic science)
6. Abu Dhabi Crown Prince Al Nahyan arrives in New Delhi (GS Paper-II: India-UAE)
7. India, U.S. agree to swap turns, Biden to host Quad Summit in home State (GS Paper-II: India-QUAD)
8. Boy dies after quack performs surgery watching YouTube
9. Delhi will oppose GST on online payments below ₹2,000 at meeting: Atishi
10. All States must adopt National Education Policy, says Dhankhar (GS Paper-II: Education and Language)
11. Mice study claims to have found long COVID's 'real' perpetrator (GS Paper-III: Basic science)
12. Planetary protection: keeping out 'toxic aliens' (GS Paper-III: S&T)
13. Periodic reset (GS Paper-II: India-ASEAN)
14. Wide open (PCS)
15. The vulnerability of live-in couples (GS Paper-I: Society)
16. Samagra Shiksha fund delay punishes role-model States (GS Paper-II: Education)
17. On uncommon cyclones in the Arabian Sea (GS Paper-I: Geography)
18. How changes in the level of Arctic sea ice can change monsoon patterns in India (GS Paper-I: Geography)

Statistics panel dissolved amid 'dissent' over Census

GS Paper I: Society

A.M. Jigeesh
NEW DELHI

The Union Ministry of Statistics and Programme Implementation has quietly dissolved the 14-member Standing Committee on Statistics (SCoS), headed by economist and former Chief Statistician of the country Pronab Sen, allegedly after its members questioned the delay in conducting the Census.

The reason it is being dismantled, according to an email sent to the members by Geeta Singh Rathore, Director-General of the National Sample Survey Office (NSSO), is that its work overlapped with that of the recently formed Steering Committee for National Sample Surveys. A copy of her email is with *The Hindu*. Dr. Sen, however, told *The Hindu* that the members were not given any reason for disbanding the panel. He added that in their meetings, they had

I have no idea of what happened. I got an email that the committee had been disbanded

PRONAB SEN
Head of SCoS



asked why the Census has not been conducted yet.

India's decennial census, scheduled for 2021, was initially delayed due to the COVID-19 pandemic, and has yet to be notified.

Formed in July 2023, the SCoS was supposed to advise the Union government on survey methodology, including sampling frame and design and survey instruments, and to finalise a tabulation plan of surveys.

In her letter to the members, Ms. Rathore said that, "The roles and responsibilities of Steering Committee are overlapping with that of Standing Committee on

Statistics as outlined in the respective Terms of Reference. In this context, I would like to convey that the Ministry has decided to dissolve the SCoS, constituted vide its order dated 13 July 2023".

The new panel is headed by NSC Chairman Rajeeva Laxman Karandikar, and at least four members of the SCoS have already been accommodated in it.

'Against the mandate'

Dr. Sen said the mandate of the SCoS was to help the Ministry on methodologies of collecting and tabulating data and that the Centre itself had now gone against that mandate. "I have no idea of what happened. I got an email that the committee had been disbanded," he said.

Over the past year, the panel had held more than half-a-dozen meetings and discussed several issues in its domain with utmost seriousness.

Statistics panel dissolved amid 'dissent' over Census (9 September)

- The Union Ministry of Statistics and Programme Implementation has dissolved the 14-member Standing Committee on Statistics (SCoS), led by economist Pronab Sen.
- The SCoS was allegedly disbanded after its members questioned the delay in conducting the Census.
- The official reason given for dissolving the SCoS, according to an email by Geeta Singh Rathore (Director-General of the NSSO), is the overlap in work with the Steering Committee for National Sample Surveys.
- Dr. Sen, however, mentioned that the members were not given a reason for disbanding and that they had asked about the Census delay in their meetings.
- India's Census, scheduled for 2021, was delayed due to COVID-19 and has not yet been conducted.
- The SCoS was formed in July 2023 to advise the government on survey methodology and finalizing survey data plans.
- The new Steering Committee is headed by NSC Chairman Rajeeva Laxman Karandikar, and some SCoS members have been included in it.
- Dr. Sen said the SCoS was meant to help with data collection methodologies, and the government

went against this mandate by disbanding the committee.

- Over the past year, the SCoS had held multiple meetings to discuss important issues.

Ukraine hopes that India will ‘review’ its decision on joining the Swiss peace process, says Ambassador

GS Paper II: International Relations

Suhasini Haidar
NEW DELHI

As the Union government looks at a possible role for India in ending the Russia-Ukraine war, Kyiv is keen on getting New Delhi to sign the Swiss peace summit document. After the summit in June, India had issued a statement disassociating itself from its outcome as it did not involve Russia and Ukraine.

Speaking to *The Hindu*, Ukraine’s Ambassador to India Oleksandr Polishchuk said that Ukrainian President Volodymyr Zelenskyy had proposed a retrospective move by India to join the peace process ahead of plans for a second peace summit in October or November. Uk-

raine, he said, had more “ambition” for India than playing “post office” between the leaders of the two warring nations.

“We hope that Prime Minister Narendra Modi’s visit to Ukraine and conversations with President Zelenskyy indicate India’s support for the peace-building effort,” Mr. Polishchuk told *The Hindu*.

He confirmed that Mr. Zelenskyy “discussed the possibility that India could review its decision at the first peace summit in Switzerland, and associate itself with the Burgenstock joint communique”, retrospectively or for India to formulate its own proposals that support principles such as humanitarian access and nuclear safety.



We hope that Prime Minister Narendra Modi’s visit to Ukraine and conversations with President Zelenskyy indicate India’s support for the peace-building effort

OLEKSANDR POLISHCHUK
Ukraine’s Ambassador to India

“A large democracy like India should not just be a messenger or post office, conveying messages from one country in the conflict to the other – given PM Modi’s ability to speak to all sides, he can play a larger role in guiding the process and even in hosting the peace summit,” he added.

The envoy’s comments

come as the Modi government has stepped up its outreach to other countries playing a role in current efforts to end the conflict.

Flurry of visits

External Affairs Minister S. Jaishankar is on a visit to Saudi Arabia, Germany and Switzerland from September 8 to 13 when he will

engage Ministers of West Asian nations and heads of UN organisations.

National Security Adviser Ajit Doval will visit Russia from September 10 to 12 for the BRICS NSA meetings where he will meet counterparts from China, Brazil, South Africa, the UAE, Saudi Arabia, Egypt and Ethiopia. The flurry of diplomatic visits comes after Mr. Zelenskyy pitched India as a possible mediator along with other “Global South” countries and Mr. Putin said he valued any efforts by India, China and Brazil on the conflict.

“We need to pay more attention to the implementation of the various plans for cooperation that the leaders agreed to,” Mr. Polishchuk said.

Ukraine hopes that India will ‘review’ its decision on joining the Swiss peace process, says Ambassador (9 September)

- The Union government of India is considering a potential role in helping end the Russia-Ukraine war.
- Ukraine wants India to sign the Swiss peace summit document. India had distanced itself from the summit’s outcome because Russia and Ukraine were not involved.
- Ukraine’s Ambassador to India, Oleksandr Polishchuk, stated that Ukrainian President Volodymyr Zelenskyy proposed that India join the peace process before a second summit planned for October or November.
- Ukraine wants India to take on a bigger role than just acting as a messenger between Russia and Ukraine.
- Mr. Polishchuk hopes that Indian Prime Minister Narendra Modi’s talks with President Zelenskyy show India’s support for peace efforts.
- Zelenskyy suggested that India reconsider its stance on the Swiss summit or present its own proposals focused on humanitarian access and nuclear safety.
- The Ukrainian ambassador believes India can play a more significant role, even by hosting a peace summit.
- India has been increasing its diplomatic outreach, with External Affairs Minister S. Jaishankar visiting Saudi Arabia, Germany, and Switzerland from September 8 to 13 to engage with key leaders.
- National Security Adviser Ajit Doval will visit Russia from September 10 to 12 for BRICS NSA meetings and meet counterparts from several countries.
- Both Russia and Ukraine have shown openness to India’s involvement in peace efforts.

The BRICS group is an acronym referring to the emerging major economies of Brazil, Russia, India, China, and South Africa. The group was founded in 2009, and its members represent a significant portion of the world’s population, territory, and gross domestic product (GDP).

Key facts and figures:

- Population:** The BRICS countries together account for over 40% of the world’s population.
- GDP:** The BRICS countries contribute significantly to the global economy, with their combined GDP representing over 25% of the world’s total.
- Land area:** The BRICS countries cover approximately 25% of the Earth’s land surface.
- Economic diversity:** While all BRICS countries are major economies, they have varying economic structures and priorities. For example, China is a manufacturing powerhouse, while Brazil and Russia are rich in natural resources.

Recent updates and developments:

- 15th BRICS Summit:** The 15th BRICS Summit was held in Johannesburg, South Africa, from August 22-24, 2023. The summit focused on themes such as peace, security, development, cooperation, and partnerships.
- As of September 2024, the member countries of BRICS are: Brazil, Russia, India, China, South Africa, **Iran, Egypt, Ethiopia, and United Arab Emirates.**

Patient with Mpox symptoms isolated, says Health Ministry (9 September)

- A young male patient in India is suspected of having Mpox after returning from a country with active transmission.
- The Union Health Ministry has not shared details about the location but confirmed the patient is isolated in a hospital and is stable.
- Samples from the patient are being tested to confirm the Mpox diagnosis.
- The Ministry said the case matches the risk assessment by the National Centre for Disease Control (NCDC), and there is no need for undue worry.
- Prashant Joshi from AIIMS Nagpur stated that the Mpox rash can be mistaken for other diseases.
- He advised people to seek medical help if they have symptoms of Mpox, along with travel history to affected areas or contact with a confirmed or suspected Mpox case.

Mpox

- **Mpox** (formerly known as monkeypox) is a viral illness that can occur in humans and other animals.
- It is caused by the **monkeypox virus, a member of the Orthopoxvirus genus**, which also includes the smallpox virus.

Transmission:

- **Mpox is primarily spread through close contact with an infected person or animal.**
- It can also be transmitted through contaminated materials, such as bedding or clothing.

Symptoms:

- Symptoms of mpox include **fever, headache, muscle aches, fatigue, swollen lymph nodes, and a rash that can look like pimples or blisters.**
- The rash often appears on the face, hands, feet, or genitals.

Treatment:

- **There is no specific treatment for mpox**, but the symptoms can be managed with supportive care.

Prevention:

- **Vaccination against smallpox is also effective against mpox.**
- Avoiding close contact with infected individuals and practicing good hygiene can help prevent the spread of the virus.

Global Outbreak: In 2022, a global outbreak of mpox occurred, primarily affecting countries outside of Africa where the virus is endemic.



Onam

- **Onam** is a **ten-day harvest festival** celebrated with great enthusiasm in the Indian state of Kerala.
- It marks the Malayalam New Year and is one of the most important festivals in the region.

Mythological Significance:

- The festival is rooted in Keralite mythology, celebrating the return of the **mythical king Mahabali**, who is believed to have ruled Kerala during a golden age.
- According to legend, **Mahabali was banished to the underworld by Lord Vishnu**, but he is allowed to visit his people once a year during Onam.

Key Celebrations:

- **Pookalam:** The **most iconic symbol of Onam is the pookalam**, a floral carpet created in courtyards using colorful flowers. It is believed to welcome Mahabali's return.
- **Onam Sadhya:** A traditional vegetarian feast served on a banana leaf is another highlight of Onam. It consists of numerous dishes, including rice, vegetables, pickles, and desserts.
- **Boat Races:** Vallam Kali, or boat races, are held in various parts of Kerala during Onam. These races are a popular spectator sport and a symbol of the state's maritime heritage.
- **Cultural Performances:** Onam is also celebrated with various cultural performances, such as **Kathakali (a classical dance form)**, **Theyyam (a ritualistic dance)**, and **Kalaripayattu (a martial art)**.
- **Onam 2024:** The **Onam festival for the year 2024 was celebrated from September 6th to 17th**, with the main day of celebration falling on September 15th.
- **Government Initiatives:** The Kerala government has been promoting Onam as a tourism attraction and has organized various events and activities to enhance the celebrations.
- **Global Celebrations:** Onam is also celebrated by Malayali communities across the world, showcasing the diaspora's strong connection to their cultural heritage.



Scent of a festival: Onam celebrations in Kerala are not complete without flowers from Tamil Nadu and Karnataka. A flower seller from Tamil Nadu strings a garland at a stall at Tripunithura, a major festival hub near Kochi, on Sunday. THULASI KAKKAT

Redevelopment threatens heritage value of Coonoor station (9 September)

- The Coonoor railway station has been unchanged for over 125 years and is a part of the Nilgiri Mountain Railway (NMR), a UNESCO World Heritage Site.
- The station's renovation is being criticized by heritage and history enthusiasts.
- Anthropologist Paul Hockings, in his "Encyclopedia of the Nilgiri Hills," notes that plans for a railway to the Nilgiris were discussed for over 50 years before becoming a reality.
- In 1891, Lord Wenlock, Governor of Madras, began the construction of the railway line, connecting Mettupalayam and Coonoor by 1899.
- Since then, the Coonoor station has remained mostly unchanged.
- The station is now part of the Amrit Bharat Station Scheme, with the Salem division of Southern Railway planning redevelopment at a cost of ₹14.7 crore, including Udhagamandalam station.

Passenger amenities

- The Railways promised to improve passenger amenities and beautify stations in Coonoor and Udhagamandalam.
- In Udhagamandalam, environmentalists opposed the work, as it destroyed part of a wetland in the town.
- In Coonoor, critics are against the changes because the 125-year-old colonial facade is being altered, which they argue harms the heritage value.
- K. Natrajan, from the Heritage Steam Chariot Trust, is upset about the renovations in Coonoor but accepts the changes in Ooty (Udhagamandalam), as that station has been modified over time.
- Natrajan believes the colonial charm of Coonoor station should have been preserved, with only necessary maintenance done.
- The renovation includes re-tiling the roof, adding tiles to the station walls, expanding parking, and "beautifying" the station.
- Initially, the Railways seemed open to working with local heritage experts but later decided against involving them in the planning process.
- Local critics argue there is no need for a larger parking lot, as the station services only a limited number of trains.
- A Southern Railway official acknowledged the concerns and said they are considering the stakeholders' views.

Bird flu: curbs spark outrage among Kerala farmers (9 September)

- Farmers are protesting against the Kerala government's decision to impose strict rules on poultry farming.
- The restrictions affect Alappuzha district and parts of Kottayam, Pathanamthitta, and Ernakulam due to a recent bird flu outbreak.
- The government banned hatching and rearing of ducklings, chicks, and quail until December 31.
- The United Poultry and Duck Farmers Association held a meeting and demanded the government revoke the order.

Abu Dhabi Crown Prince Al Nahyan arrives in New Delhi



Abu Dhabi Crown Prince Sheikh Khaled bin Mohamed bin Zayed Al Nahyan being received by Piyush Goyal in New Delhi on Sunday. ANI

GS Paper II: India-UAE

Press Trust of India
NEW DELHI

The Crown Prince of Abu Dhabi, Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, arrived in New Delhi to a warm welcome on Sunday as he kick-started a two-day maiden visit to India to boost bilateral ties on a range of areas, including energy and connectivity, amid escalating tensions in West Asia.

Union Commerce and Industry Minister Piyush Goyal received the Crown Prince at the airport, following which he was accorded a ceremonial welcome, in reflection of the importance India has attached to the visit.

“A new milestone in a historic relationship. His Highness Sheikh Khaled bin Zayed Al Nahyan arrived in Delhi on his first

official visit to India,” External Affairs Ministry spokesperson Randhir Jaiswal posted on X.

The Crown Prince is accompanied by several Ministers from the UAE government and a business delegation.

After concluding the Delhi leg of his visit, Mr. Al Nahyan will travel to Mumbai to participate in a business forum. Top business leaders from both the countries will participate in the forum on Tuesday.

The visit of Mr. Al Nahyan will further reinforce the strong ties between India and the UAE and open avenues for partnership in new and emerging areas, the Ministry of External Affairs said.

Prime Minister Narendra Modi and the Crown Prince will hold talks on Monday.

Abu Dhabi Crown Prince Al Nahyan arrives in New Delhi (9 September)

- **Sheikh Khaled bin Mohamed bin Zayed Al Nahyan**, the Crown Prince of Abu Dhabi, arrived in New Delhi for a two-day visit to strengthen ties between India and the UAE.
- He was warmly welcomed by Union Commerce and Industry Minister Piyush Goyal and given a ceremonial reception.
- The **visit aims to enhance cooperation in areas like energy and connectivity amid rising tensions in West Asia.**
- The Crown Prince is accompanied by UAE Ministers and a business delegation.
- After Delhi, he will travel to Mumbai for a business forum with top leaders from both countries.
- The visit is expected to further strengthen India-UAE relations and explore new partnership opportunities.
- Prime Minister Narendra Modi and the Crown Prince will hold talks on Monday.

India, U.S. agree to swap turns, Biden to host Quad Summit in home State (9 September)

- India and the U.S. have agreed to swap hosting the Quad Summit.
- The U.S. will host the summit this year in Delaware with President Biden and leaders from Australia, Japan, and India.
- India will now host the Quad Summit in 2025.
- The summit is scheduled for September 21.
- On September 22, Prime Minister Modi will address a diaspora event in New York and attend the “Summit of the Future” at the UN.
- Modi will not address the UN General Assembly as initially planned on September 26. Instead, External Affairs Minister S. Jaishankar will speak on September 28.
- The swap was agreed upon after discussions between Modi, U.S. President Biden, and Australian Prime Minister Albanese, and finalized by Quad officials.
- The U.S. decided to host this year's summit in conjunction with the UN General Assembly.

Delhi will oppose GST on online payments below ₹2,000 at meeting: Atishi (9 September)

- The Delhi government plans to oppose a new proposal at the GST Council meeting.
- The proposal suggests imposing an 18% GST on payment aggregators for online transactions under ₹2,000.

- State Finance Minister Atishi believes this will negatively affect small businesses and consumers.
- Currently, transactions below ₹2,000 are tax-exempt, and payment aggregators charge merchants a fee of 0.5% to 2%.
- If the proposal passes, payment aggregators might pass the extra tax cost to merchants.
- Atishi criticized the proposal as hypocritical, given the government's push for cashless digital transactions.
- If approved, small online purchases made with debit or credit cards will be taxed.

Centre's proposal

- Online transactions below ₹2,000 currently don't attract GST, while transactions over ₹2,000 are subject to an 18% GST fee on the payment gateway.
- The Centre is proposing to apply an 18% GST on all transactions through payment gateways, regardless of the amount.
- If this proposal is approved, it will impact small consumers and businesses because most online transactions are under ₹2,000.
- Payment gateways may pass the extra GST cost to merchants, who would then pass it on to consumers.
- Small businesses are crucial, contributing 30% to India's GDP and employing 62% of the workforce.
- The Delhi government argues that instead of taxing payment gateways, the Centre should support small businesses and provide tax exemptions.

All States must adopt National Education Policy, says Dhankhar (9 September)

- Vice-President Jagdeep Dhankhar praised the National Education Policy (NEP) as transformative and urged States that haven't adopted it to reconsider.
- He highlighted the NEP's role in empowering youth and valuing all languages.
- Dhankhar emphasized the importance of mother tongues and India's rich linguistic diversity.
- He noted that as Chairman of the Rajya Sabha, he allows members to speak in 22 languages and can understand their messages through their body language, even if he hears a translation.
- He encouraged everyone to help make at least one person literate, believing this act brings personal freedom, dignity, and independence.
- Dhankhar called literacy a key to India's development and potential to regain its status as a leading center of learning.

Mice study claims to have found long COVID's 'real' perpetrator (9 September)

The current concept of SARS-CoV-2 pathogenesis is that the inflammation triggered by the virus damages the inner lining of blood vessels and starts a clotting process during which fibrin is deposited in the blood. The new study has flipped this concept, finding that fibrin is reportedly the driver of COVID-19 inflammation

- The SARS-CoV-2 virus, responsible for COVID-19, is known to damage blood vessels.
- The respiratory symptoms of COVID-19 are mainly due to blood clotting and inflammation in the lungs' blood vessels, not the airways directly.
- Severe complications, including neurological issues like stroke, are also due to this blood vessel damage.
- Long COVID, or post-acute sequelae of SARS-CoV-2 infection, continues to affect many people globally, despite widespread immunity and fewer severe cases.
- Blood thinners are important in managing COVID-19 complications, but these complications can occur even after mild or asymptomatic infections.
- Research has identified gaps in understanding blood clotting issues and their treatment related to COVID-19.
- A recent study published in Nature on August 28 suggests a new approach to managing these complications.
- The study found that fibrinogen and fibrin, which are involved in clotting, bind to the SARS-CoV-2 virus's spike protein.
- This binding may drive inflammation and complications in the lungs and brain, suggesting that fibrin, rather than just being a part of the clotting process, might actually drive the inflammation and damage caused by COVID-19.

The spike protein-fibrin combo

- The study provided evidence that the spike protein of SARS-CoV-2 binds strongly with fibrinogen, a protein involved in clotting.
- The spike protein and fibrinogen accumulate in high concentrations in the lungs during infection.
- The spike protein attaches to a specific site on fibrinogen, and fibrinogen binds to several sites on the spike protein, with one site being particularly strong.
- This interaction changes the structure of clots, making them harder to dissolve with clot-dissolving drugs.
- The abnormal clots can trigger more inflammation and alter immune responses.

- The study also examined the fibrin-spike protein interaction in people with long COVID, finding that it can cause inflammation even without active infection.
- This mechanism is different from the rare clotting issues linked to certain COVID-19 vaccines, which are associated with the adenovirus component, not the spike protein.
- The study found that a monoclonal antibody called 5B8 can bind to a specific site on fibrinogen, blocking the spike protein and preventing complications without causing clotting side effects.
- 5B8 has entered phase I clinical trials for safety and tolerability and may proceed to phase 2 if successful.
- Critics argue the study is preliminary, based on animal models, and the long-term impact on long COVID needs further research.
- The researchers have a potential conflict of interest, as some are involved with companies developing related antibodies.

Planetary protection: keeping out 'toxic aliens'

GS Paper III: S&T

Vasudevan Mukunth

In space missions from the earth to another planetary body, planetary protection is the idea that it's important to preserve the biospheres of the earth and the body against contamination by "alien" microbial life.

It's an important principle of interplanetary missions, such as from the earth to the moon or Mars. It stems from the idea that we ought to keep the planetary biosphere "pristine" and from being "corrupted" by influences that may not exist had the space mission not been undertaken.

On September 5, China announced it would be pulling up the date for Tianwen-3, its ambitious Mars sample-return mission, to 2028, potentially ahead of the U.S. During the announcement, the mission's designer said it would abide by the planetary protection principle.

The principle has a legal basis in Article IX of the Outer Space Treaty (1967). It states that parties to the treaty explore outer space while avoiding "harmful contamination and ... adverse changes" in the earth's and the body's environments due to "the introduction of extraterrestrial matter."

An important way to "clean"



A model of NASA's Viking 1 lander, which became the first spacecraft to land on Mars in 1976. It was designed and operated to facilitate planetary protection. FILE PHOTO

spacecraft ahead of interplanetary missions to conform to the planetary protection principle is to fully assemble the vehicle and bake it in a dry room for three days at 120 degrees C. This increases the costs and the technical strength of the spacecraft, but such are the demands of keeping biospheres 'clean'.



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

Planetary protection: keeping out 'toxic aliens' (9 September)

- Planetary protection is about preventing contamination of Earth and other planetary bodies with **alien microbes** during space missions.
- **This principle ensures that space missions do not harm the existing biospheres or introduce foreign life forms.**
- It's crucial for missions to places like the Moon or Mars to keep these environments "pristine" and free from contamination.
- On September 5, China announced it will advance the timeline for its Mars sample-return mission, **Tianwen-3, to 2028**, potentially ahead of the U.S.
- The mission's designer confirmed it will follow the planetary protection principle.
- The principle is legally supported by **Article IX of the Outer Space Treaty (1967)**, which requires avoiding harmful contamination of Earth and other celestial bodies from extraterrestrial matter.

Policy paralysis, a weakened public health sector

GS Paper II: Health Schemes

The public health needs of a population are diverse and perception and prioritisation vary across the social strata. Public health policies are those decisions made by the government based on the resources available to address people's health needs. Public health needs include those felt by people (felt needs) based on their lived experiences and those projected upon (projected needs) them by experts – the architects of public health policies. The recent Union Budget has been critiqued for its inadequate focus on the social sector, specifically the public health sector. Public health policies of the government in the last decade indicate that there has been a severe paralysis when it comes to public health policies without any real prescription that addresses the felt needs of people.

Felt needs in public health

Public health needs can be broadly categorised into three groups: First, are the diseases of poverty such as tuberculosis, malaria, undernutrition, maternal death, bouts of illnesses due to food and water-borne infections leading to typhoid, hepatitis, and diarrhoeal diseases faced by the poor and the vulnerable. These problems attain greater significance as attempts to prevent these also pose challenges of addressing livelihood and are non-negotiable from a rights perspective.

Second are the problems of the middle class and those better off on issues that are related to environmental pollution – air, water, waste management, lack of drainage facility and failure to ensure healthy foods and eateries that pose threat to everyday lives, most of which are due to poor infrastructure development and poor market regulations. The list goes on if we add road traffic accidents, climate change and the rise of chronic illnesses. These are also applicable to the first group but may not figure within the hierarchy of priorities.

Third, and the most popular needs in public health, are the curative care needs of a population. Provisioning of curative care is the most critical and controversial policy question in public health. The three levels of curative care envisaged are primary, secondary and tertiary. The poor and the vulnerable rely on primary health-care institutions of the public sector for primary-level care, as it is the most affordable and is closer to their places of residence. Secondary-level care was historically neglected and is still inadequate against population norms. Shortage of infrastructure including health professionals in these facilities aggravates the problem. Tertiary-care needs for curative care among the poor are the focus of the **Pradhan Mantri Jan Arogya Yojana (PMJAY) under Ayushman Bharat**.

A history of Indian public health policies in the last decade shows that the **National Rural Health**



Mathew George

Head of the Department of Public Health and Community Medicine, Central University of Kerala, Kasaragod, Kerala

Primary care is weak while there has been a boost to the growth of the private sector in secondary and tertiary care

Mission, which was started in 2005, and followed by the **National Health Mission (NHM) of 2013**, were a clear departure from the then existing National Health Policy of 2002, which proposed the commercialisation of health care. It was the NHM's focus on strengthening public sector health care through architectural correction that has revived an otherwise sinking health system after the reform period of the 1990s. Efforts were taken to follow the principles of primary health care while strengthening the institutions of primary health care by implementing the national health programmes through them, thus building goodwill and trust among the people about public sector health care. This was obvious from the health infrastructure available in India, which was reported as 1,53,655 sub centres, 25,308 primary health centres (PHC) and 5,396 community health centres (CHC) as per the rural health statistics, 2015. The impetus created by NHM would have been capitalised had subsequent policies strengthened the secondary- and tertiary-level health care in the public sector. Instead, the focus has shifted entirely on **publicly funded health insurance schemes (PFHI) such as the PMJAY under Ayushman Bharat since 2018**. PFHI schemes were implemented by the governments of Maharashtra, Andhra Pradesh, Tamil Nadu, Kerala, and others as an add-on to the overall strengthening efforts under the NHM then.

Private health care, the real beneficiary

The real beneficiary of PFHI schemes in the Indian context is private sector health care. First, a health insurance cover ideally implies covering all health-care expenses, globally. It is unique that India's health insurance scheme covers only hospitalisation expenses under the scheme. This is based on the market logic that if **50 crore people (12 crore households are the beneficiaries of PMJAY)** are enrolled in the scheme; only 2.5 crore people will have an actual need for hospitalisation annually as per epidemiological data.

Further, the outsourcing of secondary and tertiary-care services to the private sector at market rates under the scheme is an open acknowledgement by the government of its failure and a lack of intention to strengthen secondary- and tertiary-level public sector health care in the country. The implication is that the remaining 100 crore population who are not covered under any government schemes are forced to have highly commercialised medical care for their illnesses, incurring an expenditure at market rates. Thus, by monopolising the market for health care, private hospitals pretend to offer services to the government at market rates, at the same time ensuring that the remaining two-thirds of the population must depend on them by making sure that public sector health care is weakened.

The last nail in the coffin of the public health system is the recent transformation of sub centres, PHCs and CHCs into health and wellness centres (HWC) in February 2018. The highlight was to declare that 1,50,000 HWCs were established as new institutions in rural areas, when numbers more than that were already in existence (RHS 2015). The proposal was to have a community health officer, expected to render treatment to a rural population by completing a bridge course. This has transformed the original mandate of sub centres from rendering outreach activity to that which provides curative care. Doctoring gained its acceptance through its act of diagnosis, prognosis, and treatment. Instead, the proposal to equip a community health officer to practise medicine minimally results in the new professional becoming a dignified chemist. The failure to offer curative care in its entirety by any institution will shatter the trust of people in those institutions.

The latest of this was in a 2023 directive to rename all the HWCs (sub centres, PHC and CHC) to 'Ayushman Arogya mandir'. One could not find any clear justifications for this name change. Several questions arise on how this name is of significance to a non-Hindi speaking population. How does the term mandir resonate as the title of a secular health institution?

Threat to public health system

Public health challenges are diverse in a country such as India and there is a need to address these across social groups without fail. For the vulnerable and the poor, prevention programmes and health promotion activities become a luxury when their day-to-day livelihoods are not addressed. It is basic primary- and secondary-level curative care that are their felt needs in public health. Historically, institutions of primary health care were entrusted with this responsibility and were delivering preventive and promotion activities close to their home, by making it culturally and contextually relevant.

The major curative care challenge posed across the country is the loss of trust towards health-care providers (private sector due to commercial interests) and public sector due to overcrowding of health care with inadequate infrastructure due to low provisioning.

The government has slashed the limbs of the public health system by not strengthening secondary- and tertiary-level care in the public sector and instead favouring the growth of the private sector. Finally, the institutions of primary health care – the lifeline of India's public health system – were weakened by projecting them as curative care centres, for popularity and branding, without acknowledging their purpose in health programmes and their interconnections with grassroot-level institutions of health care.

The views expressed are personal

Policy paralysis, a weakened public health sector (9 September)

- Public health needs vary across social strata, and government policies are based on available resources to address these needs.
- Public health needs include felt needs, experienced by people based on their living conditions, and projected needs, identified by experts.
- The recent Union Budget has been criticized for insufficient attention to the public health sector.
- Over the last decade, public health policies have been inadequate in addressing people's felt needs.

Public health needs can be divided into three categories:

- Diseases of poverty: These include tuberculosis, malaria, undernutrition, maternal deaths, and food- and water-borne diseases affecting the poor.
- Environmental and infrastructure issues: Pollution, lack of drainage, poor waste management, unsafe food, road accidents, climate change, and rising chronic illnesses, affecting the middle class and the affluent.
- Curative care needs: Healthcare services are categorized into primary, secondary, and tertiary care. The poor rely on primary health centers, while secondary care is underdeveloped. Tertiary care is supported by government schemes like Pradhan Mantri Jan Arogya Yojana (PMJAY) under Ayushman Bharat.

- The National Rural Health Mission (NRHM) launched in 2005, followed by the National Health Mission (NHM) in 2013, focused on strengthening public healthcare and reversing the commercialized approach of the National Health Policy 2002.
- NHM improved public healthcare by supporting primary health institutions, but the shift toward publicly funded health insurance schemes (PFHI), such as PMJAY since 2018, has diverted focus from strengthening secondary and tertiary care in the public sector.
- PFHI schemes were implemented in states like Maharashtra, Andhra Pradesh, Tamil Nadu, and Kerala as additional support alongside NHM.

Private health care, the real beneficiary

- Private sector benefits more from PFHI schemes like Pradhan Mantri Jan Arogya Yojana (PMJAY) than the public sector.
- Unlike global health insurance, India's scheme only covers hospitalization expenses, not comprehensive healthcare.
- With 50 crore people enrolled in PMJAY, only a small percentage (2.5 crore) are expected to need hospitalization each year.
- The government outsources secondary and tertiary care to private hospitals at market rates, admitting it cannot or will not improve public health infrastructure for these services.
- Those not covered by government schemes (about 100 crore people) face expensive, commercialized medical care, depending on private hospitals due to the weakened public sector.
- Sub centres, PHCs, and CHCs were converted into Health and Wellness Centres (HWCs) in 2018, but this was misleading because more such centres already existed before (as per 2015 data).
- The new HWCs have Community Health Officers (CHO) trained with a short bridge course, offering limited medical care, diminishing the quality of curative services.
- This shift undermines public trust in these healthcare institutions, as full curative care is not provided.
- In 2023, a directive renamed HWCs as Ayushman Arogya Mandirs, raising concerns about the relevance of the name, especially in non-Hindi speaking areas, and questioning its appropriateness in a secular health context.

Threat to public health system

- India faces diverse public health challenges that need to be addressed for all social groups.
- For the poor and vulnerable, **primary and secondary curative care** are essential, while prevention and health promotion are often seen as luxuries.
- Historically, **primary health care institutions** handled both preventive and promotion activities, making services accessible and culturally relevant.
- A major issue is the **loss of trust in healthcare providers**: private providers are seen as too commercial, while public facilities are overcrowded and under-resourced.
- The government has weakened the public health system by not investing enough in **secondary and tertiary care** in the public sector, favoring private healthcare growth instead.
- **Primary health care institutions**, which are vital to India's public health system, were weakened by being repositioned as curative care centers, neglecting their original focus on health promotion and prevention at the grassroots level.

Eligibility Criteria for Pradhan Mantri Jan Arogya Yojana (PMJAY) under Ayushman Bharat:

1. Socio-Economic Caste Census (SECC) 2011 Data: PM-JAY targets beneficiaries based on the deprivation and occupational criteria of the Socio-Economic Caste Census (SECC) 2011 for rural and urban areas.

Rural Areas:

- Families living in one-room houses with "kutcha" walls and roofs.
- Families **without adult members** between **16 and 59 years of age**.
- Female-headed households with no adult male member between 16 and 59 years.
- Households with disabled members and no able-bodied adult member.
- Scheduled Caste/Scheduled Tribe households.
- Landless households deriving a major part of their income from manual casual labor.

Urban Areas:

- Occupational categories are considered, such as:
 - Ragpickers
 - Beggars
 - Domestic workers
 - Street vendors
 - Cobblers, hawkers, and others working on streets
 - Construction workers
 - Plumbers, masons, laborers, painters, welders, security guards
 - Coolies and other head-load workers
 - Sanitation workers and gardeners
 - Home-based workers like artisans and handicraft workers
 - Drivers, conductors, cart pullers, rickshaw pullers

2. No Cap on Family Size or Age: Unlike many health insurance schemes, PM-JAY does not impose any cap on the family size, age, or gender of the members.

3. Coverage: PM-JAY provides an annual health cover of **₹5 lakh per family** for secondary and tertiary care hospitalization. This includes nearly 1,393 medical packages, covering surgeries, medical and daycare treatments, cost of medicines, and diagnostics.

4. Automatic Inclusion: Beneficiaries are automatically included in PM-JAY based on the SECC 2011 data without the need for any additional registration process. This ensures that the most vulnerable populations are covered

With or without Chinese companies is the question (9 September)

- After the 2024 general election, Prime Minister Modi remains confident in making India a global manufacturing hub.
- The 'Make in India' project (launched in 2014) and the Production Linked Incentive (PLI) scheme aim to attract both domestic and foreign investment.
- The 2024-25 Union Budget increased funding for the PLI scheme, particularly for electronics manufacturing, from ₹4,499 crore to ₹6,125 crore.
- Research and development in electronics and IT were also given a budget boost from ₹600 crore to ₹1,148 crore.
- Chinese smartphone companies have been major beneficiaries of 'Make in India,' holding over 50% of the Indian smartphone market by the end of 2023.
- These companies succeeded due to their targeted sales, aggressive marketing, and adaptability to Indian tastes.
- Despite political tensions between India and China, including the 2020 Galwan Valley incident, Chinese companies continued to operate, though India increased scrutiny of their investments.
- The Indian government is encouraging these companies to "Indianise" their operations by hiring local executives, including Indian partners, and supporting local manufacturers.
- This strategy is similar to how China developed its own local suppliers, which later expanded into other regions like Southeast Asia.

Attempts at some Indianisation

- Tata Electronics has entered the smartphone manufacturing sector in India by taking over Wistron's operations and is negotiating to acquire Pegatron, both Taiwanese companies that supply Apple.
- Chinese smartphone companies in India are adapting to government policies by bringing in Indian distributors, separating sales and marketing operations for each brand, and partnering with local manufacturers to benefit from the Production Linked Incentive (PLI) scheme.
- Despite political challenges, these companies are finding ways to comply with Indian regulations and continue their operations due to the potential of the large Indian market.
- The Indian government aims to reduce Chinese involvement in manufacturing and attract Taiwanese investments, but there are challenges.
- India currently lacks essential infrastructure, such as a strong supplier network, technological clusters, and consistent power and water supply, needed for large-scale smartphone component manufacturing.
- Chinese companies are hesitant to share technology without clear equity participation.
- The Indian government is easing visa norms for Chinese technicians to support manufacturing but faces difficulties in balancing control over both Indian and Chinese companies.
- The government's Economic Survey suggests focusing on Foreign Direct Investment (FDI) from China rather than only pursuing diversification strategies like China Plus One.
- India needs to balance encouraging local manufacturers and continuing Chinese investment to achieve its goal of becoming a global manufacturing hub.

GS Paper II: India-ASEAN

Periodic reset

India needs to engage with ASEAN consistently on trade and security

P rime Minister Narendra Modi's visit to Brunei and Singapore last week was part of a deliberate focus on India's "Act East" policy by the government in its third tenure. Not since 2018, when ASEAN leaders were in India for a summit and the Republic Day parade, has New Delhi reached out to the region in such a short time span. He is expected to travel to Laos for the ASEAN-India summit, the Philippines, and Indonesia, later this year. In addition, New Delhi has laid out the red carpet for the Prime Ministers of Vietnam and Malaysia. The message to reconnect with each of the countries in South East Asia, and even forge new ties, is well considered and overdue. Mr. Modi's visit was the first bilateral visit by any Indian Prime Minister. This neglect of ties with a country that has strategic ties with the U.S., trade ties with China, and is situated in the middle of ASEAN is telling. While India's trade with the ASEAN region has doubled in the past decade, it has actually declined with Brunei, with India ramping up its oil imports from Russia since 2022. The two sides do not have a strategic partnership, although the leaders discussed defence and geo-strategic issues, and Mr. Modi took a veiled jab at China. The two sides renewed their space cooperation, which hinges on Brunei hosting an ISRO station, and it remains to be seen whether other discussions on trade, investment and energy cooperation will bear fruit. In Singapore, the spotlight during Mr. Modi's visit was on semiconductors, given that Singapore is a major player in all parts of the electronics supply chain. As India seeks more technical expertise and investment in rare earths and chip making and Singapore seeks to defray some of the growing land and labour costs of its semiconductor industry, the two could make a perfect fit, also de-risking the process from U.S.-China-Taiwan tensions, American protectionist policies and Chinese predatory practices. This could also correct the drop in Singapore's FDI levels into India.

Hopes for more intense exchanges in technology, trade and investment can be realised only if the India-ASEAN engagement is more consistent. India's exit from the ASEAN-led RCEP in 2019 was a blow, and cuts India out of a large regional FTA. While New Delhi has refused to revise the decision despite ASEAN's entreaties, it must update the 2009 AITIGA and the 2005 CECA with Singapore. India's commitment to "ASEAN centrality" on all strategic issues in the Indo-Pacific has been warmly received, but it needs to coordinate more closely on geopolitical issues including Myanmar, the South China Sea and Quad engagement. While India's historical ties with the region date more than a millennium, modern ties need a periodic reset, as governments have carried out in the past with the "Look East" policy (1992) and the Modi government's Act East policy (2014).

Periodic reset (9 September)

India needs to engage with ASEAN consistently on trade and security

- Prime Minister Narendra Modi visited Brunei and Singapore as part of India's "Act East" policy.
- This was the first bilateral visit by an Indian Prime Minister to Brunei.
- India's trade with ASEAN has doubled in the past decade, but trade with Brunei has declined due to India increasing oil imports from Russia.
- Brunei and India do not have a strategic partnership, but they discussed defense and geo-strategic issues during the visit.
- The countries renewed space cooperation, with Brunei hosting an ISRO station.
- In Singapore, discussions focused on semiconductors, as Singapore is a key player in the electronics supply chain.
- India is looking for investment in rare earths and chip-making technology from Singapore.
- The partnership could help both countries mitigate risks from U.S.-China-Taiwan tensions and American protectionist policies.
- India's exit from the ASEAN-led RCEP in 2019 has impacted regional trade relations, and there is a need to update the 2009 AITIGA and the 2005 CECA agreements with Singapore.
- While India has historically supported ASEAN's strategic role, it needs closer coordination on issues like Myanmar, the South China Sea, and engagement with the Quad.
- India's "Act East" policy builds on the "Look East" policy from 1992 and focuses on strengthening ties with Southeast Asia.

PCS

Wide open

With more state support, Indian Paralympians are on a high

Following the disappointment of several near-misses in the recent Olympics, India's best-ever show of 29 medals for an 18th place finish in the Paris Paralympics is reason to celebrate. From four medals and 43rd spot in Rio 2016 to 19 medals and 24th rank in Tokyo 2020, this is a significant ascent and depicts the Indian Paralympians' constant improvement in sync with the increased government support. Since the challenges are different, it may not be fair to compare the achievements of the para-athletes with those in the Olympics. India's performance in the 2024 Paralympics reflects its para-athletes' quest for excellence despite the unimaginable odds they face. Of the seven gold, nine silver and 13 bronze medals, the majority (17 in all), came from para-athletics. The javelin throwers and high jumpers contributed the most, with four medals in different categories classified as impairments. Para-badminton (five), para-shooting (four), para-archery (two) and para-judo (one) completed the country's medal tally. Shooter Avani Lekhara and javelin thrower Sumit Antil, who set a new Paralympic record, defended their gold medals, high jumper Mariyappan Thangavelu claimed his third successive medal, 17-year-old armless archer Sheetal Devi became the youngest Indian to win a medal and Harvinder Singh won the first para-archery gold.

Preethi Pal bagged India's first-ever track medal as she picked up a bronze in women's 100m T35 event followed by another in 200m and Kapil Parmar captured India's first para-judo medal. Nagaland's 40-year-old Army man Hokato Sema, who shone as a shot putter despite losing a leg in the line of duty in the prime of his youth, cornered glory to underscore the indomitable human spirit. Overall, the spectators' response to the Paralympics 2024 was heart-warming – organisers sold over two million tickets for the Games. The Stade de France witnessed a near-capacity crowd thronging the iconic venue daily to watch and support the heroic efforts. It was a huge encouragement for the 4,400-plus para-athletes competing in 549 medal events in 22 sports and might contribute to the growth and acceptability of para-sports. It complemented the French authorities' attempt to make the Paralympics more inclusive, which is apparent from the emblem, mascot, and motto – Games Wide Open – used for the Olympics. The successful conduct of the Paris Paralympics and the Indians' praiseworthy performance should draw more government and corporate support for these athletes in India to ensure improved shows on the field and a better life as part of the mainstream.

Wide open (9 September)

With more state support, Indian Paralympians are on a high

- India achieved its best-ever performance in the 2024 Paris Paralympics, winning 29 medals and finishing 18th.
- This is a big improvement from 19 medals and 24th place in the Tokyo 2020 Paralympics, and 4 medals and 43rd place in Rio 2016.
- The success reflects Indian Paralympians' progress with increased government support.
- Comparing para-athletes' achievements with Olympians may not be fair due to different challenges they face.
- India won 7 gold, 9 silver, and 13 bronze medals, with the majority (17) coming from para-athletics, including javelin throw and high jump.
- Other medal-winning sports were para-badminton (5 medals), para-shooting (4), para-archery (2), and para-judo (1).
- Highlights included Avani Lekhara and Sumit Antil defending their gold medals, Mariyappan Thangavelu winning his third consecutive Paralympic medal, and Sheetal Devi becoming the youngest Indian medalist at 17.
- Preethi Pal won India's first-ever track medal in women's 100m T35, followed by another in 200m, and Kapil Parmar secured India's first para-judo medal.
- Hokato Sema, a 40-year-old Army man from Nagaland, won a shot put medal after losing a leg while on duty, showing remarkable human spirit.
- The Paris Paralympics saw strong public support, with over two million tickets sold and daily near-capacity crowds at the Stade de France.
- The event featured 4,400 para-athletes in 22 sports, promoting the growth of para-sports globally.
- The Paris Paralympics focused on inclusivity, reflected in its emblem, mascot, and motto, "Games Wide Open."
- India's success should lead to more government and corporate support for para-athletes to enhance future performances and improve their lives.

The vulnerability of live-in couples

GS Paper I: Society

In 2022, investigations began into the disappearance of a 26-year-old woman, Shraddha Walkar. Her murder, allegedly committed by her live-in partner, ignited a media trial. Sections of the media obtained her social media conversations, and financial and travel details, from the police and her friends to retrace her key life decisions. The case, framed as violence within an inter-faith live-in relationship, failed to provoke debates on violations of personal data as a breach of the individual's privacy. The trial made the crime a precautionary tale against deviating from conventional social norms.

Recent surveys show that arranged marriages are the norm in India. The choices of the youth are shaped by societal pressures and the lack of legal protection available to interfaith couples and those in live-in relationships. Shraddha's case reinforced this sensibility behind relationships.

India's democracy celebrates pluralism of social, religious, and political practices institutionally and in the everyday lives of citizens. The mechanisms of justice and law arguably secure the rights of each individual enshrined in the Constitution. This article connects the recent crimes against unconventional couples and the legal protection possible for them.

Seeking justice

The Domestic Violence Act, 2005, extends to live-in relationships. In 2006, the Supreme Court, in a decision on the complaint of a woman, Lata Singh, against her family's threats to her husband, upheld inter-caste marriages. In following judgments, the Supreme Court extended the same protection to live-in relationships, stating, "Live-in or marriage-like relationship is neither a crime nor a sin though socially unacceptable in this country". The law offers protection against domestic violence to women in such setups and property rights to children of



Megha Sharma

Assistant Professor
National Law School
India University
Bangalore

The restrictive nature of legal provisions for live-in couples allows social conservatism to find its way back to institutions of justice

such couples. However, the complaints mostly seek protection against women's parents.

In *Chawali v. State of U.P.* (2015), the Allahabad High Court, building on the conservatism towards marriage, warned against the emotional and psychological consequences of such alliances: "Not only prostitution but sometimes, as a result of 'live-in relationship', a woman faces deportation... or involvement in the commission of crimes. It is not that every live-in relationship may result with ill consequences... However, Courts have no parameter to find out the intent of boys and girls who are... in live-in relationship."

Legal ambiguity has been a central issue in such cases, as these relationships are not illegal, but they do not offer the rights and social acceptance possible with marriages. The 'intent' becomes narrowly defined as the monogamous nature of the couple's relationship and leaves out any other forms of companionship. In *Chawali*, the Court said, "Fundamental rights securing the individual rights of the citizens should be looked into from an Indian perspective." Judgments view live-in relationships as a western concept. They separate western individual rights and protection from the Indian traditional and customary practices that place family as the basis of socialisation.

The Court's appeal to a unified Indian perspective excludes the class and social inequalities that can impact citizens' access to law. A homogenous culture overlooks the divergence in the experiences of women across caste, economic groups, literacy levels, and settlements. These aspects independently and collectively determine the demands for protection and the possibility of accessing formal legal mechanisms.

Negotiating law

The rights of live-in couples weighed against the rights of

couples in marriages are tolerated but not accepted as natural to India. The judiciary's interpretations expose the couples to vulnerability by legitimising customary practices through the trials. In 2024, for instance, the Madhya Pradesh High Court dismissed an interfaith couple's pleas seeking police protection against the woman's family and registration of their marriage, observing that the union of a Muslim man with a "fire-worshipper" woman is not a valid wedding as per Muslim law. Further, the couple could not prove their financial dependence or long-term residence, which were critical to proving their relationship akin to marriage. The rules defining the criteria for establishing live-in relations do not account for the impossibility of opening a bank account or cohabiting in India's rental market without proof of marriage or family ties.

The restrictive nature of such provisions allows social conservatism to find its way back to the secular institutions of justice in modern India. Under the garb of appeals to Indian traditions and perspectives, the judgments promote legal protection only through marriage. A 2023 High Court order held, "It reserves many rights and privileges to married persons to preserve and encourage the institution of marriage. The Supreme Court is simply accepting a social reality, and it has no intention to unravel the fabric of Indian family life".

India's religious and legal pluralism offers possibilities for rethinking interconnections between law and social practices. There are many efforts by non-state actors to support individuals expressing their autonomy. The success of these initiatives should lead to changes in attitudes towards socialisation and create supportive community networks, while promoting deliberations over the role of law as a corrective check to prevalent discrimination.

The vulnerability of live-in couples (9 September)

- In 2022, a 26-year-old woman, Shraddha Walkar, disappeared, and her live-in partner was accused of her murder.
- The case received massive media attention, with private details like social media conversations and financial data being exposed, but it did not raise concerns about privacy violations.
- The media portrayed the crime as a warning against unconventional relationships, especially inter-faith live-in relationships.

- Arranged marriages are common in India, and societal pressures, along with a lack of legal protection for interfaith and live-in couples, influence young people's choices.
- India's Constitution ensures individual rights, but recent crimes highlight the need for better legal protection for unconventional couples.
- The Domestic Violence Act, 2005, provides protection to women in live-in relationships, and the Supreme Court has upheld inter-caste marriages and offered protections for live-in relationships.
- Despite these protections, many complaints in such cases are often against parents of the women involved.
- In 2015, the Allahabad High Court warned of potential emotional and psychological risks in live-in relationships, though not all such relationships have negative outcomes.
- Courts find it difficult to determine the true intentions of those involved in live-in relationships.
- Legal ambiguity surrounds live-in relationships in India. While not illegal, these relationships lack the rights and social acceptance of marriage.
- The "intent" of such relationships is judged by monogamy, excluding other forms of companionship.
- Courts often view live-in relationships as a "Western" concept, contrasting them with Indian traditional practices that prioritize family.
- This perspective ignores social inequalities like caste, economic status, and education that affect access to legal rights.
- Live-in couples' rights are tolerated but not fully accepted as natural in India.
- Courts sometimes uphold conservative views, making couples more vulnerable. For example, in 2024, the Madhya Pradesh High Court dismissed an interfaith couple's request for protection because their union wasn't valid under Muslim law.
- Live-in couples face practical challenges, such as opening bank accounts or renting homes, due to lack of proof of marriage or family ties.
- These legal and societal restrictions allow conservative values to persist within modern legal systems.
- Many judgments emphasize marriage as the primary source of legal protection, reinforcing the traditional family structure.
- India's religious and legal diversity presents opportunities to rethink how law and social practices are connected.
- Non-state efforts are helping individuals exercise autonomy, and such initiatives could shift societal attitudes and promote more inclusive legal protections.

Samagra Shiksha fund delay punishes role-model States

The Centre's withholding of funds has more to do with acceptance of the PM Shri scheme than the actual outcomes of the Samagra Shiksha scheme

GS Paper II: Education

DATA POINT

Sambavi Parthasarathy
Vignesh Radhakrishnan

Over the past year, the Centre has withheld funds of the Samagra Shiksha scheme (SSA) to at least five Opposition-ruled States – Tamil Nadu, Kerala, Punjab, West Bengal, and Delhi. The SSA is an overarching programme for the school education sector. Data show that the Centre's decision has more to do with acceptance of the PM Shri scheme, which aims to develop "exemplar model schools, that offer leadership to other schools", than the outcomes of the SSA. In some cases, unwillingness to accept the National Education Policy in its entirety was also a reason.

The fees for students enrolled under the Right to Education depends on SSA funds. Salary delays for teachers have also been reported in these States. Owing to the financial burden, Kerala and Punjab relented and Delhi too may agree to the Centre's terms.

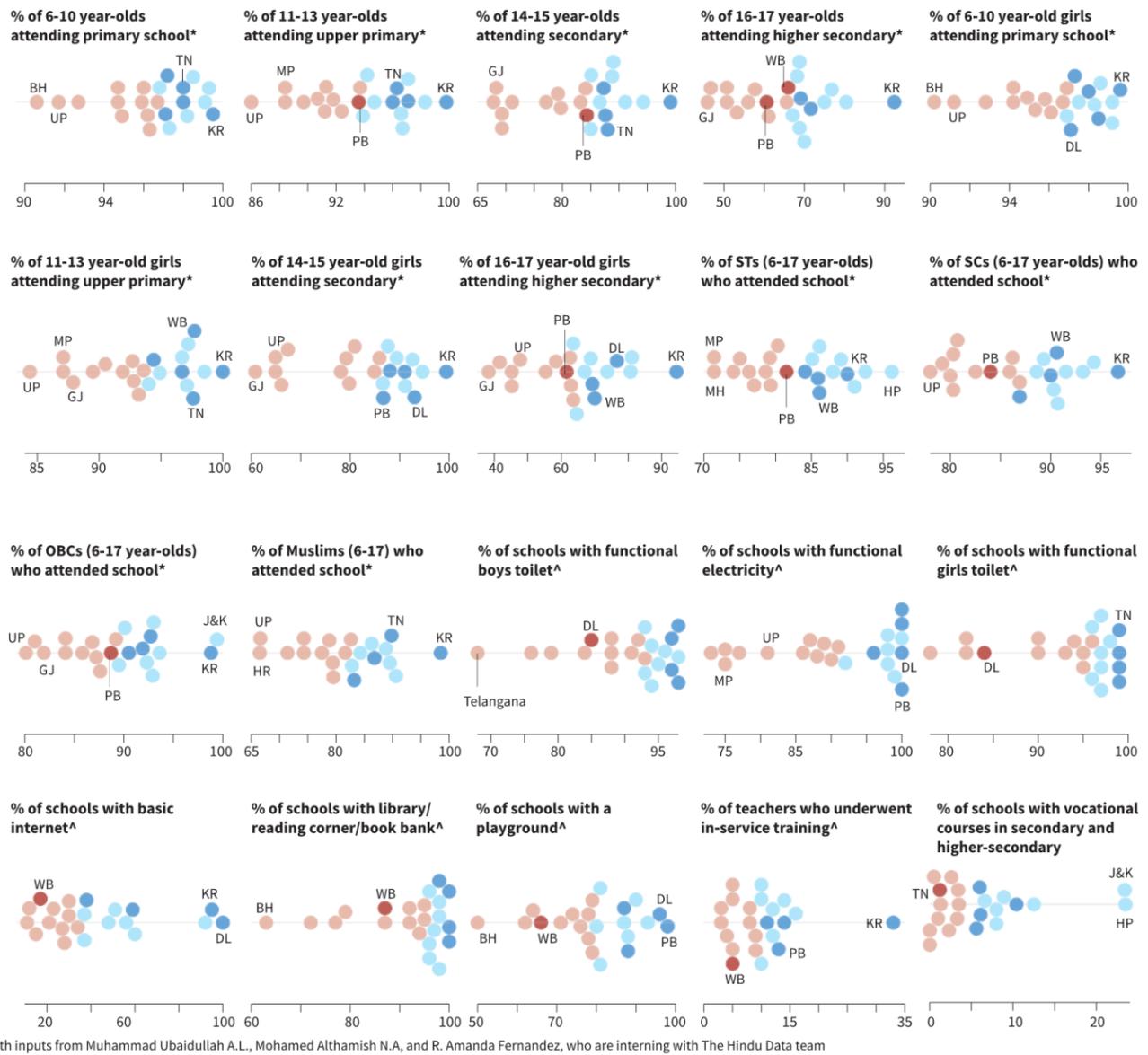
By delaying the funds, the Centre has penalised the States that are at the forefront of achieving the SSA's major objectives, such as bridging social and gender gaps, ensuring equity and inclusion in school education, promoting vocational education, ensuring school provisions, and training teachers.

The graph compares 22 major States on 20 objectives of the SSA. On all 20 objectives, Kerala is in the top half (best 11 States) of the list, even leading in many. Tamil Nadu is in the top half on 19 objectives. Delhi is in the top half on 18 objectives, and West Bengal on 15. Punjab features in the top half for 12 of the objectives.

Among the States which got the funds, Gujarat is in the top half for only eight of the 20 objectives. Uttar Pradesh and Madhya Pradesh are in the top half for three objectives each, and Bihar for two.

Top rankers denied funds

The data for the charts are sourced from the National Family Health Survey 2019-21 (marked * in graph), and U-DISE (marked ^). In each measure, States in the top half (best 11) are marked in blue, bottom half are marked in red. If Tamil Nadu, Kerala, Punjab, Delhi or West Bengal are in the top half, they are highlighted as blue, if they are in the bottom half they are highlighted as red. In the graph, BH: Bihar, KR: Kerala, PB: Punjab, GJ: Gujarat, HP: Himachal Pradesh



With inputs from Muhammad Ubaidullah A.L., Mohamed Althamish N.A, and R. Amanda Fernandez, who are interning with The Hindu Data team

Samagra Shiksha fund delay punishes role-model States (9 September)

The Centre's withholding of funds has more to do with acceptance of the PM Shri scheme than the actual outcomes of the Samagra Shiksha scheme

- The central government has withheld Samagra Shiksha scheme (SSA) funds from five opposition-ruled states: Tamil Nadu, Kerala, Punjab, West Bengal, and Delhi.
- SSA is a major program for school education, and the withheld funds affect the functioning of schools, including fees for students under the Right to Education and teachers' salaries.
- The funds have been withheld partly due to these states' reluctance to accept the PM Shri scheme, which aims to create model schools, and in some cases, their refusal to fully implement the National Education Policy.
- Kerala and Punjab have agreed to the Centre's conditions due to financial strain, and Delhi may follow.
- These states are leading in achieving key SSA goals like gender equality, inclusion, and teacher training, but they are being penalized despite their good performance.
- Data show Kerala ranks in the top half (best-performing) for all 20 SSA objectives, Tamil Nadu for 19, Delhi for 18, West Bengal for 15, and Punjab for 12.
- In contrast, Gujarat, which received funds, ranks in the top half for only 8 objectives, Uttar Pradesh for 3, Madhya Pradesh for 3, and Bihar for 2.

On uncommon cyclones in the Arabian Sea

Why does the north Indian ocean have two cyclone seasons while all other cyclogenesis regions have just one? How is climate change affecting the region and adding to the unusual activity? Why was there a lot of excitement over Asna, a rare August cyclone?

GS Paper I: Geography

EXPLAINER

Raghu Murtugudde

The story so far:

The north Indian Ocean supplies a large part of the moisture required to generate the 200 lakh crore or so buckets of water during the summer monsoon. That implies a lot of evaporation from the Arabian Sea and the Bay of Bengal, which requires these seas to be warm enough to allow evaporation. Warm tropical oceans also tend to be hotbeds of cyclones. And yet, the north Indian Ocean is the least active region of the world's oceans vis-à-vis the number of cyclones. The combination of some factors that favour cyclogenesis and some that suppress it make this area unusual in terms of cyclone seasons, numbers, and the response of the ocean and the cyclones to global warming.

Why is the Indian Ocean unique?

The Indian Ocean receives a lot of attention for its monsoonal circulation and the dramatic seasonal wind reversals to the north of the equator. But it's also unique because it has 'oceanic tunnels' connecting it to the Pacific Ocean and the Southern Ocean. The Pacific tunnel brings a significant amount of warm water every year in the upper 500 m while the Southern Ocean tunnel brings in cooler waters below about 1 km.

The Arabian Sea warms rapidly during the pre-monsoon season as the Sun crosses over to the northern hemisphere. The Bay of Bengal is relatively warmer than the Arabian Sea but warms further and begins to produce atmospheric convection and rainfall. The trough that eventually leads to the monsoon onset over Kerala arrives in mid-May itself over the Bay of Bengal. The post-monsoon season is the northeast monsoon season for India, and produces significant amounts of rain over several States.

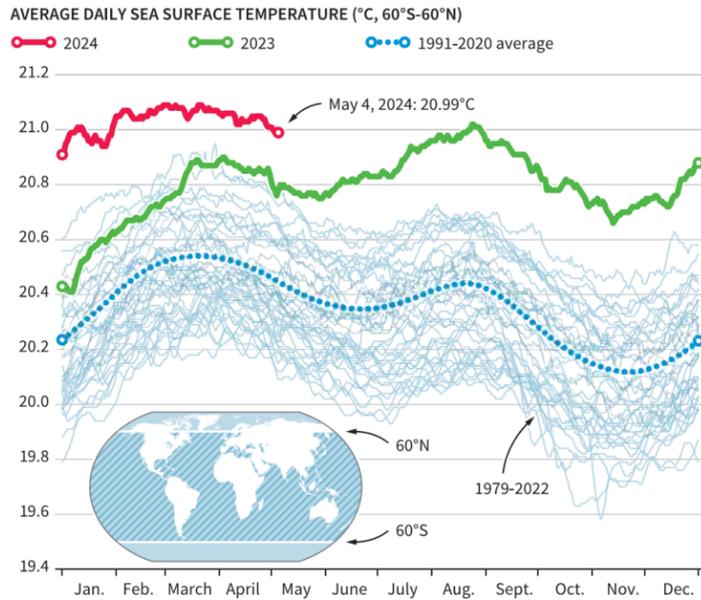
All these wind patterns and sea surface temperatures influence cyclogenesis throughout the year over the north Indian Ocean and sustain the stark contrast in cyclogenesis between the Arabian Sea and the Bay of Bengal.

Does climate change play a part too?

Climate change amplifies the uniqueness of the Indian Ocean. More heat is coming in from the Pacific Ocean now while the Southern Ocean is also pushing in warmer waters. The Indian Ocean is warming rapidly due to these inputs, plus atmospheric changes in winds and humidity. The north Indian Ocean and the monsoon are now responding to

Warming temperatures

More heat is coming in from the Pacific Ocean now while the Southern Ocean is also pushing in warmer waters. The Indian Ocean is warming rapidly due to these inputs, plus atmospheric changes in winds and humidity



Sources: BBC, Copernicus, ECMWF

© GRAPHIC NEWS

related climate change drivers from tropical oceans as well as from pole-to-pole influences.

The Ocean's rapid warming is now reported to be affecting the heat uptake by the Pacific Ocean and the sinking of heavy waters in the north Atlantic Ocean. The Indian Ocean is essentially acting like a clearinghouse for ocean warming during climate change. All these region-specific idiosyncrasies play into cyclogenesis, cyclone numbers, and their responses to climate change over the Indian Ocean.

Are cyclones common?

During the monsoon itself, the strong southwesterly winds – or the so-called low-level jet – drive a strong evaporation and mixing of cold subsurface waters with the surface waters. Thus the Arabian Sea becomes significantly cooler during the pre-monsoon season. The strong convective activity over the Bay of Bengal produces many low-pressure, or cyclonic, systems during the monsoon but they rarely grow into cyclones.

This is because the strong monsoon winds vary in strength and direction from the surface to the middle atmosphere. This variation is called vertical shear and it tends to strip off the energy from any

cyclone that may be trying to grow.

The net result is that the dominant cyclone season is uniquely split into the pre- and post-monsoon seasons over the north Indian Ocean. All other cyclogenesis regions have a single cyclone season during the year.

The main impact of the monsoonal circulation is that the warm ocean, the heat content, and the atmospheric convection favour cyclogenesis over the north Indian Ocean. This leads to cyclones being formed during the pre-monsoon and the post-monsoon seasons. However, the Arabian Sea has much less convective activity during the pre-monsoon and is relatively less prone to cyclogenesis. The northeast monsoon and dry continental air ends up cooling the Arabian Sea post-monsoon.

The number of cyclones in the Arabian Sea is thus about half of that over the Bay of Bengal in both seasons.

Thus, the cooler temperatures, stronger wind shear, and the relatively low convective activity over the Arabian Sea make the Arabian Sea relatively a desert for cyclones.

Some upward trend in the number of cyclones was reported from 2010 onwards but the Arabian Sea has been eerily calm the last few years.

What is Asna?

There was a lot of excitement recently about a rare August cyclone – named 'Asna' – born from the transition of a strong land-born depression onto the warm Arabian Sea. This is the first north Indian Ocean cyclone in August since 1981. The depression that grew into this cyclone itself was unusual in terms of its powerful growth over land. Low-pressure systems are typically born over the Bay of Bengal and traverse the core monsoon zone to bring about 60% of the total seasonal rainfall.

These ocean-born depressions can feed off of prior rainfall (as soil moisture) as they pass over India. There is some evidence that these low-pressure systems are now contributing to extreme rainfall events, but they have been stuck in a corridor for over a century. The unusual growth of the low-pressure system that brought deluges to western India fed off the soil moisture from excess rainfall since the beginning of the season. It was big enough to start hitting the warm northern Arabian Sea as it approached the western end of land. The ocean supplied the energy required for convection and to retain, and even, grow in strength.

Once its transition to the ocean is complete, it grew into a regular cyclone, but as a remarkably unusual land-born cyclone. The warming over the Arabian Sea has already been reported to be related to the northward shift of the low-level jet, which itself is driven by rapid warming over West Asia. Cyclonic storm Asna did cause nearly 50 deaths and left a trail of damages to crops and properties. It dissipated over the ocean eventually due to dry desert air being entrained into the circulation.

As the English writer Daniel Defoe said, "Expect nothing and you'll always be surprised." The warm 2023-2024 that resulted from a combination of global warming and El Niño, with a likely contribution from underwater volcanic eruptions, has produced plenty of surprises in terms of extreme events across the planet. The monsoon's evolution has also been unusual, especially since the forecasted strong La Niña hasn't emerged yet. The rainfall distribution remained as unpredictable as ever with a wet peninsular India and a strange mix of wet and dry regions over the country's north.

A low-pressure system is unusual but its amplification over land is. Its dash across land onto the ocean is another unexpected event. We didn't expect it and obviously were duly surprised.

Raghu Murtugudde is professor, IIT Bombay, and emeritus professor, University of Maryland.

THE GIST

The Indian Ocean receives a lot of attention for its monsoonal circulation and the dramatic seasonal wind reversals to the north of the equator. But it's also unique because it has 'oceanic tunnels' connecting it to the Pacific Ocean and the Southern Ocean.

The main impact of the monsoonal circulation is that the warm ocean, the heat content, and the atmospheric convection favour cyclogenesis over the north Indian Ocean. This leads to cyclones being formed during the pre-monsoon and the post-monsoon seasons.

There is a lot of excitement right now about a rare August cyclone – named 'Asna' – born from the transition of a strong land-born depression onto the warm Arabian Sea. This is the first north Indian Ocean cyclone in August since 1981.

On uncommon cyclones in the Arabian Sea (9 September)

Why does the north Indian ocean have two cyclone seasons while all other cyclogenesis regions have just one? How is climate change affecting the region and adding to the unusual activity? Why was there a lot of excitement over Asna, a rare August cyclone?

- The north Indian Ocean provides much of the moisture needed for the summer monsoon, through evaporation from the warm Arabian Sea and Bay of Bengal.
- Despite this, the north Indian Ocean has fewer cyclones compared to other oceans, due to a mix of factors that both favor and suppress cyclone formation.
- The Indian Ocean is unique because it has 'oceanic tunnels' connecting it to the Pacific Ocean and the Southern Ocean.
 - The Pacific tunnel brings warm water into the upper 500 meters of the Indian Ocean.
 - The Southern Ocean tunnel brings cooler water below about 1 kilometer.
- The Arabian Sea warms up quickly before the monsoon season, while the Bay of Bengal is warmer and heats up further, leading to increased rainfall and atmospheric convection.
- The monsoon onset in Kerala begins around mid-May, and the post-monsoon northeast monsoon season brings significant rain to several Indian states.
- Wind patterns and sea surface temperatures influence cyclone formation throughout the year, causing a notable difference in cyclone activity between the Arabian Sea and the Bay of Bengal.

Does climate change play a part too?

- Climate change is intensifying the unique characteristics of the Indian Ocean.
- More warm water is coming from the Pacific Ocean and Southern Ocean.
- The Indian Ocean is warming rapidly due to these inputs and changes in atmospheric conditions.
- This rapid warming affects heat uptake by the Pacific Ocean and heavy water sinking in the North Atlantic Ocean.
- The Indian Ocean is acting as a major area for ocean warming during climate change.

Cyclone patterns in the Indian Ocean:

- During the monsoon, strong southwesterly winds cause significant evaporation and mix cold subsurface waters with surface waters, cooling the Arabian Sea.
- The Bay of Bengal experiences strong convective activity during the monsoon, creating many low-pressure systems, but these rarely develop into full cyclones due to varying wind directions and strengths (vertical shear) that disrupt cyclone development.
- Cyclone seasons are split into pre-monsoon and post-monsoon periods in the north Indian Ocean, unlike other regions which have a single cyclone season.
- The warm ocean, high heat content, and atmospheric convection support cyclone formation in pre-monsoon and post-monsoon seasons.
- The Arabian Sea has less convective activity and cooler temperatures post-monsoon, making it less prone to cyclones compared to the Bay of Bengal.
- The Arabian Sea experiences about half the number of cyclones as the Bay of Bengal in both seasons.
- Cooler temperatures, stronger wind shear, and lower convective activity make the Arabian Sea relatively calm for cyclones.
- There has been a slight increase in cyclone numbers since 2010, but the Arabian Sea has been unusually calm in recent years.

What is Asna?

- Cyclone ‘Asna’ in August 2023 was a rare event
- It was the first cyclone in the north Indian Ocean in August since 1981.
- Formed from a powerful land-born depression that transitioned to the warm Arabian Sea.
- Usually start over the Bay of Bengal and move across India, contributing about 60% of seasonal rainfall.
- They can cause extreme rainfall events and feed off soil moisture from previous rains.

Unusual aspects of Cyclone Asna:

- The depression grew unusually powerful over land, fed by excess soil moisture.
- Transitioned to the Arabian Sea, which provided the necessary energy for its growth into a cyclone.
- Asna became a regular cyclone but was unusual due to its land-born origins.

Impact and outcome:

- The cyclone caused around 50 deaths and significant damage to crops and property.
- It eventually dissipated over the ocean due to dry desert air mixing into the cyclone's circulation.

Climate context:

- The warm 2023-2024 season, influenced by global warming, El Niño, and possibly underwater volcanic eruptions, brought many extreme weather events.
- The monsoon was unpredictable, with wet conditions in peninsular India and varying rainfall across the northern regions.

Overall surprise:

- The land-born depression amplifying into a cyclone and its movement onto the ocean was unexpected and surprising.

Tropical Cyclone Areas:

- Norther Australia, Caribbean sea area, West/East Africa, Indian subcontinent, South China sea.

Name of the county/continent	Name of the tropical cyclone
China/Japan	Typhoon
Philippines	Baguio
Caribbean	Hurrican
Australia	Willy-willies

India

Toofan/Chakrawats

Conditions for formation of tropical cyclones:

- Takes birth only overwater body.
- Needs a good amount of moisture.
- Needs a temperature of 26.5 degrees centigrade.
- Enough Coriolis force is needed (rotational force of earth)
- Pre-existence of very low-pressure area.
- The vertical wind shear should be low.



How changes in the level of Arctic sea ice can change monsoon patterns in India (September)

Unpredictable, erratic rainfall has become the norm for the Indian monsoon. New research reveals that less sea ice in the central Arctic leads to lower rain in western and peninsular India but more rain in central and northern India

- Heavy rains have caused major problems in India's southeast, with at least 17 dead in Andhra Pradesh and many homeless in Telangana.
- The Indian Meteorological Department warns of more heavy rains in Gujarat, Himachal Pradesh, and Delhi.
- Rain patterns are increasingly unpredictable, leading to both droughts and floods.
- Climate change is a major factor in these changing patterns.
- Research shows that Arctic sea ice changes also impact the Indian monsoon.
- The Indian summer monsoon occurs from July to September, with most rain in July and August.
- In summer, land heats up faster than the ocean, creating low pressure at the Tropic of Cancer.
- Trade winds from the southeast are deflected towards India, picking up moisture from the Arabian Sea and bringing rain.
- The monsoon splits into two branches: one brings rain to the west coast from the Arabian Sea, and the other brings rain to the east and northeast from the Bay of Bengal.
- The two branches converge over Punjab and Himachal Pradesh.
- Recent studies show that sea surface temperatures in the Indian, Atlantic, and Pacific Oceans, as well as a large-scale atmospheric wave called the circum-global teleconnection, affect the monsoon.

How changes in the level of Arctic sea ice can change monsoon patterns in India

Unpredictable, erratic rainfall has become the norm for the Indian monsoon. New research reveals that less sea ice in the central Arctic leads to lower rain in western and peninsular India but more rain in central and northern India

GS Paper I: Geography

Arkatapa Basu

Yadav, Juhi et al, 'Contrasting response of regional spring Arctic Sea ice variations on Indian summer monsoon rainfall', *Remote Sensing of Environment*, Vol 311, September 1, 2024.

Incessant rainfall has wreaked havoc in India's southeast, leaving at least 17 dead in Andhra Pradesh and thousands homeless and at the mercy of floods in Telangana. The Indian Meteorological Department has also warned of heavy rains in parts of Gujarat, Himachal Pradesh, and Delhi.

Unpredictable, erratic rainfall has become the norm for the Indian monsoon. Once a bringer of relief and hope to the subcontinent, these rains are now a herald of drought and floods.

Climate change is an important reason why. However, a closer look into climate models shows the intricate play of surface temperature, pressure gradients, air currents and even sea ice that is responsible for bringing rain to the Indian landmass. In a study published in the journal *Remote Sensing of Environment* in June, researchers from India's National Centre for Polar and Ocean Research (NCPOR), under the Ministry of Earth Sciences, and South Korea's Korea Polar Research Institute have found that seasonal changes in the Arctic sea ice affect the Indian monsoon as well.

Making of a monsoon

The Indian summer monsoon rainfall (ISMR) over the Indian subcontinent, from July to September, and with most of the rains recorded in July and August, is one of the most prominent monsoon systems in the world.

In summer months, sunlight warms the

Central Asian and Indian landmass more and faster than the surrounding ocean. This creates a low pressure band at the Tropic of Cancer called the intertropical convergence zone. Trade winds blowing from the southeast are subsequently deflected towards the Indian landmass due to the Coriolis force and have low pressure after they cross the equator. As they blow over the Arabian Sea, the winds pick up moisture and deposit that as rain over India.

Over the landmass itself, this southwest monsoon splits into two. The Arabian Sea arm brings rain to the west coast while the other arm travels to the Bay of Bengal and brings rain to India's eastern and northeastern parts. The arms finally converge over Punjab and Himachal Pradesh as the Arabian Sea arm moves inward and the Bay of Bengal arm moves along the Himalaya.

The ISMR is much more complex than scientists first anticipated. In the last two decades, climate models have shown that the surface temperatures of the Indian, the Atlantic, and the Pacific Oceans affect the ISMR. The circum-global teleconnection (CGT), a large-scale atmospheric wave flowing at the mid-latitudes, seemed to significantly influence the monsoon as well.

The influence of Arctic sea ice

In recent years, scientists have also suggested that the declining levels of Arctic sea ice, due to climate change, could influence the monsoon's temperament. In the new study, researchers used observational data from 1980 to 2020 and climate models (specifically Coupled Model Intercomparison Project Phases 5 and 6) to check how Arctic sea ice levels affect atmospheric circulations that in turn

influence the ISMR.

The results revealed distinct and at times contrasting patterns. According to the paper, less sea ice in the central Arctic leads to lower rain in western and peninsular India but more rain in central and northern India. On the other hand, lower sea ice levels in the upper latitudes, particularly in the Barents-Kara Sea region encompassing the Hudson Bay, the Gulf of St. Lawrence and the Sea of Okhotsk, delay the monsoon's onset and render it more unpredictable.

Several atmospheric systems also influence this pattern. The scientists found that when sea ice levels in the central Arctic increase, the heat transferred from the ocean to the atmosphere triggers a cyclonic circulation at slightly lower latitudes, like in the north Atlantic. This bolsters the Rossby waves, fast-flowing streams of air high in the atmosphere created by the earth's rotation and differences in temperature and weather systems that move west to east. "To put it simply, imagine giant loops in a river of air high above us. These loops can push warm or cold air across the planet and steer storms around, changing weather patterns as they go," Avinash Kumar, an NCPOR scientist and one of the study's co-authors, told *The Hindu*. The enhanced Rossby waves result in high pressure over northwest India and low pressure over the Mediterranean region. This in turn strengthens a narrow, concentrated band of wind, called the Asian jet stream, over the Caspian Sea, causing the subtropical easterly jet – a jet stream blowing over the Indian subcontinent during summer – to shift northward. As a result, an anomalous high pressure region is created over Central Asia, disrupting atmospheric stability over the Indian landmass and

bringing more rain over western and peninsular India.

On the other hand, low sea ice over the Barents-Kara Sea region triggers a series of air currents that produce an anomalous high pressure over southwest China. This correlates with a positive Arctic Oscillation – high pressure over the northern Atlantic and Pacific oceans along with a weakening of the CGT, which connects weather events in different parts of the world.

As sea ice levels decrease in the region, heat rises from the Barents-Kara sea, creating an anticyclonic circulation (calm, clear skies) over northwest Europe. This disturbs the upper atmospheric region over subtropical Asia and India.

This instability, coupled with high surface temperature of the Arabian Sea and the moisture picked up from the surrounding water bodies promotes high rainfall over northeastern India while leaving central and northwest regions of the country without much.

Does climate change also play a role?

Now that scientists know a little more about the forces that conspire to bring or withhold rain over India, what can we say about the role of climate change?

"Climate change, by accelerating the reduction of Arctic sea ice, exacerbates the variability and unpredictability of the ISMR," Dr. Kumar said. "Lower Arctic sea ice can lead to more frequent and severe droughts in some regions while causing excessive rainfall and flooding in others."

Apart from highlighting the physical pathways in which the Arctic sea ice affects the Indian monsoon, the current study shows the urgent need to expand research on climate dynamics and for scientists to prepare more accurate forecasts of the ever-changing monsoons.

The influence of Arctic sea ice

- Scientists are studying how decreasing Arctic sea ice due to climate change affects the Indian monsoon.
- They analyzed data from 1980 to 2020 and used climate models to see these effects.
- Findings show that less sea ice in the central Arctic means:
 - Less rain in western and peninsular India.
 - More rain in central and northern India.
- Less sea ice in the upper latitudes (e.g., Barents-Kara Sea region) can:
 - Delay the monsoon's start.
 - Make it more unpredictable.

Atmospheric systems influenced by sea ice changes include:

- Increased sea ice in the central Arctic can lead to more heat transfer to the atmosphere.
- This triggers cyclonic circulation and enhances Rossby waves (high-altitude air currents).
- These waves can shift weather patterns, creating high pressure over northwest India and low pressure over the Mediterranean.
- This affects the Asian jet stream and causes a high-pressure region over Central Asia.
- The result is more rain in western and peninsular India due to disrupted atmospheric stability.
- Low sea ice in the Barents-Kara Sea region triggers air currents that cause high pressure over southwest China.
- This links with a positive Arctic Oscillation, leading to high pressure over the northern Atlantic and Pacific Oceans and weakening the CGT (a global weather pattern connection).
- As sea ice decreases, heat rises from the Barents-Kara Sea, creating calm, clear skies over northwest Europe.
- This disrupts the upper atmosphere over subtropical Asia and India.
- The instability, combined with warm Arabian Sea temperatures and moisture, leads to heavy rainfall in northeastern India.

- Meanwhile, central and northwest India receive less rain.
- Climate change, by reducing Arctic sea ice, makes the Indian monsoon more unpredictable, leading to both severe droughts and heavy flooding.
- The study emphasizes the need for more research and better monsoon forecasting to address these changing patterns.

Youth in Punjab look to greener pastures abroad to make a living (9 September)

Periodic Labour Force Survey shows the unemployment rate in Punjab to be 7.7%, which is above the national rate of 6.7%.; the State is seeing a steady rise in emigration with approximately 13.34% of rural households having at least one member migrated, indicates a recent study

- Ranjandeep Singh, a 22-year-old BA graduate from Malout, Punjab, is preparing for the IELTS exam to migrate abroad, mainly due to a lack of suitable job opportunities.
- He worked as a security guard and in a sales job but found the wages too low and the work conditions difficult.
- He now plans to go to Canada for better study and job opportunities.
- His family owns 4-5 acres of farmland in Karamgarh.
- In Sangrur, on July 28, a group of unemployed youths under the banner of 'Punjab Berozgar Sanjha Morcha' protested near the Chief Minister's residence.
- They demanded government jobs and blamed the AAP government for ignoring their concerns.
- Raman Kumar, a 41-year-old B.Ed graduate who passed his teacher eligibility test in 2018, is frustrated as he still hasn't secured a government job.
- Sukhwinder Singh Dhilwan leads a group demanding the Punjab government fill vacant posts in health and education sectors, including teacher positions and health workers.
- They are also asking for age relaxation for government job applicants and quicker recruitment for art and craft teachers.
- A survey (Jan-March 2024) shows Punjab's overall unemployment rate is 7.7%, higher than the national rate of 6.7%.
- In urban areas, unemployment is higher among women (10.9%) than men (6.8%).
- Youth unemployment (ages 15-29) in urban areas is 17.4%, with 15% among men and 26% among women.
- Economist Dr. Lakhwinder Singh notes that 80% of employed youth in Punjab are dissatisfied with their jobs, the highest dissatisfaction rate in India.
- He suggests Punjab's slow economic growth and low investment are key reasons for high unemployment.
- Dr. Singh recommends the Punjab government invest in capital formation, technological sectors, and encourage private investment to create better jobs.
- A Punjab Agricultural University study shows an increase in migration, with 13.34% of rural households having at least one emigrant.
- Main reasons for migration include low income, lack of job opportunities, and corruption.
- The Punjab government claims to be working to improve employment rates.

Brazil's LIDE eyes boosting trade with India (9 September)

- LIDE, a business leaders' organization from São Paulo, Brazil, has opened an office in Mumbai to boost trade between India and Latin American countries, especially Brazil.
- This announcement comes as Brazil prepares to host the G-20 summit.
- LIDE focuses on promoting free enterprise, innovation, and economic growth, and has offices in over 20 countries, covering 34 sectors.
- A four-day conference in India is planned for August 2025, with 150 companies from Brazil, Latin America, and other countries participating.
- LIDE aims to strengthen economic ties between Brazil and India, especially in agriculture, aerospace, defense, technology, oil & gas, pharmaceuticals, sustainability, tourism, and minerals.
- LIDE leaders see potential for growth in tourism between Brazil and India, as Brazil is already a major source of outbound tourism to the U.S. and Europe but not to India.
- Bilateral trade between India and Brazil is currently around \$20 billion but could increase significantly.
- Brazil's main exports to India are crude oil, sugar, sugarcane, soy, and soybean oil.
- India's main exports to Brazil include pharmaceuticals, refined petroleum, software, and technology products.
- Brazilian companies are heavily dependent on China for imports and Russia for fertilizers, and LIDE sees opportunities for Indian products and services to benefit Brazilian companies.